Professional competencies and graduates employability in Oman

Ghanim Faiz Al Harrasi[1], Masoud Suliman Al Salmani[2], Maram Ghanim Al Harrasi[3]
[1]Training and Employment Guidance Center, University of Technology and Applied Sciences (UTAS), Al Musannah, Oman
[2]Department of Partnership and Entrepreneurship, University of Technology and Applied Sciences (UTAS), Al Musannah, Oman
[3]Computer Systems and Networks Section, College of Engineering, Sultan Qaboos University, Muscat, Oman

Article Info

ABSTRACT

The unemployment crisis among graduates is a global issue that receives considerable attention from countries. However, in the Omani context, employers and policymakers argue that it stems from a lack of professional competencies rather than a shortage of jobs. Therefore, this paper focuses on studying the impact of graduates' professional competencies on employability from the perspective of graduates of the University of Technology and Applied Sciences (UTAS) in Oman. The study examines graduates' perceptions of professional competencies that directly affect employability within the context of the Omani labor market. It explores the relationship between Omani graduates' professional competence and the skills gap between graduates and the requirements of the labor market in Oman. The study employed a quantitative approach, with data collected via a questionnaire distributed to 100 graduates from the UTAS in Oman. The study applied exploratory factor analysis using SPSS to test the factors influencing graduates' employability. The main findings concluded that graduates believe they are professionally competent but cannot identify a consensus on the competence barrier preventing them from being employed. Based on these findings, the study recommends a unified guideline of competencies required by Oman's labor market.

Corresponding Author:

Ghanim Faiz Al Harrasi
Training and Employment Guidance Center, University of Technology and Applied Sciences
P.O Box 191, PC 314, Muladdah, Al Musannah, Oman
Email: Ghanim.Alharrasi@utas.edu.om

1. INTRODUCTION

The employment crisis faced by higher education graduates is a pervasive global issue that significantly impacts the market economy. One critical factor exacerbating this crisis is the growing lack of employer confidence in the quality of outputs from higher education institutions (HEI). Research consistently demonstrates the positive influence of graduates' perceptions of employability on their employment outcomes [1]. In response, many HEI's have prioritized employability as a key policy objective [2]. Despite these efforts, a persistent gap exists between the skills graduates acquire and the needs of the labor market. This gap continues to hinder employment opportunities, as employers often seek specific competencies that graduates may not possess. This study aims to address the professional competencies gap, which is considered a significant barrier to graduate employability, by offering a framework of competencies based on the perspectives of Omani graduates. The research underscores the importance of enhancing key professional skills and competencies and advocates for proactive measures by stakeholders to improve the employability prospects of graduates in Oman [3].

The study aligns with the labor market goals and employment priorities outlined in Oman Vision 2040. The Omani government, through initiatives led by the Ministry of Labor (MOL), has emphasized addressing key challenges within the labor market, with the aim of creating an environment that attracts talent and adapts to societal changes. Central to this vision is the strategic focus on developing a labor market that can keep pace with evolving needs. Royal Decree No. 47/2021, which established the University of Technology and Applied Sciences (UTAS) system, introduced several key objectives, particularly those related to leveraging scientific research for the labor market and aligning research outcomes with Oman's broader developmental plans. These objectives are directly linked to this study, which investigates how scientific research can contribute to meeting Oman's labor market needs. Additionally, the UTAS strategic plan (SP) includes sub-objectives focused on enhancing graduates' competencies and competitiveness, further supporting the study's relevance by emphasizing the need for academic institutions to align graduate capabilities with the demands of the labor market to improve employability outcomes.

The issue of graduate unemployment and employability is a significant global challenge, particularly in market economies. In Oman, this problem is exacerbated by employers' lack of confidence in the effectiveness of higher education and the preparedness of graduates to enter the workforce. This mismatch has resulted in a persistent gap between the professional competencies of graduates and the evolving demands of the labor market. The Oman Vision 2040, launched in 2020, seeks to address this gap by emphasizing the alignment of employment opportunities with labor market needs. In this regard, Al Hinai et al. [4] highlights the importance of employability as a practical strategy to help job-seeking graduates enhance their skills and competencies, thus increasing their readiness for the workforce. According to study by Fabio [5], employability builds on targeted, specialized training programs to improve individual capabilities to meet market demands.

Career boundaries theory further supports this notion, with Santos [6] arguing that graduates' competencies must be tailored to the unique contexts of different labor markets. The challenge of defining the professional competencies needed by the labor market has sparked ongoing debates within higher education and academic circles. Consequently, practitioners and researchers should converge on a competency framework that clearly defines the general and specialized aspects of graduates' professional competencies [7]. This study, therefore, aims to explore the role of professional competencies in enhancing graduate employability, proposing that it is possible to identify the specific competencies required by the labor market from the perspective of the graduates themselves. The discourse surrounding professional competencies in Oman continues to be an area of active scholarly debate, with ongoing research primarily focused on examining and clarifying the perspectives of employers. This paper presents a comprehensive framework for professional competencies, specifically tailored to meet the demands of the Omani labor market as seen by Omani graduates.

The study examines the gap in professional competencies among graduates in Oman and how to align these competencies with labor market needs. The objectives of this study are focused on exploring the effect of graduates' professional competencies such as knowledge, attributes, and workplace practices as well as investigating the moderating impact of graduates' readiness on the relationship between professional competencies and employability. Based on the objectives and research questions, the study presents four hypotheses. The first hypothesis posits that graduates' professional knowledge affects their employability. The second hypothesis asserts that graduates' professional attributes impact their employability. The third hypothesis suggests that graduates' professional practices in the workplace influence their employability. The final hypothesis proposes that graduates' readiness moderates the relationship between professional competencies and employability.

