



Research Article

Generic Skills Development in the Gulf Cooperation Council Countries and Graduate Outcomes: A Systematic Review of the Literature

تنمية المهارات العامة في دول مجلس التعاون الخليجي ونتائج الخريجين: مراجعة منهجية للأدب

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Abstract

Generic skills are essential because today's jobs and the future of work require flexibility, initiative, and the ability to undertake many different tasks. While higher education graduates in the Gulf Cooperation Council (GCC) countries recognize the contribution of these skills in their academics and workplace performance, generic skills development is not a consistent part of their education, which has led to socioeconomic challenges. If higher education placed a great emphasis on developing generic skills, students would expect to have pragmatic benefits, such as academic success, boosting workplace performance, positive interpersonal relationships, and better health and overall well-being. To the best of our knowledge, no systematic review has been conducted to examine generic skills development outcomes in the GCC. Hence, this systematic review aims to identify, evaluate, and summarize findings from peer-reviewed and policy-related studies that have documented generic skills development outcomes in the GCC countries, including identifying broad definitions used and areas for future research. The findings demonstrated conclusive evidence regarding the effectiveness of generic skills development at the higher education level in enhancing graduate outcomes in employability promotion skills, enhancing stakeholder engagement in curriculum and instruction, academic or workplace performance, influences on health, and effects on social dimensions.

الملخص

تعتبر المهارات العامة ضرورية لأن وظائف اليوم ومستقبل العمل تتطلب المرونة والمبادرة والقدرة على القيام بالعديد من المهام المختلفة. في حين أن خريجي التعليم العالي في دول مجلس التعاون الخليجي يعترفون بمساهمة هذه المهارات في الأداء الأكاديمي وفي مكان العمل، فإن تطوير المهارات العامة ليس جزءًا ثابتًا من تعليمهم، مما أدى إلى حدوث تحديات اجتماعية واقتصادية. إذا ركز التعليم العالي بشكل كبير على تطوير المهارات العامة، فإن الطلبة يتوقعون الحصول على فوائد عملية، مثل النجاح الأكاديمي، وتعزيز الأداء في مكان العمل، والعلاقات الشخصية الإيجابية، والصحة الأفضل والرفاهية العامة. على حد علمنا، لم يتم إجراء أي مراجعة منهجية لفحص نتائج تنمية المهارات العامة في دول مجلس التعاون الخليجي. ومن ثم، تهدف هذه المراجعة المنهجية إلى تحديد وتقييم وتلخيص نتائج الدراسات التي تمت مراجعتها من قبل الأقران والمتعلقة بالسياسات والتي وثقت نتائج تنمية المهارات العامة في دول مجلس التعاون الخليجي، بما في ذلك تحديد التعريفات العامة المستخدمة ومجالات البحث في المستقبل. تُظهر النتائج أدلة قاطعة فيما يتعلق بفعالية تنمية المهارات العامة على مستوى التعليم العالي في تعزيز نتائج الخريجين في مهارات تعزيز القابلية للتوظيف، وتعزيز مشاركة أصحاب المصلحة في المناهج والتعليم، والأداء الأكاديمي أو في مكان العمل، والتأثيرات على الصحة، والتأثيرات على الأبعاد الاجتماعية.

OPEN ACCESS

Keywords: Generic skills, Higher education, Curriculum, Graduate outcomes, GCC countries

الكلمات المفتاحية: المهارات العامة، التعليم العالي، المناهج، نتائج الخريجين، دول مجلس التعاون الخليجي

1. Introduction

The Gulf Cooperation Council (GCC), comprising six member countries – Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAENQF, #45) – has taken significant strides to transform its member economies from a dependence on oil and gas and has pivoted to providing a policy and structural environment that supports the growth of a knowledge-based economy anchored on human capital investments (Gross & Ghafar, 2019). This shift has necessitated a sharp focus on strengthening higher education to ensure that its citizens are adequately prepared for the workforce.

Incorporating generic skills development in higher education has the potential to ensure that graduates acquire the personal and professional attributes required for successful employment (Damaj & Chaaban, 2011; El-Saharty et al., 2020; Gilar-Corbi et al., 2018). However, the definition and application of generic skills development are not well understood, and its effect on educational outcomes and labor market performance in GCC countries has not been consistently documented. This systematic review summarizes findings from empirical studies of generic skills development outcomes to address the following research question: What graduate outcomes are incorporated in generic skills development in higher education of GCC countries? The findings demonstrated conclusive evidence regarding the effectiveness of generic skills development at the higher education level in enhancing graduate outcomes in employability promotion skills, enhancing stakeholder engagement in curriculum and instruction, improving academic or workplace performance, positive influences on health and social dimensions.

2. Background and Context

The GCC nationalization policies encourage recent college and university graduates entering the workforce to look at the private sector for employment (Belwal et al., 2017) to build a resilient talent pool in the region that can lead the deployment and utilization of the rapid technological developments taking place in the global market (Quota & Sekkarie, 2017; Samans & Zahid, 2017). As an example, the UAE has led the way in appointing a fourth industrial revolution ambassador, whose primary role will be to support the government's strategic aims for building a knowledge economy, including developing local talent, and ensuring nationals are employed and learning the skills demanded by employers (GulfNews, 2019 #35).

This emphasis on a knowledge economy has led to GCC countries prioritizing training and education, particularly at the higher education level. The GCC countries were among the first to join the World Bank's *Human Capital Project*, an initiative to improve people's investments through knowledge, skills, and health required for a successful life and a well-functioning society and employment (El-Saharty et al., 2020).

2.1. GCC higher education challenges

While the GCC countries have different context-specific needs for higher education, they share similar learning challenges, particularly the need to strengthen the role of higher education institutions and how they are meeting the needs of employers, including fostering the development of skills that are relevant to today's labor market and social settings (Samans & Zahid, 2017). Increasingly, higher education institutions in the GCC countries are being asked by industry and the government to produce graduates with versatile workplace and subject-specific skills (Damaj & Chaaban, 2011).

While GCC countries have experienced exponential growth in higher education within the past two decades due to government policies promoting foreign higher education institutions to set up in the country, challenges remain in addressing quality-related issues in the higher education domain. These issues have led to low participation from the local workforce in the private sector since graduates are not competent and do not meet the employer's needs (Naithani, 2011 #34). In addition, the challenges in quality assurance in higher education have also led to education and labor market mismatches, the adverse implication of educational attainment on adult mortality and morbidity, and high wage differential between public and private sector jobs (El-Saharty et al., 2020).

These challenges have led to the GCC countries to focus on strengthening generic skills development to ensure the development of basic technical, interpersonal, intrapersonal, and business knowledge skills (Iqbal & Zenchenkov, 2014; Quota & Sekkarie, 2017).

2.2. Generic skills standards and qualifications frameworks in the GCC

Qualification frameworks and competency standards across the GCC countries describe the types of qualifications, their levels, and standards within the country's education and training system to express its workers' competencies (BQA; KHDA; OAAA, n.d.). This framework and standard include internal and external quality assurance processes to enhance the learning outcomes provided through higher education programs (Tuck, 2007 #44). A unified qualification framework for the GCC is still in the initial development phase. The framework has been modeled from the European Qualification Framework and the Association of Southeast Asian Nations Regional Qualifications Framework. It also includes generic skills that learners need in their lives for both current and future work (Chakane & Rodrigues, 2009; UAENQF, 2013). Table 1 summarizes the national qualification framework (where one exists) for the GCC countries and highlights whether generic skills are emphasized in the frameworks.

