



The Role of Saudi Universities in Supporting and Communicating with Graduates in Accordance with International Requirements

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This study aimed to identify role of Saudi universities in supporting graduates and communicating with them in light of contemporary international changes from their view point. A questionnaire was addressed to graduates; 724 graduates responded to the questionnaire, ranging from recent graduates to graduates who graduated five years ago. The graduates reported that Saudi universities play their role in supporting graduates before graduation with a score above average, with regard to the development of self-learning competencies, self and professional management and, in addition to the competencies of teamwork, communication and relationship building; finally, the competencies of commercial awareness and self-employment. The graduates assessed the universities' communication with them after graduation, with a score below average regarding strengthening relations with graduates, contributing to their qualification for jobs, and cooperation with private sector institutions, making their websites available to them or inviting them to participate in events and attend forums held by the university. The study recommended strengthening universities' communication with their graduates, activating roles of graduate follow-up units in universities, cooperating with private sector to train and employ graduates, and make their websites available to establishing communication networks and information bases for graduates, providing them with necessary support and exchanging information.

Keywords: role of Saudi universities, international requirements, support of graduates, communication with graduates

INTRODUCTION

Most universities around the world seek to support their graduates and communicate with them in an effort to raise their level of excellence, qualify them for the labour market and activate their participation in development programs. However, under the complex economic conditions, the high competition for job opportunities, and employers' search for special specifications when hiring graduates, supporting graduates is priority issue. This issue affects the individual, society and development as a whole. Therefore, the current efforts made by universities to support their graduates need to be

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reviewed, given the negative aspects of preparation on the one hand and the acceleration of change and work requirements on the other.

Studies have recently confirmed the importance of activating communication between the university and graduates, such as Cortes (2019) who confirmed that the communication of universities with their graduates would enhance the career life of graduates and enhance their chances of obtaining jobs. Moreover, Matsouka and Mihail (2016) indicated that there should be cooperation between employers and universities in order to support graduates' employability.

Graduates need support and assistance in several issues, including providing them with the skills required by the labour market as well as by participating in development and community issues, such as self-marketing skills, critical thinking, the ability to network and build social relationships, in addition to supporting basic skills related to their field of specialization (Abdelwahed, 2016). Graduates also need programs that help integrate them into society and participate in meeting development requirements, such as participating in voluntary and service works. They make them more sensitive to the diverse needs of society. Graduates also need other support services, such as enhancing their communication with employers, and marketing them to employers by various means and methods, and other services and aspects of support that are indispensable for any graduate under the current circumstances (Bothwell, 2018).

Additionally, Ali (2009) asserts that the reason for graduates' problems in search of jobs is the failure of higher education institutions to fulfil their roles in using inappropriate educational strategies and means. The university educational system needs to be developed to match its outcomes with what graduates need in their personal and practical lives alike. In this study, the reality of the practices of Saudi universities in supporting graduates and communicating with them will be identified, and eventually suggestions will be provided to improve the role of universities in this regard in light of the results of the study.

Study Problem

Saudi universities face challenges imposed by globalization and technological developments on the work environment of these universities. These challenges include the contemporary trend of many countries towards linking the outcomes of universities to the labour market, as well as changing their role from focusing on employment as traditional universities to focusing on creating job opportunities for graduates. They also include moving from isolation from the outside world to contributing to the development and building of society, requiring more openness and partnership and the link between theory, application and practical orientation (Najmi, 2021).

In the Kingdom of Saudi Arabia, graduates face many difficulties in their search for jobs. They go through experiences of failures in this regard. They attempt to overcome these stressful situations on their own. They may not have the competencies or skills necessary to confront these situations (Abdoh, 2020 & Aldhubyani, 2012).

The main bodies responsible for the failures of young people in their search for jobs and rapid integration into society are their universities. The university's responsibility for graduates do not stop when they are granted the graduation certificate, but goes beyond that to follow up on graduates and their conditions, for example helping them get suitable jobs in due time. Alissa (2016) explored the role of Saudi universities in reducing the unemployment of graduates; according to the latest statistics it reached 26.8%. The study stated that one of the most important reasons for unemployment of Saudi university graduates is the mismatch between the graduate's acquisitions of specific knowledge and skills and the labour market. The study confirmed that the university's role is to help graduates find suitable jobs after graduation, by observing the labour market and training them to meet the market requirements, as well as through cooperation with employment institutions and entering into partnerships that help them get suitable jobs in due time.