Oman is still striving to formulate a unified framework of professional competencies that includes the skills required for the labor market. To address the skills and employment gap, Oman Vision 2040 emphasizes the importance of the labor market in ensuring employment. Accordingly, the MOL outlines the vision's goals by launching national initiatives to enhance professional skills and the competencies of job seekers. MOL has designed three programs to qualify job seekers with the skills necessary for the Fourth Industrial Revolution and to enhance their ability to adapt to the labor market's requirements. The first program, called Imana, aims to build professional competencies that keep pace with developments in the labor market. The second program is the "Khirbet" program, which focuses on implementing plans to enhance job seekers' capabilities, abilities, and skills. The third program, for distance training, is called the "Maran Platform," and it aims to promote a lifelong learning approach. On the other hand, the Omani Authority for Academic Accreditation has established the General National Qualifications Framework, as shown in Figure 1. The Omani National Qualifications Standards (ONQS) are designed to meet the requirements of the Omani context and influence learning outcomes in higher education, with a particular emphasis on thinking and problem-solving skills.
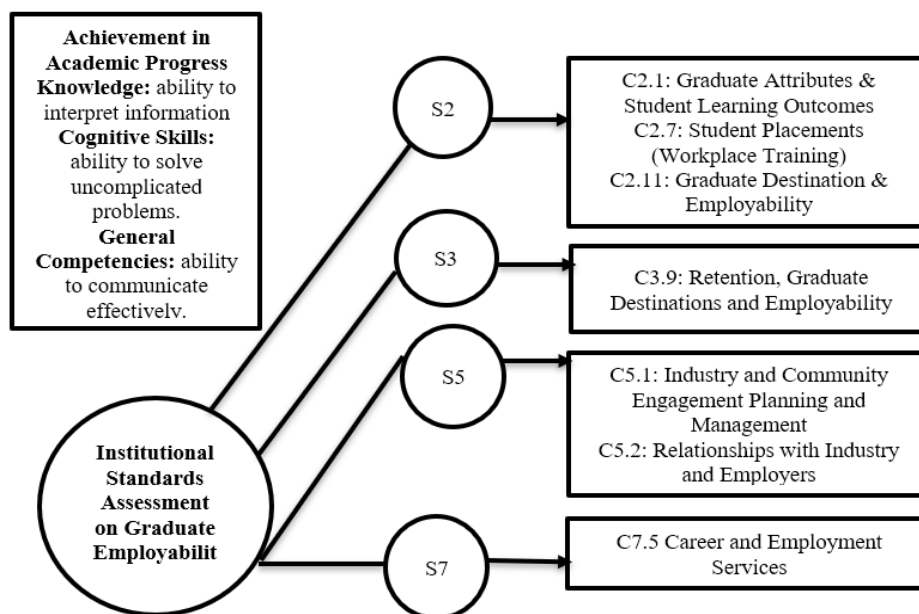
Figure 1. The Omani National Qualifications Standards

Employability is a practical approach that helps individuals increase their capabilities to meet the demands of the labor market [4]. Based on the arguments surrounding the term, it can be defined as the graduate's ability to develop professional competencies and achieve performance from the moment they begin a job [8]. Thus, employability reflects individual readiness, which is grounded in in-depth and specialized training programs that enable job seekers to address the challenges and current demands of the labor market [5]. Competencies refer to personality traits, skills, and knowledge developed by an individual that can be applied in the workplace [9]. The theory of professional competence focuses on the fundamental competencies required to perform a specific job [10].

In contrast, practice theory refers to the practical aspect of developing competence, or the variety of activities expressed in the term "professional practice of competence" [11]. The concept of professional practice in relation to competence leads us to conclude that competence is a matter of appropriateness. Additionally, evaluation is conducted by determining the extent to which a person can carry out the procedures required by an activity, based on the type of professional practice. Stakeholders emphasize the importance of adopting an employability framework that integrates the perspectives of both researchers and practitioners, aiming to identify the vocational competence attributes of graduates [7].

In the Omani context, graduates still need to become aware of the required skills and the influence of the prevailing national context [12]. It is believed that predetermined expectations regarding the impact of certification and specialization on job opportunities have led to significant difficulties, hindering job prospects for Omani graduates [8]. Accordingly, graduates must reshape their behaviors and expectations to align with the actual requirements of the labor market and the challenges they face in their professional future [13]. HEIs in Oman face significant challenges in their tireless efforts to convince employers of the efficiency of their graduates. A nearly unanimous opinion has emerged among stakeholders that a certificate alone is no longer sufficient to guarantee employment.

Therefore, HEIs and employers must collaborate to enhance the competence of graduates, equipping them with the necessary skills to enter the labor market [14]. Many studies have concluded that knowledge of labor market requirements is almost nonexistent among job-seeking graduates, which presents a significant obstacle to building employability [15]. Employers in Oman find that graduates must build a skill set compatible with labor market needs [16]. However, there is still no agreement in Oman on a specific classification of the skills that should be emphasized in practical training programs. Consequently, each higher education institution (HEI) has identified core skills, referred to as graduate attributes [17]. Thus, the ambiguity surrounding the term "graduate employability" calls for more in-depth research to evaluate and develop graduates' competencies.

The labor market's demand for skills is deeply rooted in the national cultural context, a factor that must be acknowledged when formulating a professional skills framework [18]. Numerous studies have shown that university students often have high expectations of securing employment after graduation, based on their admission to universities and their college degrees. The Omani Graduate Survey 2017 revealed that

overall grade point average (GPA) and specialization were significant factors in securing a job. However, the 2019 survey presented a different picture, indicating that these factors did not have a significant impact on employment opportunities [19]. The findings of the graduate survey also indicated that 91% of job seekers believed their qualifications were suitable for the labor market [20].