2.3. Developments in defining generic skills

Worldwide, education and workforce development practitioners have developed models and lists of generic skills that learners need to be socially and economically

Table 1*National qualification framework of GCC countries*

Country	Authority	Framework	Generic skills
Bahrain	General Directorate of National Qualifications Framework (GDQ) of the Education and Training Quality Authority (BQA, #14)	National Qualifications Framework	None
Kuwait	National Bureau for Academic Accreditation and Education Quality Assurance	National Qualification Framework	None
Oman	Omani Academic Accreditation Authority (OAAA, #36)	National Qualification Framework	Includes emphasis on generic skills in assessments
Qatar	National Commission for Qualifications and Academic Accreditation	No formal framework; under development	Nil
Saudi Arabia	National Commission for Academic Accreditation and Assessment	National Qualification Framework	Includes emphasis on generic skills requirements for all academic awards
United Arab Emirates	National Qualification Authority (NQA)	National Qualification Framework	Includes emphasis on skills learned through work and life experiences, voluntary activities, and other informal and non-formal activities

successful in life. There are various terms, nomenclature, and classification of generic skills that have been used in the literature, as summarized in Table 2.

2.4. Literature review

The integration of generic skills in education is an evolving topic in the literature. There are ongoing developments and initiatives considering how best to teach these skills to college and university students and how to create conducive environments in which generic skills can be learned (CASEL, n.d.; OECD, 2017; P21, n.d.). By definition, generic skills are those *skills that are essential for employment and personal development, fulfillment, community life, and active citizenship* (Gibb & Curtain, 2004).

Gilar-Corbi et al. (2018) found that incorporating certain aspects of generic skills, such as emotional intelligence, led to positive outcomes in one's personal, social, and societal standings, which resulted in better academic and workplace success, and reduced negative aspects of social dimensions. Similarly, other studies found that these skills are associated with benefits that extend beyond the academic contexts and outcomes, such as success in work, positive interpersonal relationships, and better mental health and overall well-being (Bar-On et al., 2006; Gibb & Curtain, 2004; Jordan & Ashkanasy, 2006). However, globally accepted best practices on defining these skills and ensuring that graduates across all disciplines have mastered them are limited (Damaj & Chaaban, 2011).

Table 2*Different definitions used for generic skills*

Term	Description of capabilities and competencies
Basic/Necessary/ Workplace know-how skills	Communication, computer, customer service, empathy, lifelong learning, numeracy, organization, problem-solving, research and information gathering, teamwork, work ethics
Core skills	Communication, numeracy, information and communication technology, working with others, problem-solving
Common/Essential/ Life or Lifelong skills	Assertiveness and self-control, communication and interpersonal, decision-making and problem-solving, creative thinking and critical thinking, self-awareness and empathy, resilience
Emotional Intelligence skills	Empathy, motivation, self-awareness, self-regulation, social skills
Employability skills	Communication, creativity and innovation, decision-making, initiative, leadership, lifelong learning, managing and time management, negotiating and persuading, problem-solving, teamwork
Social and Emotional skills	Collaboration, emotional regulation, decision-making, open-mindedness, relationship, self-awareness, self-management, social awareness, task performance
Soft skills	Communication, empathy, higher-order thinking, goal orientation, positive self-concept, self-control
Transferable/ Professional skills	Communication, leadership, organizational and execution, people skills
21st Century skills	Communication, collaboration, creativity, critical thinking, digital literacy, life, and career skills

Note. This table is based on information collected from the 12 studies, including information from CASEL, P21, and OECD.

Furthermore, some studies have focused on engaging employers to ensure that their expectations for generic skills are included in the curriculum. Mason et al. (2009) found that employer engagement in curriculum design and instruction had a clear positive effect on a graduate's ability to find employment within six months after graduation, including increasing workplace performance (Mason et al., 2009). Similarly, Panagiotakopoulos (2012) found that a weak connection between higher education and employers results in graduates not having the practical and requisite skills valued in the workplace.

Additionally, Maxwell et al. (2010) explored the role of employer engagement in employability skills development and found that employers were dissatisfied with graduates whom they perceived as lacking essential employability skills required in the workplace. Employers work in partnership with higher education institutions on the core employability skills they seek from graduates to reduce the skills gaps. The study suggested that employers and higher education co-share the responsibilities for developing these skills (Maxwell et al., 2010).

Ultimately, post-secondary institutions struggle with balancing the need to provide vocational education with the more traditional expectation of providing a learning environment that nurtures reflective practitioners, social critics, and good citizens. Although universities respond to the labor market needs by developing policies and processes to strengthen graduating students' skills and competencies, employers continue to be

dissatisfied with the skill level of university graduates (Star & Hammer, 2008). To better align higher education with labor market needs, integrating generic skills development into the curriculum and consistently delivering it to students could ensure that students are better prepared for employment.

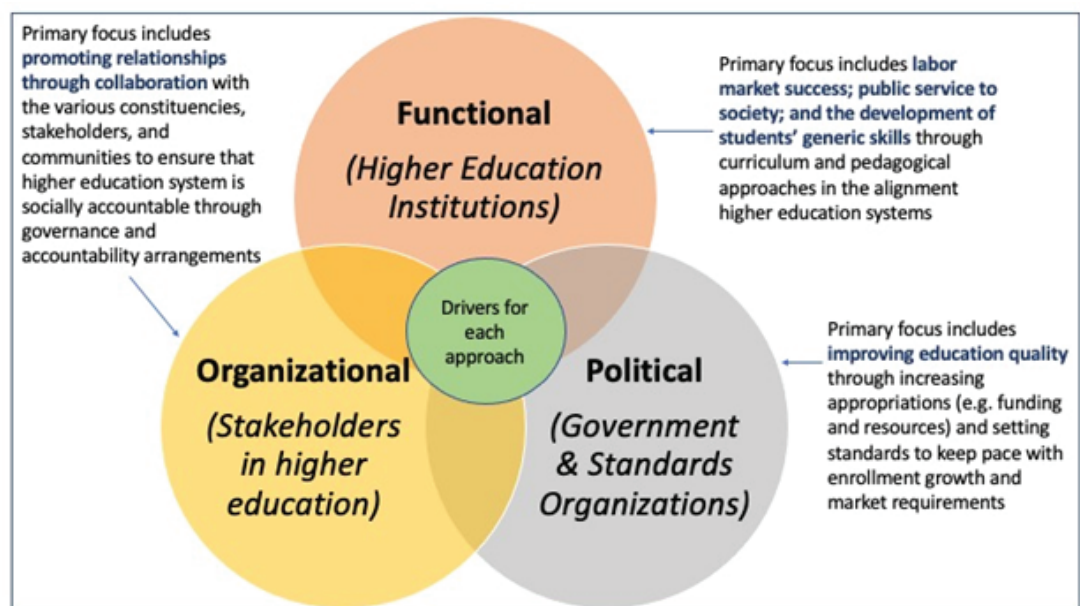
2.5. Methods

2.5.1. Conceptual framework – Functional, organizational, and political approaches model

Academic institutions, employers, social organizations, policies, and other enabling environment influences impact graduate outcomes. In her Functional, Organizational, and Political Approaches (FOPA) model (Figure 1), Knight (2013) shows that higher education systems, organizations, and political institutions will determine whether an individual will be successful in life and in their contribution to a well-functioning society. In this regard, Knight's model is used to guide and characterize our systematic review findings and understand generic skills development outcomes in the GCC context, including identifying broad definitions used and gaps that need further study.