However, challenges can serve as positive signals, helping graduates realize the importance of reshaping their behaviors and expectations toward the labor market requirements and the challenges of future employment [13]. The most prominent challenge facing HEI's in Oman lies in their ability to convince employers of the efficiency of their outputs. Stakeholders agree that more than just an academic certificate is required to guarantee employment. Therefore, it is necessary to increase graduates' efficiency and provide them with the skills needed to prepare them for work [14]. Literature findings show that graduates need to learn about labor market requirements, which hinders their ability to build employability [15]. Employers in Oman likewise believe that graduates lack the skills required in the workplace [16]. Figure 2, adapted from the literature, illustrates the framework of factors that affect the employability of graduates.
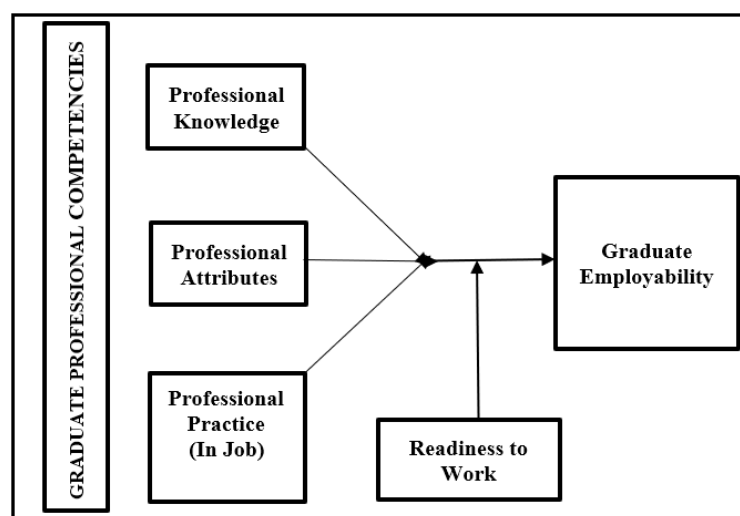

Figure 2. Graduates professional competencies framework

Study by Tulsi and Poonia [21] focused on communication skills, creativity, innovation, teamwork, problem-solving, and critical thinking. At the same time, Bhatti *et al*. [22] considered the English language not just as a language but as a crucial tool for efficiency in the workplace, especially in the global context. Human and social capital influence national culture and graduate employability [23]. Silva *et al*. [24] also found an effect of training, while Jackson and Bridgstock [25] found that it does not affect employability. However, training is critical in enhancing professional competence and developing employability [26]. The previous comments support the claim that graduate employability requires an in-depth understanding of competency assessment and development [27].

The government plays the role of mediator between stakeholders to address the skills gap by seeking to build a unified structure of professional skills for graduates [28], [29]. Jatmiko [30] emphasized several core standards: professional competencies, professional knowledge, professional attributes, and professional practices. Accordingly, the added value of this study will focus on graduates' perceptions regarding taking the initiative to address the skills gap through a self-management approach to professional competencies.

2. METHOD

The study adopted descriptive correlational research based on quantitative approach. Exploratory factor analysis was used to test the influence of professional competencies on employability of graduates of the UTAS. This study accordingly evaluates the influence of professional competencies on employability through a sample of UTAS graduates. The target population of this research consists of 100 graduates from the UTAS in Oman. The study's unit of analysis is based on the perceptions of the impact of professional competencies on employability. Bryman and Bell [31] examine the various techniques for data collection, such as interviews and questionnaires. To better analyses the research problem, the researcher must collect data methodically [32].

2.1. The research strategy

The study adopted a probability simple random sampling method and participants' choices from different backgrounds. The sample provides a complete representation of the population and an unbiased representation of the population. The framework presented in the research paper examines the relationships between the study variables, offering a framework for interpreting the data and addressing the research problem concerning the employability of Omani graduates. The researcher contends that the chart is characterized by its clarity, simplicity, and effectiveness in illustrating the correlations between the study variables. These qualities were achieved through the careful adaptation of the survey to guide respondents through the variables, ensuring ease of understanding and interpretation. The study used a survey to explore the relationship between graduates' professional competencies and graduates' employability with a sample drawn from the population of graduates.

The study conducted a data analysis regression to test hypotheses to determine whether graduates have professional competency and if it impacts their employability. The questionnaire was designed of the title "Employability of Omani graduates". The study instrument was adapted to suit the research in the Omani context. The design of the questionnaire has been carefully tailored to align with the specific context of the Omani labor market, considering the associated social, cultural, and economic factors. The design depends on the formulation simplicity of the questions and the inclusion of short, clear and easy-to-understand questions. A pre-test of the questionnaire was conducted with a sample of university graduates to ensure its appropriateness and effectiveness.

The questionnaire used in this study was adapted and developed based on an extensive review of literature related to graduates' perceptions of employability, with a specific focus on the dimensions of the phenomenon in the Omani national context. A pre-test of the questionnaire was conducted with a sample of university graduates to ensure its appropriateness and effectiveness. The instrument comprises 47 questions, divided into six distinct sections. The first section gathers demographic data, while the remaining five sections are designed to assess the key research variables, with a total of 40 items. Part 2 focuses on the dependent variable, graduate employability, and its associated factors, comprising 5 items. Parts 3, 4, and 5 examine independent variables related to professional characteristics, professional knowledge, and professional practice of graduates, with 5, 14, and 12 items, respectively. Part 6 addresses graduates' readiness to work, consisting of 4 items as shown in Table 1.

The respondents are asked to rate their perceptions of each variable on a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The scale is designed to capture progression from strong disagreement to strong agreement. The research strategy is rooted in a systematic approach to identifying the key issues and challenges related to the study, emphasizing the value of participants' opinions in providing meaningful insights. The target population for this study was randomly selected from various branches of the UTAS across Oman, with sample size determination based on Krejcie and Morgan's sampling table [33]. The random sampling framework ensures a diverse and representative sample of graduates across the country.

For the reliability of the research instrument, the study questionnaire was formerly tested on a sample of the target population. A pilot test conducted in advance to ensure that all means of data collection can work effectively, efficiently. The measurement depends on analyzing the reliability and validity of correlation in the different items and the responses of the participating respondents. The data were processed based on SPSS version 21, and the Cronbach alpha test was used to measure the reliability of all questionnaire items. It suggests an excellent level of questionnaire reliability, with an overall value of 0.947 and more than 0.780 for each variable, and the study instrument included a sufficiently representative number of elements.

The questionnaires for graduates were distributed electronically via a Google Form link, and then the link was sent to the graduates' sample via the departments of graduate follow-up. The demographic variable measurement includes gender, employment status, specialization, and qualification. Accordingly, the chart provides a coherent illustration of the literature discussion relevant to the study's topic. The findings of the research highlight that both the chart and the questionnaire instrument offer valuable insights into the problem at hand, particularly within the context of Oman.

Table 1. The research instrument grid

No.	Dimension	N of items	Percent (%)
1	Demographic information	7	14.0
2	Graduate employability	5	10.0
3	Professional attributes	5	16.0
4	Professional knowledge	14	28.0
5	Professional practice	12	24.0
6	Graduate readiness	4	8.0
	Overall questionnaire	47	100.0

3. RESULTUS AND DISCUSSION

The percentage of respondents in the research sample, which totaled 100%, reflects the graduates' interest in expressing their views on employability. However, this interaction was more pronounced among females, with a participation rate of 72%, compared to only 28% for males. The results also show that the highest participation rate was within the 21-25 age group, at 53%. This demonstrates the concentration of the highest participation rate among individuals with a bachelor's degree, a higher diploma, or a post-secondary diploma, with an overall rate of 98%.

These results indicate the graduates' maturity in expressing their perceptions of graduate employability and the professional competencies available to them. The specializations in applied sciences, engineering, and management had the highest percentages of respondents, ranging from 37% to 30% to 20%, respectively. The demographic characteristics of the research sample also show that a significant percentage of graduates have not found employment, with a rate of 87%, as shown in Table 2.

Table 2. Demographic characteristics of the study sample

	Variable	Frequency	Percent (%)
Gender	Male	28	28.0
	Female	72	72.0
Total		100	100.0
Marital status	Single	63	63.0
	Married	37	37.0
Total		100	100.0
Age period	21-25 years	53	53.0
	26-30 years	35	35.0
	31-35 years	6	6.0
	More than 35 years	6	6.0
Total		100	100.0
Work status	Unemployed graduate	87	87.0
	Employed graduate	13	13.0
Total		100	100.0
College/university	Public	73	73.0
	Private	27	27.0
Total		100	100.0
Educational level (certificate)	Diploma	33	33.0
	Higher-diploma	23	23.0
	Bachelor	42	42.0
	Master	2	2.0
Total		100	100.0
Department	Engineering	30	30.0
	Business studies	21	21.0
	Information technology	9	9.0
	Applied sciences	37	37.0
	Other	3	3.0
Total		100	100.0

The responses to the questionnaire were scored using a 5-point Likert scale (ranging from strongly disagree=1 to strongly agree=5). The hypotheses were tested using regression coefficients, and all hypotheses were accepted. The analysis of the questionnaire reveals that multiple regression analysis shows a reasonable degree of correlation between graduates' employability and professional competence variables. The coefficient of variance analysis indicated a statistically significant relationship between professional competencies and the employability of graduates.

The results in Table 2 show a consensus among graduates that graduate employment depends on their ability to present themselves as suitable candidates for employment. Graduates also possess the skills and professional competence necessary for their employability. Table 3 illustrates that the average agreement on graduate employability is 3.75. The survey shows strong approval for the alignment of graduates' professional qualifications and the labor market's requirements. Respondents believe this alignment has contributed to improvements in their employability. The similarity in responses was highest regarding skills in working with a multicultural team, using modern technology, adhering to work ethics and health and safety regulations in the workplace, and engaging in lifelong learning.

Table 4 presents the descriptive statistics for professional competencies (professional attributes). All aspects of the attribute variable show a high level of satisfaction. The statement "the ability to identify, formulate, and solve problems" has the highest mean (4.10) with a standard deviation of 0.870. This is followed by "proficiency in the English language required in the workplace," with a mean of 3.81 and a standard deviation of 1.002. Respondents emphasized their mastery of problem-solving skills, English

communication, organizational commitment, and job search techniques, as shown in Table 3. They also highlighted the importance of having guidelines for the professional competencies required to enhance employment opportunities for graduates.

Table 3. Descriptive statistics of graduate employability concept

The questions of the graduate employability concept	Mean	Standard deviation	Decision
The graduate's ability to present himself as a suitable candidate for the job increases his/her employability	3.91	1.120	High
Employability is positively affected by graduate's professional competency	3.75	1.149	High

Table 4. Descriptive statistics of professional competencies

Questions of the graduate professional attributes	Mean	Standard deviation	Decision
The ability to understand the culture of the organization	4.12	0.913	High
The ability to identify, formulate, and solve problems	4.10	0.870	High
Proficiency in the English language required in the workplace	3.81	1.002	High
The skills and knowledge of academic major that needs of the labor market	3.39	1.278	High
Need for a skills handbook	3.92	1.038	High

Table 5 illustrates the descriptive statistics of the professional competencies (professional knowledge). All phrases have a high level of satisfaction. The statement (the willingness and ability to engage in a lifelong learning environment) has the highest mean (4.30) with a standard deviation (0.870). Then (the ability to work in multicultural teams) with a mean of 4.20 and a standard deviation of 0.921. Results regarding professional knowledge in the workplace show high confidence among respondents in competencies for adapting to the workplace environment. Graduates expressed their high competence in working in a multicultural environment that supports lifelong learning and knowledge of workplace requirements. Respondents emphasized the professional and ethical commitment of the workplace and the efficiency of using modern technologies to complete the work (Table 4).