Figure 1

FOPA model to guide the review of generic skills outcomes in higher education



Note. This figure, Functional, Organizational, and Political Approaches, is based on the FOPA model from Knight, J. (2013). A model for the regionalization of higher education: The role and contribution of tuning. *Tuning Journal for Higher Education*, 1(P21, #38), 105–125.

Each of the following approaches from the model has been used to guide the review, linked to generic skills development. These approaches are not mutually exclusive, and they work in unison, reinforcing each other (Knight, 2013, p. 117).

The Functional Approach focuses on developing the concrete needs of a region by recognizing qualifications that are compatible and comparable to society. According to Knight, *the Functional approach* refers to the process of alignment of higher education with the labor market, and society (Knight, 2013). The driver for the functional approach is the higher education institution whose primary focus includes labor market success, public service to society, and the development of students' generic skills through the curriculum and pedagogical approaches to align with work and society's needs. In practice, the Qualifications Framework of the European Higher Education Area (QF-EHEA) and the ASEAN Qualifications Reference Framework (AQRf) provides a process of enabling a comparison of education qualification across participating GCC member countries. They facilitate employability of graduates (ASEAN, 2015; EHEA, 2005; Gehmlich, 2009), including integrating generic skills aspects as well as inputs from socioeconomic dimensions, though only the QF-EHEA articulates essential skills needed in the workplace (EHEA, 2016; Eisenshmidt, 2009; Gehmlich, 2009). In the generic skills development context, this is aligned with the quality assurance and accreditation, which incorporates generic skills in the curriculum and the assessment procedures.

The Organizational Approach includes frameworks, structures, and agencies necessary to help establish and oversee regional- and intra-regional initiatives in a more systematic manner. In this research, *the Organizational approach* focuses on developing and implementing an effective structure that enables identifying generic skills and collaborating among critical stakeholders in higher education institutions to deliver them (Knight, 2013 #30). For example, the QF-EHEA requires the internal governance arrangements within autonomous higher education institutions to include employer participation to ensure that higher education remains of high quality and relevant to students and other stakeholders (EHEA, 2016; Eisenshmidt, 2009; Gehmlich, 2009; Serrano et al., 2015). The driver for the organizational approach is educational stakeholders whose primary focus includes promoting relationships with the various constituencies, stakeholders, and communities by collaborating to ensure that higher education is socially accountable through governance and accountability arrangements. This is aligned with institutional governance frameworks that promote greater collaboration from employers and educational stakeholders in curriculum design and development in the generic skills development context.

The Political Approach focuses on developing and pursuing coherent policies that are feasible and facilitate the quality of the education system in meeting the region's needs. According to Knight, *the political approach* involves "the political will and strategies that put higher education initiatives on the agenda of decision-making bodies." The political approach launches programs or funding schemes or develops political instruments on agreements, treaties, and other events of this nature (Knight, 2013 #30). For example, the Bologna Declaration led to the implementation of QF-EHEA, which developed an outcomes-based, student-centered, and competency-based learning model for the European Union member states that is responsive to the needs of the labor market and society. The driver for the political approach is government entities and standards organizations. They focus primarily on improving education quality,

increasing appropriates (e.g., providing funding and resources), and setting standards to keep enrollment growth and market requirements. In the generic skills development context, this is aligned with regional policy and agreements to include a framework for the reporting and certification of generic skills, including allocating funding to support its implementation (EHEA, 2016 #21; Eisenshmidt, 2009 #22; Gehmlich, 2009 #25).

This model proposes a process to test the validity of the selected 12 studies with the inter-related approaches to generic skills outcomes. Generic skills are an essential element in sector-specific and employability-focused research, which has generally not been addressed in the research of generic skills development outcomes in higher education. The FOPA model addresses the generic skills development, which would potentially address the problems of skills mismatch, adult mortality and morbidity, and wage differential in the GCC countries (El-Saharty et al., 2020).

In part, the FOPA model guided this review in that, as the model suggests, the outcomes considered were broad and included those that were employability and individual wellness-oriented in scope, where they existed. However, no type of outcome literature was excluded. Thus, the analysis was based on existing literature characteristics rather than being limited to the FOPA model categories.

2.5.2. Search and review

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Moher et al., 2015) guidelines were used to guide the paper's development. The research was identified through electronic searches of the Educational Resources Information Center (ERIC) ProQuest database, documents released by leading international organizations such as the World Bank Documents & Reports Abstracts database, and manual article searches. The search period was restricted to years 2000–2020, and only studies published in English language were included. Keywords for the search included *generic skills*, *higher education*, *curriculum*, *graduate outcomes*, *Gulf Cooperation Council* (ERIC), *education and training system*, *development of skills*, *human capital outcome*, *labor and education*, and *Gulf Cooperation Council* (World Bank Documents & Reports).

From this combination of search approaches, the electronic search produced 210 articles. Relevance criteria guiding the search included the following: (a) studies using either quantitative or qualitative methodology; (b) studies with generic skills development in post-secondary education institution as an intervention or an outcome, academic success, reduction of behavioral problems and stress, increase positive social behavior; (c) studies that aimed to demonstrate the effectiveness of generic skills and employability; and (d) studies congruent with the broad definition of generic skills. Studies were excluded from the review if (a) they were not focused on the GCC countries and (b) if they were not specific to post-secondary education. As a result, 12 studies were identified that met the inclusion/exclusion criteria for review.

Table 3*Summary of search results*

Database	Search produced	Search identified	Boolean query	Exact phrase/filter
ERIC (ProQuest)	198	7	(generic skills) AND (higher education) AND curriculum OR (graduate outcomes) AND (gulf cooperation council)	adult basic education, adult education, higher education, peer-reviewed
World Bank Documents & Reports	7	1	education and training system, development of skills, human capital outcome, labor and education, Gulf Cooperation Council	
Manual Search	5	4		
Total	210	12		

2.5.3. Critique format

The critique format used the PRISMA (Moher et al., 2015) guidelines for reviewing the literature. Table 4 provides an overview of the studies included.

2.5.4. Review of studies

Hypothesis, Objectives, and Questions

All but 1 of the 12 studies were nonexperimental in design; therefore, most had research questions, objectives/aims, or implied research questions instead of hypotheses. Five outcome categories were identified:

1. *Employability promotion skills.* Ten of the twelve studies specified employability promotion as the focus. Alshare and Sewailem (2018) addressed differences between employers and business educators on the importance of employability skills needed for the 21st-century workforce. Griffin and Coelho (2019) focused on the impact of experiential education, such as internships and work-based opportunities in developing employability skills. Thomas et al. (2016) addressed differences in a purely linguistic and a broader sociolinguistic English education in developing employability skills. Al-Ajmi (2003), Alshare and Sewailem (2018), Belwal et al. (2016), Hijazi and Zoubeydi (2017), Iqbal and Zenchenkov (2014), and Swales et al. (2012) focused on identifying and defining the employability skills demanded by employers. Atef and Balushi (2017) investigated the role of self-awareness: student's employment intentions and job preferences in enhancing employability. Mirza and Karolak (2019) investigated aspects of higher education experience and preparation for employment.
2. *Impact of stakeholder engagement in curriculum and instruction.* Ten of the twelve studies specified aspects of curriculum and instruction and what is needed in the classroom to support the transition to employment. Al-Ajmi (2003), Alshare