Table 6 demonstrates the descriptive statistics of the professional competencies (professional practice), showing that two statements have a very high level of satisfaction. The statement, "I have the ability to work as a team leader or manager," has the highest mean (4.21) with a standard deviation of 0.955. Similarly, the statement, "to obtain a job, the graduate needs to have a strong CV," also has the highest mean (4.21) and a standard deviation of 0.944.

Table 5. Descriptive statistics of professional competencies

Questions of the graduate professional knowledge	Mean	Standard deviation	Decision
The willingness and ability to engage in a lifelong learning environment	4.30	0.870	Very high
The ability to work in multicultural teams	4.20	0.921	Very high
The ability to use techniques for work practice	4.20	0.876	Very high
Having a professional and ethical commitment to workplace	4.28	0.854	Very high
Having a knowledge of health and safety procedures in the workplace	4.23	0.952	Very high

Table 6. Descriptive statistics of professional competencies

Questions of graduate professional practice	Mean	Standard deviation	Decision
The ability to work as a team leader or manager	4.21	0.955	Very high
To obtain a job, the graduate needs a strong CV	4.21	0.994	Very high
The need for the internship	3.93	1.122	High
Social relationships play a major role in getting a job opportunity	3.89	1.103	High

However, the graduates' views on the gap between the knowledge gained from the educational system and specialization, on the one hand, and the requirements for professional competence in the labor market, on the other hand, were moderate, ranging from approval of the existence of a gap to neutrality. Most responses agreed that national culture impacts jobs and employment opportunities. Based on the statistical results, it was concluded that employability is significantly related to classroom professional knowledge, the graduate's professional attributes, and the professional practices in the workplace. In general, the average mean of professional competencies is 4.02, the average standard deviation is 1.014, and the decision for the field is high. Overall, the essential information from the ANOVA analysis showed that the coefficients could be interpreted to predict graduates' employability through professional competencies. Accordingly, the following regression equation was derived:

$$\text{Graduate employability} = (1.153) + (0.655) \text{ professional competencies}$$

Table 7 of the descriptive statistics reveals a striking aspect of our research: the high level of satisfaction with graduates' readiness. All statements regarding graduate readiness received very high levels of satisfaction, with the statement "as a graduate, I am adequately prepared for the workplace," scoring the highest mean (4.12) and a standard deviation of 0.913. This is a testament to the effectiveness of the education system in preparing graduates for the workplace. The average mean for graduate readiness is 4.05, the average standard deviation is 0.870, and the decision for the field is very high. Although the descriptive analysis of the data showed a significant effect of graduate readiness on the relationship, the hierarchical regression analysis demonstrates no moderating effect of graduate readiness on the relationship between professional competencies and employability.

Table 7. Descriptive statistics of readiness to work

The questions of the graduate readiness to work	Mean	Standard deviation	Decision
Preparation for the workplace	4.12	0.913	Very high
Professional competencies increase my readiness to work	4.05	0.870	High

The results review show that the value of educational qualifications no longer dominates graduates' perceptions of enhancing professional competence for employability. The employability of graduates has transformed into a strategy that focuses on the skills and professional competencies required for the labor market. Al-Jahwari et al. [8] argue that employability in Oman refers to the competence of university students to work, especially in the private sector. Al Hinai et al. [4] define employability as a practical approach to enhancing individuals' ability to meet the requirements of the labor market. Returning to the results, we find that the graduates' perceptions of employability align with the definition of their ability to present themselves as job candidates. Thus, Sudhakar and Prakash [3] emphasized the importance of improving and developing graduates' employability to meet the needs of the labor market.

Respondents rejected the claim from previous research that graduates' competencies are not relevant to workplace needs. Ibrahim and Devesh [14] believe that the Omani labor market needs to address the issue of graduates' employability because their competencies do not match labor market requirements, according to employers. This claim contradicts the graduates' perceptions that emerged through the survey conducted by this study. Omani HEI graduates believe they meet labor market requirements and possess the necessary competencies. Based on the previous statement, Abelha et al. [27] argue that the issue of graduate employability requires more in-depth research to evaluate and develop graduates' competencies.

Survey results indicate that graduates have high confidence in their qualifications and professional competence. The first objective and the study's first question focus on using graduates' experience and knowledge to enhance employability. This finding coincides with the graduate survey results from the National Center for Statistics and Information in Oman. The survey shows that 91% of job seekers confirmed their qualifications suit the labor market [20]. Employment literature also indicates increasing awareness among graduates regarding the challenges of their careers [13]. This finding is consistent with the research results.

Respondents placed significant emphasis on skills that constitute the required professional competencies. Graduates identified the most required workplace skills as working with a multicultural team, organizational and ethical commitment, risk management, knowledge of occupational safety and health procedures, ability to use modern technologies, and lifelong learning. This high value placed on professional competence underscores the importance of the identified workplace skills.

The second objective addresses whether the professional attributes of graduates are compatible with the needs of the labor market. According to the results, graduates' other skills, such as communication, English language proficiency, problem-solving, and critical thinking, are the most needed for achieving work-related goals. Therefore, the ability to communicate in English is considered a distinctive feature for graduates and a decisive factor for employability in the Omani labor market. Tulsi and Poonia [21] added that the labor market needs communication skills, creativity, innovation, teamwork, problem-solving, and critical thinking. Half of the respondents agreed that English is an important communication and work language, and considers it a significant factor for proficiency in the workplace [22]. Although Gaisch et al. [23] downplayed the effect of national culture on graduates' employment, the results confirmed the existence of this effect, especially for females. This result aligns with Shariq [18], who believes family and peers influence graduates' career choices.