Table 4
Overview of generic skills studies in the GCC

Study	Method	Framework	Broad framework category	Sample characteristics & data collection	Analyses	Outcomes/Findings	Country
Alshare & Sewaillem (2018)	Descriptive using survey method	Not explicitly stated, but pedagogical theory and learning approach (instructional design and industrial linkages)	Functional and Organizational Approaches	N = 60 employers; N = 49 faculty	Quantitative. T-test and ANOVA	Pedagogical implication of generic skills and the labor market. Development of students' generic skills and labor market success through promoting collaboration with employers	Qatar
Griffin & Coelho (2019)	Descriptive using both case study and survey method	Not explicitly stated, but experiential (internship and work-based) learning approaches	Organizational	N = 36 female undergraduate students; 8-week work placement	Qualitative. Analyzed qualitatively using thematic analysis.	Student perception of generic skills and preparation needed for the workplace. Promoting collaborations with employers	United Arab Emirates
Thomas et al. (2016)	Descriptive using mixed-method approach (through telephone interviews, student workplace simulations, and employer focus groups)	Not explicitly stated, but pedagogical theory and learning approach (curriculum and instructional design)	Functional and Organizational Approaches	N = 9 employers; student and employer focus groups	Qualitative. Analyzed qualitatively using thematic analysis.	Integration of generic skills in the curriculum. Development of students' generic skills and labor market success through promoting collaboration with employers	Bahrain
Belwal et al. (2017)	Descriptive using survey method	Hypothetico-deductive logic and inferential analysis	Functional and Organizational Approaches	N = 114 university graduates	Quantitative. T-test and ANOVA	Graduate attributes at the time of a job interview. Development of students' generic skills and labor market success through promoting collaboration with employers	Oman

Table 4*Continued.*

Study	Method	Framework	Broad framework category	Sample characteristics & data collection	Analyses	Outcomes/Findings	Country
Mirza & Karolak (2019)	Descriptive using survey method	Not explicitly stated, but pedagogical theory and learning approach (higher education institution organizational structure and student motivation)	Organizational	N = 15 female graduates	Qualitative. Analyzed qualitatively using thematic analysis.	Student perception of benefit of the university experience versus the benefit of the knowledge gained while at university. <i>Promoting collaboration with employers</i>	Bahrain
Swalles et al. (2012)	Descriptive using survey method	Social contract by using psychological contract theory (higher education institution organizational structure, curriculum, instructional design, industrial linkages, and government policies)	Functional, Political, and Organizational Approaches	N = 25 ministerial officials and senior private sector managers with human resource management responsibilities	Qualitative. Analyzed qualitatively using thematic analysis.	Government and employer perception of how higher education is preparing graduates for the labor market. <i>Development of students' generic skills and labor market success through promoting collaboration with employers and improving education quality</i>	Oman
Hijazi & Zoubaidi (2017)	Descriptive using survey method	Not explicitly stated, but pedagogical theory and learning approach (government policies in terms of national qualification framework and higher education institution organizational structure)	Functional, Political, and Organizational Approaches	N = 108 instructors	Quantitative. Pearson's Chi-square test	Gaps with the expected skills needed for graduates when transitioning to the labor market based on international best practices. <i>Development of students' generic skills and labor market success through promoting collaboration with employers and improving education quality</i>	MENA Region
Shorfuazzaman & Alhussein (2016)	Descriptive using survey method using structural equation modeling (SEM)	Unified Theory of Acceptance and Use of Technology (UTAUT). Pedagogical theory and learning approach that includes constructivism and behaviorism (e.g., motivation factors, instructional design, social/peer influence, etc.)	Organizational	N = 84 undergraduate students between the age range of 18 and 25 years	Quantitative. Cronbach's alpha and average variance extracted (AVE)	University students' perception and readiness towards the utilization of mobile learning in higher education studies. <i>Promoting collaboration with employers</i>	Saudi Arabia

Table 4*Continued.*

Study	Method	Framework	Broad framework category	Sample characteristics & data collection	Analyses	Outcomes/Findings	Country
Iqbal & Zenchenkov (2014)	Descriptive qualitative research using the survey method (convenience sampling technique)	Not explicitly stated, but exploratory research, pedagogical theory and learning approach (higher education institution, organizational structure, instructional design, curriculum, industrial linkages, and government policies)	Functional, Political, and Organizational Approaches	N = 10 employers; 8 participated in the study and 2 only responded to the survey	Qualitative. Analyzed qualitatively using thematic analysis.	Collaboration between the private sector and universities in defining generic skills to promote the national economy and social growth. <i>Development of students' generic skills and labor market success through promoting collaboration with employers and improving education quality</i>	Saudi Arabia
Atef & Balushi (2017)	Descriptive using survey method	Not explicitly stated, but pedagogical theory and learning approach (student motivation, curriculum, instructional design, and experiential/internship learning)	Functional and Organizational Approaches	N = 88 university students	Quantitative. T-test and ANOVA	Influence of higher education in promoting private-sector jobs as a career path. <i>Development of students' generic skills and labor market success through promoting collaboration with employers</i>	Oman
Al-Ajmi, K. (2003)	Descriptive using pilot study and survey method	Not explicitly stated, pedagogical theory and learning approach (curriculum design, instructional design, industrial linkages, and government policies)	Functional, Political, and Organizational Approaches	N = 405 participants responded to the survey; includes undergraduate and graduate students, teaching staff, and academic managers	Quantitative. Pearson's Chi-square test	Higher education system quality and factors influencing opinions of study, teaching methods, and assessments. <i>Development of students' generic skills and labor market success through promoting collaboration with employers and improving education quality</i>	Saudi Arabia
El-Saharty et al., 2020	Not explicitly stated, but descriptive quantitative research	Not explicitly stated, but pedagogical theory and learning approach (government policies in terms of national qualification framework and higher education institution organizational structure)	Functional, Political, and Organizational Approaches	Not stated	Not stated	Human capital investment and impact on knowledge, skills, and health. <i>Development of students' generic skills and labor market success through promoting collaboration with employers and improving education quality</i>	GCC

and Sewailem (2018), Atef and Balushi (2017), Belwal et al. (2016), Griffin and Coelho (2019), Hijazi and Zoubeidi (2017), Iqbal and Zenchenkov (2014), and Thomas et al. (2016) investigated integrating career preparation and requirements into the curriculum and instruction. Swailes et al. (2012) investigated content and instruction's role in influencing student beliefs and attitude toward work. Shorfuzzaman and Alhussein (2016) investigated student expectations, peer influence, and self-awareness in determining students' ability to adapt to mobile learning to support lifelong learning.

3. *Impact on academic or workplace performance.* Six of the twelve studies investigated the impact of education and training on academic or workplace performance. Al-Ajmi (2003), Iqbal and Zenchenkov (2014), and Swailes et al. (2012) investigated students' education performance and the connection with delivering satisfactory performance in the workplace. Shorfuzzaman and Alhussein (2016) investigated the impact of mobile learning on a learner's performance and productivity. Griffin and Coelho (2019) investigated experiential learning opportunities, such as internships and work-based arrangements, to measure student performance. Thomas et al. (2016) addressed differences in a linguistic and a broader sociolinguistic English education in developing confidence, which manifests itself in performance in interviews or workplace situations.
4. *Influences on health.* Two of the twelve studies specified the influence of lifelong skills on health issues. El-Saharty et al. (2020) investigated aspects of lifelong skills: decision-making and problem solving, creative thinking and critical thinking, self-awareness and empathy, resilience, and their influence on adult mortality and morbidity. Swailes et al. (2012) investigated whether employability skills improved general levels of health.
5. *Effects on social dimensions.* Two of the twelve studies investigated aspects of social dimensions: poverty, unemployment, and unequal opportunities in employment and access to resources. While Swailes et al. (2012) investigated whether employability skills impacted levels of social dimensions, El-Saharty et al. (2020) investigated the influence of lifelong skills and their impact on an individual's decision to invest in human capital (education and training) and the pattern on earnings over an individual's lifetime.

2.5.5. Theoretical frameworks

Only two of the twelve studies identified a specific theoretical framework that was used to guide their study. The following theoretical frameworks were used: (a) Unified Theory of Acceptance and Use of Technology by Shorfuzzaman and Alhussein (2016) and (b) psychological contract theory by Swailes et al. (2012). Thus, although 10 of the 12 studies did not explicitly state a theoretical framework, it appeared that these studies were guided by traditional theoretical frameworks: pedagogical theories and learning approach (higher education institution organizational structure, instructional design, curriculum, industrial linkages, and government policies).

All studies were qualitative and used a convenience sampling process to collect data for their study, except for one study (El-Saharty et al., 2020) that used a cluster sampling process. The number of subjects in these studies ranged from 9 (Thomas et al., 2016) to 405 (Al-Ajmi, 2003 #2).

3. Methodology

Eleven of the twelve studies used descriptive research, either surveys, observations, or case studies. El-Saharty et al.'s (2020) study did not explicitly state the research method used; however, it is a World Bank study and conforms to the World Bank's typical methodology and uses a descriptive quantitative research method (WBG, n.d.). All studies included a mixture of qualitative and quantitative methods, which adds a wealth of information in understanding generic skills development in the GCC context. However, no evidence exists to indicate that the findings of these studies have been integrated to build upon each other to form systematic knowledge in the GCC countries.

3.1. Measurement

Eleven of the twelve studies reported researcher-developed interview questions that used a Likert scale to collect data from subjects in the study. El-Saharty et al.'s (2020) study did not indicate the instrument that was used.

3.2. Analyses

The seven quantitative descriptive studies mostly relied on descriptive statistics such as *t*-test and ANOVA (Alshare & Sewailem, 2018; Atef & Al Balushi, 2017; Belwal et al., 2017), Pearson's Chi-square test (Al-Ajmi, 2003; Hijazi & Zoubeydi, 2017), Cronbach's alpha and average variance extracted (Shorfuzzaman & Alhussein, 2016), or percentages and means (El-Saharty et al., 2020). These analyses are essential for research design; however, small studies with convenience sampling limit the findings' generalizations.

Five studies (Griffin & Coelho, 2019; Iqbal & Zenchenkov, 2014; Mirza & Karolak, 2019; Swailes et al., 2012; Thomas et al., 2016) were qualitative studies that mainly relied on thematic analysis and also included specific quotations from the subjects in the study. Also, all five addressed the reliability and validity issues associated with the methodology. For example, Griffin and Coelho (2019) stated that "*all responses for each question were entered verbatim in Wordle as plain text. In accordance with best practices, full responses were preserved and entered in their entirety*)" (p. 67). Other studies (Iqbal & Zenchenkov, 2014; Mirza & Karolak, 2019; Swailes et al., 2012; Thomas et al., 2016) also described a similar process of transcribing notes. Thus, all five qualitative studies reviewed showed consistency in reporting the analysis technique used.

4. Findings

Overall, the findings of these 12 studies were diverse. The findings are presented according to the thematic areas suggested by the research questions/objectives.

1. *Employability promotion skills.* All 10 studies investigating employability promotion outcomes suggested a positive benefit both to the students and employers in work placements, skills development, and labor market outcomes. In Thomas et al.'s (2016) study, the new graduate employees who took courses that developed their generic skills and those who could demonstrate that they can take project/work assignments and communicate what they have learned, apply them to the work context, and demonstrate a willingness to develop was more coveted by employers and had better work placement prospects than those who could not demonstrate these generic skills. Alshare and Sewailem (2018) also found that employers emphasized on generic skills, such as work ethics, communication/flexibility, and adaptability, in their recruitment process and believed that they were fundamental skills for the 21st-century workforce. Al-Ajmi (2003), Belwal et al. (2016), Griffin and Coelho (2019), and Iqbal and Zenchenkov (2014) found that students valued employability skills in their transition to employment, based on perceptions of labor market expectations and demands for generic skills, and Iqbal and Zenchenkov (2014) concluded that this led to better industry performance, in turn making the country more competitive in the global market. Swailes et al. (2012) found that a lack of generic skills led to poor experience to operate in private-sector cultures and misalignment with work expectations that led to poor workplace outcomes. Atef and Balushi (2017) found that developing generic skills are important for students in understanding the wide range of available employment opportunities and the relevance of generic skills in developing new career paths not previously considered, whereas Mirza and Karolak (2019) found that students perceived that higher education was not adequately preparing them with these skills. The final study, Hijazi and Zoubaidi (2017), reported that a lack of unified best practices in higher education in the GCC and MENA region compared to international best practices led to gaps in the quality of graduates transitioning to employment, with the skills needed for the economy. In the context of the functional approach, employability promotion skills focus on increasing participation of higher education institutions in accrediting students' employability skills through certification and recognition mechanisms. In summary, there is some evidence of employability promotion outcomes associated with generic skills.
2. *Impact of stakeholder engagement in curriculum and instruction.* Ten studies reported the importance of involving stakeholders, such as the community, businesses, and government, in the higher education system, particularly curriculum development and instruction. To meet the growing demands for relevant employable skills, Al-Ajmi (2003), Alshare and Sewailem (2018), Atef and Balushi (2017), Belwal et al. (2016), Griffin and Coelho (2019), Hijazi and Zoubaidi (2017), Iqbal and Zenchenkov (2014), Shorfuzzaman and Alhussein (2016), Swailes et al. (2012), and Thomas et al. (2016) reported efforts in aligning curriculum and instruction

in coordination with stakeholders, particularly businesses, to ensure that students are well prepared when they transition to employment. Only Shorfuzzaman and Alhussein (2016) reported the role of technology as an enabler in preparing students for the world of work. While the implication of stakeholder engagement, namely businesses, are important in curriculum development and instruction as they hire graduates who are adequately prepared for their needed job positions, there was no evidence in the studies of stakeholder involvement as an intervention. Attention is preferably on evaluating the integration of generic skills in the curriculum and instruction as an intervention. In the context of the organizational approach, stakeholder engagement focuses on promoting internal governance arrangements within higher education institutions that promote collaboration with curriculum design and development that align with market needs.