The third objective explored the extent to which graduates' professional practice in the workplace aligns with the requirements of the labor market. The results revealed that half of the graduates believe that internships significantly impact bridging the gap between classroom knowledge and professional competency requirements in the workplace. However, some consider internship programs a critical strategy for enhancing employability [24]. While Jackson and Bridgstock [25] found that internships do not affect employability, the researcher agrees with Liu-Farrer and Shire [26], that internships are a critical factor in enhancing professional competence and developing employability. Thus, a graduate's professional competence is a combination of personal attributes, technical and professional skills, and workplace experience gained from on-the-job training programs and various forms of employment. Liu-Farrer and Shire [26] concludes that the employability of graduates is influenced by labor market expectations of specific skills within the national context. However, participants stressed that internship programs are not just a tool for increasing skills but a prerequisite for bridging the gap between classroom knowledge and workplace competence.

Respondents also confirmed their readiness to work and their professional competence to enter the labor market. Interestingly, and contrary to previous studies, graduates demanded the provision of a guide to professional skills and competencies and expressed interest in adopting a unified guide for the Omani labor market. Based on graduates' perceptions, the study sought to provide a unified framework for professional competencies to enhance employability in the Sultanate of Oman. Previous studies of the Omani market did not suggest the adoption of a unified framework for professional competencies required by the local labor market. From the study's findings, this paper proposes a suggested table, as shown in Table 8, that includes a framework for professional competencies agreed upon by graduates' perceptions.

The proposed framework is not just a theoretical construction but a practical tool. It combines a summary of the perceptions of graduates from Omani HEIs, national occupational standards, and professional competency skills set by the MOL for job-seeker training programmers. Importantly, it also considers the qualifications of graduates and the requirements of employers, ensuring that their needs and perspectives are central to the framework. The framework is further grounded in the national qualifications' standards of the Omani authority for academic accreditation and educational quality assurance. Additionally, the framework includes a guideline called the component Omani graduate employability skills (OGES).

The suggested framework calls on the government and employers to adopt a unified national guide for professional competencies in the Omani labor market. The professional competencies framework includes general, specific, learning, work, and life skills. The classification of skills will help identify current and future jobs and direct training programs toward the requirements of each professional sector, in line with the demands of the fifth industrial revolution.

Table 8. The component Omani graduate employability skills

Main component (professional competencies)	Sub-components (required skills)
Professional knowledge: a set of specialized scientific and national knowledge provided by the HEI that prepares graduates for a successful career.	OGES1-Knowledge of major OGES2-Knowledge of contemporary issues in industry OGES3-Knowledge of national cultural, and work history OGES4-Awareness of social and cultural differences OGES6-Knowledge of work ethics OGES7-Knowledge of work sectors and legislation OGES8-Ability to analyses and solve problems OGES9-Ability to work in a team OGES10-Communication skills OGES13-Innovation, creativity and entrepreneurial
Professional attributes: the personality skills and traits that are supposed to be used in a job, and workplace effectively.	OGES5-Social intelligence OGES6-Knowledge of work ethics OGES8-Ability to analyses and solve problems OGES9-Ability to work in a team OGES10-Communication skills OGES11-Leadership skills OGES12-Lifelong learning OGES13-Innovation, creativity and entrepreneurial
Professional practice: the skills are used to gain employment, maintain employment and succeed in the work field.	OGES5-Social intelligence OGES6-work ethic OGES8-Problem solving OGES9-Teamwork OGES10-Communication skills OGES11-Leadership skills OGES12-Lifelong learning OGES13-Decision making OGES14-CV writing and job search OGES15-Innovation, creativity and entrepreneurial

4.   CONCLUSION

The literature reveals the main problem facing graduate employability: the incompatibility between graduates' specializations and skills on one hand, and the needs of professions on the other. Previous studies, along with the findings of this study, conclude that it is crucial to understand the impact of the national context on the perceptions of graduates, as well as the differences in perceived opinions. The study's findings suggest that like international models for building employability through adopting a professional competency framework, Omani graduates will rely more on professional self-management in the future. Hence, the study recommends a framework tailored to the labor market in the Sultanate of Oman. The proposed framework draws on the experiences of countries in Europe, America, and Asia. This study aligns with some literature findings, which indicate that Omani graduates need to develop the skills required by employers, rather than relying solely on the basic skills acquired during their studies.

The researchers believe the study's significance lies in its alignment with Oman Vision 2040 and its executive programs concerning education and employment priorities. The study provides valuable insights for stakeholders exploring the attitudes of graduates and higher education students regarding their employability. It also responds to the call for participation in graduate employment studies that interest the Ministry of Higher Education. Additionally, the study serves as a valuable source of knowledge for researchers and practitioners in human resources, particularly in relation to the Omani experience of graduate employability. Therefore, this study makes a significant contribution by offering a comprehensive normative framework for the Omani labor market context.

AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Ghanim Faiz Al Harrasi	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Masoud Suliman Al Salmani		✓				✓	✓		✓	✓	✓			✓
Maram Ghanim Al Harrasi	✓		✓	✓	✓		✓			✓			✓	

C : **C**onceptualization	I : **I**nvestigation	Vi : **Vi**sualization
M : **M**ethodology	R : **R**esources	Su : **Su**pervision
So : **So**ftware	D : **D**ata Curation	P : **P**roject administration
Va : **Va**lidation	O : Writing - **O**riginal Draft	Fu : **Fu**nding acquisition
Fo : **Fo**rmal analysis	E : Writing - Review & **E**diting	

CONFLICT OF INTEREST STATEMENT

The authors hereby declare that there are no conflicts of interest, whether financial, personal, or otherwise, that could have inappropriately influenced the content or outcomes of the research presented in this paper. Furthermore, it is affirmed that the work contained in this thesis was conducted in full compliance with the regulations and ethical standards of the International Journal of Educational Research and Evaluation (IJERE). The research is original and constitutes the authors' own work, except where explicit reference is made to the contributions of others.