3. *Impact on academic or workplace performance.* Six studies found that generic skills can boost academic and workplace performance. Al-Ajmi (2003), Iqbal and Zenchenkov (2014), Griffin and Coelho (2019), Shorfuzzaman and Alhussein (2016), Swailes et al. (2012), and Thomas et al. (2016) reported generic skills development in the classroom, internship, or work-based arrangements improved performance in job interviews and at workplace. In Swailes et al.'s (2012) study, generic skills development through pre-placement activities and real industry projects at the university improved students' workplace performance. In addition, Griffin and Coelho (2019) found that these skills led to quick integration into private sector cultures as students were earlier exposed to working conditions and have participated in it, which resulted in long-term workplace performance. Shorfuzzaman and Alhussein's (2016) study was the only study that reported the impact of digital literacy skills in improving both a learner's performance in the education setting and a learner's productivity in the workplace. In the context of the functional approach, laying the foundation of generic skills development in higher education has benefits in education and workplace performance. The students reviewed showed that students have demonstrated improvements in academic success and are better equipped to succeed professionally in the workplace. Thus, there is potential to study workplace performance aspects as a generic skills development outcome of college and university students.
4. *Influences on health.* Swailes et al. (2012) and El-Saharty et al. (2020) found that generic skills affected general health levels. Swailes et al. (2012) reported that generic skills development improves general health levels, given the rising population and increasing unemployment in local communities. In addition, El-Saharty et al. (2020) reported that education and training, particularly generic skills development, helped reduce health risk factors such as adult mortality and morbidity. For example, it was reported that the main drivers of mortality and morbidity in the GCC countries were noncommunicable diseases and transport injuries, which can be addressed through generic skills development and lifelong learning. In this view, this is consistent with the FOPA model, which incorporates inputs from sectors and actors that affect higher education institutions' ability to support the economy's socioeconomic needs (Knight, 2013; Knight & Woldegiorgis,

2017). For example, national and regional qualifications framework, such as QF-EHEA, integrate knowledge, skills, and health as what an individual needs to accumulate over their lives to make them more productive in the economy (EHEA, 2016; Eisenshmidt, 2009; El-Saharty et al., 2020; Gehmlich, 2009).

5. *Effects on social dimensions.* Swailes et al. (2012) and El-Saharty et al. (2020) found that generic skills had positive outcomes on social dimensions such as poverty, unemployment, unequal employment opportunities, and access to resources. In Swailes et al.'s (2012) study, the development of generic skills to promote youth employability helped transition more locals into private sector employment and helped reduce social problems. In addition, El-Saharty et al. (2020) reported that the benefits of generic skills development, including lifelong learning skills, promote resilience and adaptability, leading to an individual's lifetime human capital investments that further reduce the risks of social dimensions. In the context of the FOPA model, laying the foundation of generic skills development in higher education supports the social system, which is important in promoting positive outcomes on social dimensions.

5. Discussion

This systematic review aimed to identify and describe recent empirical studies of generic skills development outcomes, including identifying broad definitions used and gaps that need further study in the GCC countries. We have introduced the FOPA model as a conceptual framework to guide our selected 12 studies with the inter-related approaches to generic skills outcomes. Our findings revealed five thematic outcomes: employability promotion skills, the impact of stakeholder engagement in curricular and instruction, impact on academic or workplace performance, influences on health, and effects on social dimensions. The FOPA model's emphasis on the inter-related approach was evident in the five thematic outcomes. The findings of generic skills in the five thematic outcomes involved various agencies such as higher education, government agencies, employers from business sectors. Each outcome differently achieved in the 12 studies engaged actors beyond higher education to develop generic skills. According to the FOPA model, we draw conclusion that generic skills outcomes in the GCC countries mostly involve the functional and organizational approach where higher education and employers collaborate in curriculum and instructions through governance arrangements. However, sometimes political approaches have been impactful in developing specific generic skills outcomes when national authorities encourage it through nationalization policies that emphasize on generic skills development in higher education.

Worldwide, education and workforce development practitioners have accepted the different nomenclature used for generic skills, as indicated in Table 2, along with capabilities and competencies, yet recent generic skills development outcome literature continues to demonstrate mixed results regarding its effectiveness. While the generic skills agenda might be seen as part of the broader employability agenda, it might also be seen as an agenda of facilitating higher education access in helping students

develop skills needed for success in the academics, workplace, and life (CASEL, n.d.; OECD, 2017). As a group, these 12 studies are so different and flawed that they really cannot be used to draw any conclusions about generic skills development at the higher education level. Not only do methodologies differ, but also considerable diversity exists in the outcomes that are measured.

While the FOPA model provided a framework for testing the selected studies' validity, there may be several possible explanations for the low number of studies in this current review that assessed or reported outcomes associated with generic skills.

First, methodological issues were evident. All reviewed studies, except the study by El-Saharty et al. (2020), were descriptive studies that used convenience sampling and, therefore, our systematic review faced the difficulty to generalize the combined findings. Furthermore, these studies were conducted in five different countries or two regions: Bahrain (Mirza & Karolak, 2019; Thomas et al., 2016); Oman (Atef & Al Balushi, 2017; Belwal et al., 2017; Swailes et al., 2012); Qatar (Alshare & Sewailem, 2018); Saudi Arabia (Al-Ajmi, 2003; Iqbal & Zenchenkov, 2014; Shorfuzzaman & Alhussein, 2016); United Arab Emirates (Griffin & Coelho, 2019); GCC (El-Saharty et al., 2020); and MENA (Hijazi & Zoubeidi, 2017). Due to different education systems across countries and regions, the characteristics of student structure in the classroom, instructors, and employers add to setting variability.

Second, another methodological issue across these studies was measurement. Five studies used researcher-developed interview questions, which had minimal reliability and validity.

Third, only three studies identified a theoretical framework (Belwal et al., 2017; Shorfuzzaman & Alhussein, 2016; Swailes et al., 2012). The use of such frameworks guides researchers in the selection of variables to be measured. As attention is paid to which framework operates well in studying generic skills development outcomes, studies can become more consistent and collectively can better advance knowledge about the field. In turn, generic skills development can become increasingly evidence-based.

Finally, only two studies identified the implication of generic skills development on health and social dimensions. Although these aspects were not the primary focus of the reviewed studies, it was encouraging that researchers have identified the need to study variables other than those associated with the employability agenda.

6. Limitations

One of the limitations of the review was searching for original studies. The researchers limited the databases to ERIC and the World Bank Documents & Reports, which identified studies using either quantitative or qualitative methodology from their titles to be challenging. As a result, we may have missed important original studies on generic skills development in our review's GCC context. We, however, screened references to reduce this limitation. In addition, the search period was restricted to years 2000–2020, which may have introduced limitations by leaving out important studies that were conducted before this defined period.

7. Recommendations and Implication

7.1. Recommendations

This review's findings suggest important weaknesses in the recent literature on the study of generic skills development outcomes at the higher education level; thus, continued advancement of knowledge about the field is not occurring effectively. Recommendations for future research that addresses these weaknesses are presented below.

- Conduct regional studies guided by a model that accounts for input differences in a learner's generic skills, such as decision-making, self-awareness and expectation, lifelong learning skills, and other factors that influence a graduate's employability (Atef & Al Balushi, 2017; Shorfuzzaman & Alhussein, 2016) as an outcome. Although these variables will continue to vary widely across countries and contexts, it is critical to developing a common regional understanding with the generic skills nomenclature to be studied, compared, and assessed in systematic ways across studies. With respect to curriculum development and instruction, there is still a question about the optimal amount of learning efforts that should be dedicated to generic skills development and the pertinent aspects that employers say they cannot do without. Hence, more studies are needed that account for input differences that can guide higher education institutions in striking a good balance in the amount dedicated to generic skills development in the classroom.
- Conduct studies that include health- and social dimension-focused outcomes, using the FOPA model, which links the higher education system with networks, national systems, regional university associations, and other key higher education factors from all sectors of the economy, as opposed to limiting generic skills development to employability outcomes. Although the studies by Swailes et al. (2012) and El-Saharty et al. (2020) included outcomes related to health and social dimensions, this was not the primary focus of these studies. Health and social dimensions have not always been valued as important outcomes of generic skills development, especially at the higher education level, but it is critical to study if a better understanding of generic skills development is to be made. With the rapid technological developments and the impact of the fourth industrial revolution, higher education institutions need to develop a holistic approach for students' development that emphasizes skills (both technical and generic skills), essential competencies, and experiential learning to enhance graduate attributes. The GCC countries can take steps in this direction by developing a Regional Qualifications Framework that aligns higher education in playing a more active role in sectors of employment and social dimensions, which have not been taken into consideration in the past, in the process of building a more resilient talent pool in the region (Quota & Sekkarie, 2017; Samans & Zahid, 2017).
- Conduct studies that operationally define the measures of generic skills development on graduate attributes and outcomes and the continued development and use of tools that measure these outcomes. The GCC should establish generic

skills standards and categorization to guide higher education in curriculum design and instruction, which are important in developing tools to measure generic skills.

7.2. Implications for practice

Enhancing the understanding of each of the core properties of the inter-related approaches and learning how to facilitate them as a practitioner would cross-fertilize the relationship between higher education with its various constituencies, stakeholders, and communities. The FOPA model to practitioners would represent the interconnections and interdependencies of interactions between higher education with key stakeholders and government in developing personal and employability skills. For example, higher education institutions thinking in terms of partnerships with key stakeholders will require internal governance arrangements to enhance interactions to align with the needs of employers and the community (EHEA, 2016; Eisenshmidt, 2009; Gehmlich, 2009; Serrano et al., 2015) – which encourages the identification and integration of generic skills in higher education.

7.3. Implication for research

Using studies such as those included here may demonstrate the current value of generic skills development at the higher education level and improve graduates' investments through knowledge, skills, and health required for a successful life, a well-functioning society, and for employment (El-Saharty et al., 2020). Furthermore, such studies will help provide research-based direction for further generic skills development initiatives in the region.

FOPA provides a non-mutually exclusive process for building closer alignment of higher education systems to the labor market, health, and social dimensions to enhance graduates' attributes in academics, workplaces, and the community (Knight, 2013 #30). Higher education often focuses on narrow discipline-based curriculum and instruction, ignoring the generic skills aspects needed by students to succeed in academics, the workplace, and in their life. By focusing attention on generic skills development, higher education will be better positioned to prepare students for an increasingly dynamic world, including providing great value for a college or university education.

Finally, research in this area has implications for health and social dimension research in general and presents an opportunity to test health- and social-focused outcomes. If the goal for generic skills development is to produce a productive and well-rounded individual, this is an important area of research for promoting the value of generic skills for employability and health and social dimensions.

Biography

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He received a master's in international development policy from Duke University. His current research focuses on educational investments, the role of technology in human capital formation, and the effect of technical and vocational education and training (TVET) on labor market outcomes. He has over ten years of experience conducting a variety of research, evaluation, and technical assistance projects focusing on entrepreneurship, small and medium enterprise (SME) development, workforce development training and education, and youth development, particularly in East Africa and the Middle East region.

Eun Jung Paik is a Ph.D. student majoring in education theory and policy at the Pennsylvania State University. She received a master's degree in International Relations from Sogang University in South Korea. She has over six years of administrative experience in Korean higher education institutions. Her current research interests are focused on inequalities in secondary and higher education in relation to socio-economic background and how these factors affect the student's access and outcomes of education. Her other interests are racial disparities in academic achievement and the relationship between education and demographic transitions.

References

- [1] Al-Ajmi, K. M. (2003). *Quality and employability in higher education: The case of Saudi Arabia* [PhD thesis, Middlesex University]. Middlesex University Research Repository. MX 73111910.
- [2] Alshare, K., & Sewailem, M. F. (2018). A gap analysis of business students' skills in the 21st century: A case study of Qatar. *Academy of Educational Leadership Journal*, 22(P21, #38), 22.
- [3] ASEAN. (2015). *Qualifications Reference Framework*. Retrieved from <https://asean.org/wp-content/uploads/2017/03/ED-02-ASEAN-Qualifications-Reference-Framework-January-2016.pdf>.
- [4] Atef, T., & Al Balushi, M. (2017). Omani tourism and hospitality students' employment intentions and job preferences. *Quality Assurance in Education*, 25(4), 440–461. <https://doi.org/10.1108/QAE-04-2016-0022>
- [5] Bar-On, R., Handley, R., & Fund, S. (2006). The impact of emotional intelligence on performance. In V. U. Druskat, F. Sala, & G. Mount (Eds.), *Linking Emotional Intelligence and Performance at Work: Current Research Evidence with Individuals and Groups* (pp. 3–19). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- [6] Belwal, R., Priyadarshi, P., & Al Fazari, M. H. (2017). Graduate attributes and employability skills. *International Journal of Educational Management*, 31(6), 814–827. <https://doi.org/10.1108/IJEM-05-2016-0122>
- [7] BQA. (n.d.). The national qualifications framework. Retrieved from <https://www.bqa.gov.bh/En/QaaetUnits/NQFU/Pages/NQF.aspx>
- [8] CASEL. (n.d.). *Approaches: What is SEL?* Retrieved from <https://casel.org/what-is-sel-4/approaches/>
- [9] Chakane, M., & Rodrigues, P. (2009). *The GCC qualifications going global: Towards internationally recognized qualifications framework in the GCC countries*. Paper presented at the Qualifications Framework Project. Retrieved from http://www.qualifications.ae/2009gccconference/GCC_Report_1Nov.pdf
- [10] Damaj, I. W., & Chaaban, F. B. (2011). *Sustainability of engineering education in the Gulf Cooperation Council region*. Paper presented at the 2011 IEEE GCC Conference and Exhibition (GCC). Retrieved from: <https://ieeexplore.ieee.org/document/5752606>
- [11] EHEA. (2005). *Bergen Communiqué: Ministerial Conference Bergen 2005*. Bergen, Germany. Retrieved from <http://www.ehea.info/page-ministerial-conference-bergen-2005>
- [12] EHEA. (2016). *National Correspondents for Qualifications Frameworks (QF-EHEA)*. Paris. Retrieved from <https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=28734&no=15>
- [13] Eisenshmidt, E. (2009). Induction - Challenges and opportunities for improving teacher education in Europe. In O. Gassner, L. Kerger, & M. Schratz (Eds.), *The First Ten Years After Bologna* (pp. 123–138). Bucharest, Romania: Editura Universitatii din Bucuresti.