DATA AVAILABILITY

Derived data supporting the findings of this study are available from the corresponding author [GFAH] on request. Furthermore, the data supporting the findings of this study are included in the supplementary materials.

REFERENCES

[1]   N. Mezhoudi, R. Alghamdi, R. Aljunaid, G. Krichna, and D. Düştegör, "Employability prediction: a survey of current approaches, research challenges and applications," *Journal of Ambient Intelligence and Humanized Computing*, vol. 14, no. 3, pp. 1489–1505, Mar. 2023, doi: 10.1007/s12652-021-03276-9.

[2]   S. Sahudin, "Literature review on the factors affecting employability of engineering graduates," *ASEAN Journal of Engineering Education*, vol. 6, no. 1, pp. 13–22, 2022, doi: 10.11113/ajee2022.6n1.75.

[3]   G. P. Sudhakar and B. S. S. Prakash, "Employability of management graduates from Tier 2 and 3 institutions," *AIMS Journal of Management*, vol. 6, no. 2, pp. 187–206, 2021.

[4]   M. R. Al Hinai, A. B. Bhuiyan, and N. A. Husin, "The moderating effects of gender, career, moral mindset on the relationship between the graduate attributes and readiness for employability among engineering colleges graduates in Oman," *International Journal of Accounting & Finance Review*, vol. 5, no. 3, pp. 16–30, Oct. 2020, doi: 10.46281/ijafr.v5i3.807.

[5]   A. D. Fabio, "A review of empirical studies on employability and measures of employability," in *Psychology of Career Adaptability, Employability and Resilience*, K. Maree, Ed., Cham: Springer International Publishing, 2017, pp. 107–123, doi: 10.1007/978-3-319-66954-0_7.

[6]   G. G. Santos, "Career boundaries and employability perceptions: an exploratory study with graduates," *Studies in Higher Education*, vol. 45, no. 3, pp. 538–556, Mar. 2020, doi: 10.1080/03075079.2019.1620720.

[7]   I. Römgens, R. Scoupe, and S. Beausaert, "Unraveling the concept of employability, bringing together research on employability in higher education and the workplace," *Studies in Higher Education*, vol. 45, no. 12, pp. 2588–2603, Dec. 2020, doi: 10.1080/03075079.2019.1623770.

[8]   N. S. Al-Jahwari, M. Al Khalidi, S. Albalushi, M. Alghanami, Z. AlOmairi, and F. Khan, "Job-search behaviour of Omani Graduates: Sohar University-a case study," *International Journal of Research in Entrepreneurship & Business Studies*, vol. 1, no. 2, pp. 24–32, 2020, doi: 10.47259/ijrebs.123.

[9]   E. Y. Saatci and C. Ovaci, "Innovation competencies of individuals as a driving skill sets of future works and impact of their personality traits," *International Journal of Technological Learning, Innovation and Development*, vol. 12, no. 1, pp. 27–44, 2020, doi: 10.1504/IJTLID.2020.108637.

[10]   M. Mulder, "Competence theory and research: A synthesis," in *Competence-based Vocational and Professional Education: Bridging the Worlds of Work and Education*, M. Mulder, Ed., Cham: Springer International Publishing, 2017, pp. 1071–1106, doi: 10.1007/978-3-319-41713-4_50.

[11]   O. Lindberg and O. Rantatalo, "Competence in professional practice: A practice theory analysis of police and doctors," *Human Relations*, vol. 68, no. 4, pp. 561–582, Apr. 2015, doi: 10.1177/0018726714532666.

[12]   A. S. Al Wahshi, "Human resource planning practices in the Omani Public Sector: An exploratory study in the Ministry of Education in the Sultanate of Oman," M.S. thesis, Edith Cowan University, Joondalup, Australia, 2016.

[13]   S. F. El-Fekey and M. S. Mohamad, "The relationship between graduates' perceived employability attributes and employability gap in Egypt: The moderating roles of core self-evaluation and university branding," *International Journal of Business and Management*, vol. 13, no. 4, pp. 158–172, Mar. 2018, doi: 10.5539/ijbm.v13n4p158.

[14]   O. Ibrahim and S. Devesh, "Implication of public speaking anxiety on the employability of Omani graduates," *Journal of Teaching and Learning for Graduate Employability*, vol. 10, no. 2, pp. 122–135, Nov. 2019, doi: 10.21153/jtlge2019vol10no2art861.

[15]   R. Rodrigues, C. L. Butler, and D. Guest, "Evaluating the employability paradox: When does organizational investment in human capital pay off?," *International Journal of Human Resource Management*, vol. 31, no. 9, pp. 1134–1156, May 2020, doi: 10.1080/09585192.2019.1704825.

[16]   R. Al-Mahrooqi and C. J. Denman, "Omani graduates' English-language communication skills in the workforce: Employees' perspectives," *International Journal of Applied Linguistics and English Literature*, vol. 5, no. 4, pp. 172–182, May 2016, doi: 10.7575/aiac.ijalel.v.5n.4p.172.

[17]   B. Khampirat, C. Pop, and S. Bandaranaike, "The effectiveness of work integrated learning in developing student work skills: A case study of Thailand," *International Journal of Work-Integrated Learning*, vol. 20, no. 2, pp. 127–146, 2019.

[18]   M. Shariq, "Analysis for employment preference of undergraduate accounting students in Oman," *TEM Journal*, vol. 10, no. 2, pp. 825–831, May 2021, doi: 10.18421/TEM102-41.