- [14] El-Saharty, S., Kheyfets, I., Herbst, C. H., & Ajwad, M. I. (2020). *Fostering Human Capital in the Gulf Cooperation Council Countries*. Washington DC: World Bank. Retrieved from <https://openknowledge.worldbank.org/handle/10986/33946>
- [15] Gehmlich, V. (2009). "Kompetenz" and "Beruf" in the context of the proposed German qualifications framework for lifelong learning. *Journal of European Industrial Training*, 33(8/9), 19. <https://doi.org/10.1108/03090590910993607>
- [16] Gibb, J., & Curtain, P. (2004). Overview. In J. Gibb (Ed.), *Generic Skills in Vocational Education and Training: Research Readings* (p. 12). Adelaide, Australia: National Centre for Vocational Education Research (NCVER).
- [17] Gilar-Corbi, R., Pozo-Rico, T., Sanchez, B., & Castejon, J. L. (2018). Can emotional competence be taught in higher education? A randomized experimental study of an emotional intelligence training program using a multimethodological approach. *Frontiers in Psychology*, 9, 11. <https://doi.org/10.3389/fpsyg.2018.01039>
- [18] Griffin, M., & Coelho, P. (2019). Business students' perspectives on employability skills post internship experience. *Higher Education, Skills and Work-Based Learning*, 9(P21, #38), 60–75. <https://doi.org/10.1108/HESWBL-12-2017-0102>
- [19] Gross, S., & Ghafar, A. A. (2019). *The Shifting Energy Landscape and the Gulf Economies' Diversification Challenge*. Washington, DC: The Brookings Institution. Retrieved from https://www.brookings.edu/wp-content/uploads/2019/12/FP_20191210_gcc_energy_ghafar_gross.pdf
- [20] Gulf News. (2019, November 4). UAE Cabinet announces appointment of Fourth Industrial Revolution ambassador. *Gulf News*. Retrieved from <https://gulfnews.com/uae/government/uae-cabinet-announces-appointment-of-fourth-industrial-revolution-ambassador-1.1572881176821>
- [21] Hijazi, R., & Zoubeidi, T. (2017). State of business statistics education in MENA region. *Journal of International Education in Business*, 10(P21, #38), 68–88. <https://doi.org/10.1108/JIEB-07-2016-0017>
- [22] Iqbal, A., & Zenchenkov, M. (2014). Market tested business education: Corporate sector perceptions of Saudi graduates competencies. *Asia-Pacific Journal of Cooperative Education*, 15(P21, #38), 15.
- [23] Jordan, P. J., & Ashkanasy, N. M. (2006). Emotional intelligence, emotional self-awareness, and team effectiveness. In V. U. Druskat, F. Sala, & G. Mount (Eds.), *Linking Emotional Intelligence and Performance at Work: Current Research Evidence with Individuals and Groups* (pp. 145–163). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- [24] KHDA. (n.d.). Know about national qualifications framework (QFEmirates) of UAE. Retrieved from https://www.khda.gov.ae/CMS/WebParts/TextEditor/Documents/Know_about_National_Qualifications_Framework_QAD_Book_02_Eng.pdf
- [25] Knight, J. (2013). A model for the regionalization of higher education: The role and contribution of tuning. *Tuning Journal for Higher Education*, 1(P21, #38), 20.
- [26] Knight, J., & Woldegiorgis, E. T. (2017). *Regionalization of African Higher Education*. The Netherlands: Sense Publishers.
- [27] Mason, G., Williams, G., & Cranmer, S. (2009). Employability skills initiatives in higher education: What effects do they have on graduate labour market outcomes? *Education Economics*, 17(P21, #38), 30. <https://doi.org/10.1080/09645290802028315>
- [28] Maxwell, G., Scott, B., & Macfarlane, D. (2010). Employers as stakeholders in postgraduate employability skills development. *The International Journal of Management Education* 8(P21, #38), 21. <https://doi.org/10.3794/ijme.82.267>
- [29] Mirza, C., & Karolak, M. (2019). Gulf Cooperation Council (GCC) labor market, education and generation Y females: A match or a mismatch? *Journal of International Women's Studies* 20(P21, #38), 10.
- [30] Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., . . . Stewart, L. A. (2015). Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement. *Systematic Reviews*, 4(P21, #38), 1.
- [31] Naithani, P. (2011). Foreign higher education institutes in Gulf Cooperation Council (GCC) countries. *Journal of Management Studies and Research*, 10(P21, #38), 6.
- [32] OAAA. (n.d.). *Oman Qualification Framework (OQF)*. Oman: Oman Academic Accreditation Authority (OAAA, #36). Retrieved from <http://www.oaaa.gov.om/OQF.aspx#OQFGeneral>
- [33] OECD. (2017). *Social and Emotional Skills: Well-Being, Connectedness and Success*. Paris: OECD. Retrieved from: [https://www.oecd.org/education/school/UPDATED%20Social%20and%20Emotional%20Skills%20-%20Well-being,%20connectedness%20and%20success.pdf%20\(website\).pdf](https://www.oecd.org/education/school/UPDATED%20Social%20and%20Emotional%20Skills%20-%20Well-being,%20connectedness%20and%20success.pdf%20(website).pdf)
- [34] P21. (n.d.). *Framework and Resources for 21st Century Learning*. BattelleforKids. Retrieved from <https://www.battelleforkids.org/networks/p21/frameworks-resources>
- [35] Panagiotakopoulos, A. (2012). Employability skills development in Greek Higher Education Institutions (HEIs). *Higher Education, Skills and Work-Based Learning* 2(P21, #38), 9. <https://doi.org/10.1108/20423891211224621>

- [36] Quota, M., & Sekkarie, S. (2017). *Toward a Diversified Knowledge-based Economy: Education in the Gulf Cooperation Countries*. Washington, DC: World Bank Group.
- [37] Samans, R., & Zahid, S. (2017). *The future of jobs and skills in the Middle East and North Africa: Preparing the region for the fourth industrial revolution* (REF 150517). Geneva, Switzerland: World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_EGW_FOJ_MENA.pdf
- [38] Serrano, G., Llamazares, F., & Otamendi, F. J. (2015). Measurement and sustainability of the qualifications frameworks in the European higher education area through an employment survey on access to the labour market. *Sustainability*, 7(10), 35. <https://doi.org/10.3390/su71013777>
- [39] Shorfuzzaman, M., & Alhussein, M. (2016). Modeling learners' readiness to adopt mobile learning: A perspective from a GCC higher education institution. *Mobile Information Systems*, 2016, 1–10. <https://doi.org/10.1155/2016/6982824>
- [40] Star, C., & Hammer, S. (2008). Teaching generic skills: Eroding the higher purpose of universities, or an opportunity for renewal? *Oxford Review of Education*, 34(P21, #38), 15.
- [41] Swailes, S., Al Said, L. G., & Al Fahdi, S. (2012). Localisation policy in Oman: A psychological contracting interpretation. *International Journal of Public Sector Management*, 25(5), 357–372. <https://doi.org/10.1108/09513551211252387>
- [42] Thomas, A., Piquette, C., & McMaster, D. (2016). English communication skills for employability: The perspectives of employers in Bahrain. *Learning and Teaching in Higher Education: Gulf Perspectives*, 13(P21, #38). <https://doi.org/10.18538/lthe.v13.n1.227>
- [43] Tuck, R. (2007). *An Introductory Guide to National Qualifications Frameworks: Conceptual and Practical Issues for Policy Makers*. Geneva, Switzerland: International Labour Office.
- [44] UAENQF. (2013). *Qualifications Meta-frameworks: A Report Supporting the Development of Gulf Cooperation Council's Gulf Qualifications Framework (GQF)*. United Arab Emirates: National Qualifications Authority (NQA). Retrieved from http://technicalcouncil.com/files/gulf_qfw.pdf
- [45] WBG. (n.d.). *Experimental Methods*. Retrieved from https://dimewiki.worldbank.org/wiki/Experimental_Methods