[19]   Graduate Survey, "Graduate Survey." (in Arabic) [Online]. Available: https://www.moheri.gov.om/userupload/2024/Statistical%20Report%202023.pdf.

[20]   National Center for Statistic and Information (NCSI), "Economic Outlook of Oman/Report," 2019. [Online]. Available: https://www.ncsi.gov.om/Pages/NCSI.aspx

[21]   P. K. Tulsi and M. P. Poonia, "Expectations of industry from technical graduates: Implications for curriculum and instructional processes," *Journal of Engineering Education Transformations*, vol. 28, no. 4, pp. 42–49, Apr. 2015, doi: 10.16920/jeet/2015/v28i4/70393.

[22]   M. A. Bhatti, S. A. M. Saat, M. M. Aleidan, G. H. M. Al Murshidi, M. Alyahya, and A. S. Juhari, "Are business graduates' employability skills and learning/teaching techniques universal? Exploring the role of culture: A comparative study among Australia, China, Pakistan, and Saudi Arabia," *Sustainability*, vol. 14, no. 5, p. 3069, Mar. 2022, doi: 10.3390/su14053069.

[23]   M. Gaisch, V. Rammer, S. Preymann, S. Sterrer, and R. Aichinger, "The applicability of two graduate employability frameworks: How possession, position, integration and engagement shape graduate employability," in *Universities as Political Institutions: Higher Education Research in the 21st Century*, L. Weimer and T. Nokkala, Eds., Leiden: Brill/Sense, 2020, pp. 287–310, doi: 10.1163/9789004422582_013.

[24]   P. Silva et al., "Stairway to employment? Internships in higher education," *Higher Education*, vol. 72, no. 6, pp. 703–721, Dec. 2016, doi: 10.1007/s10734-015-9903-9.

[25]   D. Jackson and R. Bridgstock, "What actually works to enhance graduate employability? The relative value of curricular, co-curricular, and extra-curricular learning and paid work," *Higher Education*, vol. 81, no. 4, pp. 723–739, Apr. 2021, doi: 10.1007/s10734-020-00570-x.

[26] G. Liu-Farrer and K. Shire, "Who are the fittest? The question of skills in national employment systems in an age of global labour mobility," *Journal of Ethnic and Migration Studies*, vol. 47, no. 10, pp. 2305–2322, Jul. 2021, doi: 10.1080/1369183X.2020.1731987.

[27] M. Abelha, S. Fernandes, D. Mesquita, F. Seabra, and A. T. Ferreira-Oliveira, "Graduate employability and competence development in higher education-a systematic literature review using PRISMA," *Sustainability*, vol. 12, no. 15, p. 5900, Jul. 2020, doi: 10.3390/SU12155900.

[28] N. C. Ndebele and J. Ndlovu, "Employment experiences of post graduate students in KwaZulu-Natal: An intersection of qualifications and employability in the labor market," *South African Journal of Higher Education*, vol. 33, no. 2, pp. 92–106, Jul. 2019, doi: 10.20853/33-2-2802.

[29] N. S. Bakry, M. H. M. Puad, S. Asimiran, S. Abd. Kadir, and A. M. Rashid, "Exploring career decisions and employability skills among engineering students in vocational colleges," *International Journal of Academic Research in Business and Social Sciences*, vol. 10, no. 12, pp. 448–461, Dec. 2020, doi: 10.6007/ijarbss/v10-i12/8339.

[30] A. Jatmiko, "Competency of science vocational teachers in the industrial revolution 4.0 era," *Jurnal Penelitian Pendidikan IPA*, vol. 9, no. 12, pp. 11592–11602, Dec. 2023, doi: 10.29303/jppipa.v9i12.5698.

[31] A. Bryman and E. Bell, *Business research methods*, 4th ed. Oxford, UK: Oxford University Press, 2015.

[32] M. Saunders, P. Lewis, and A. Thornhill, *Research methods for students*. Harlow, UK: Pearson Education, 2019.

[33] M. A. Tumiran, "How to deal with insufficient sample size due to non-response in surveys?" *Quantum Journal of Social Sciences and Humanities*, vol. 5, no. 2, pp. 70–86, Apr. 2024, doi: 10.55197/qjssh.v5i2.346.

BIOGRAPHIES OF AUTHORS

Ghanim Faiz Al Harrasi is a head of Training and Employment Guidance Centre, at University of Technology and Applied Sciences (UTAS-Musannah). He obtained PhD in management from University of Kuala Lumpur in Malaysia (UniKL) and Msc in human resources and employment relations from Brunel University (BU) in UK. He worked as head of the On-the-Job Training Department, head of the Student Affairs Department, head of the Admissions and Registration Department, and a social worker at Al Musannah College of Technology (ACT-Musannah). He participated in many conferences in the fields of education development, employment, guidance, counseling, and administrative skills development. He also presented presentations in the field of graduate preparation, entrepreneurship, and innovation. He can be contacted at email: Ghanim.Alharrasi@utas.edu.om; ghanim@act.edu.om.

Masoud Suliman Al Salmani is recently working as a head of Partnership and Entrepreneurship Department, at University of Technology and Applied Sciences (UTAS-Musannah). He obtained a master of business administration from the University of Bedfordshire. He worked in the Quality Assurance Department, Career Guidance Department and On-the Job Training Department at Al Musannah College of Technology (ACT-Musannah). He can be contacted at email: masoud.alsalmani@utas.edu.om.

Maram Ghanim Al Harrasi is an MSc student in computer systems and networks at Sultan Qaboos University. She obtained BTech in computer engineering from University of Technology and Applied Sciences (UTAS-Al Mussanah). She can be contacted at email: s147810@student.squ.edu.om.