Other studies also confirmed that there is a gap between the outcomes of university education in the Kingdom of Saudi Arabia and the labour market; graduates do not possess the sufficient skills they need to engage in the market, which contributes to increase in unemployment. Thus, unemployment leads to a feeling of inferiority, marginalization, weak integration into society and fear of the future. This effects society, and family alike (Alruwais, 2019, Arif et al., 2018 & Ahrashaw, 2011).

In a conference on the role of Saudi universities in activating the Saudi vision (2030), held at Qassim University (2017), attended by Saudi Electronic University and some government sectors, the role of Saudi universities was emphasized in building the required professional and scientific cadres by providing quality education and enhancing opportunities for lifelong learning. The conference stressed the improvement of educational curricula and reform of educational systems to help develop skills and prepare competencies compatible with the world of work and the diversity of life skills. Both Karam and Sadiq (2019) indicated the limited attention given by many higher education institutions in supporting the employability of graduates. They are often satisfied with graduating students without following them up and supporting them with regard to obtaining jobs. Daraghmeh (2020) called for strengthening the role of training units in universities to coordinate with training institutions and establish a database for graduate trainees. Alkurd and Alhabil (2018) expressed the need to increase universities' interest in following up graduates and intensifying their training and rehabilitation programs, as well as diversifying community activities and scientific trips. They emphasized providing the material and information infrastructure that support graduates, in addition to attracting funding necessary to support programmes in this regard.

The previous discussion confirms a weakness in the skills of graduates and their need for support and assistance in order to obtain jobs and integrate into society. This led to the question about the role of Saudi universities in this matter as follows:

- What is the role of Saudi universities in supporting graduates and communicating with them in light of contemporary international requirements from their point of view? The following two questions arise from the main question:

1. What is the role of Saudi universities in supporting graduates and communicating with them in light of contemporary international requirements before graduation from their point of view?
2. What is the role of Saudi universities in supporting graduates and communicating in light of contemporary international changes after graduation from their point of view?

Objectives of the study

1. Exploring the role of Saudi universities in supporting graduates and communicating with them in light of contemporary international requirements before graduation from their point of view.
2. Identifying the role of Saudi universities in supporting graduates and communicating with them in light of contemporary international requirements after graduation from their point of view.

Significance of the study

The results of this study may help Saudi universities in developing their strategic plans and adopting certain constructive suggestions, projects and methodologies that will support their graduates and make them employable in terms of personal specifications and basic skills required in the labour market.

Study terms

“Supporting graduates and communicating with them” in this study is intended to support graduates in several issues, including providing them with general skills necessary for employment and personal development (Gibb & Curtain, 2004). They are required by the labour market as well as by involvement in development and community issues related to the ability to self-manage, continue learning and build relationships. In addition, they include supporting basic skills related to the field of specialization, as well as programs that help integrate them into society and participate in meeting development requirements. They involve enhancing their communication with employers and marketing them to employers by various means and methods; let alone other services and aspects of support and assistance that are indispensable for any graduate in under the current circumstances. Obeidat (2010) believes that the most important skills required for graduates are related to communication, technology, initiative, creativity and foreign languages.

Theoretical framework and previous studies**The role of Saudi universities towards their graduates in light of contemporary challenges**

As a result of the rapid transformations that characterize the current era in various fields, Saudi universities - like other universities - find themselves surrounded by many global variables, including the tremendous scientific and technological progress, the information and communication revolution, globalization and cultural openness, the

change in the economy and production relations, and the wide democratic participation. These variables impose many challenges related to the ability to adapt, keep pace with the nature of the professions and skills required, and train graduates in line with the current requirements. Research and Studies Centre (2010), Ministry of Higher Education, Kingdom of Saudi Arabia, specified the most important challenges facing Saudi higher education as global competition for the quality of graduates, the global ranking of universities, and the shift towards a knowledge economy.

These challenges urge Saudi universities to adopt different policies and take on new roles towards taking care of the quality of outcomes, providing highly skilled graduates who are needed by the job market (Almallahi, 2012). These challenges also pose difficulties related to controlling quantity and quality regarding the level of the required professional skill, as well as the level of personal characteristics and the ability to actively adapt to the requirements of the labour market. They require preparing graduates to face the variables, in their various forms, and instilling values and principles. They necessitate developing a deeper awareness of the current variables related to job market and training, together with activating some educational principles such as self-learning, continuing education, and education for all (Sulaiman, 2017).

These challenges also require the intensive employment of information and communication technology in university education; the shift from the consumption of knowledge to production; the use of new methods based on logic and conclusion; and a focus on building the intellectual and innovation side of graduates, which is the pillar of the knowledge economy (Najmi, 2021). Most of the world rankings of universities focus on the quality of graduates and the educational process through internal and external indicators, including the distinction of graduates in obtaining awards (Shanghai ranking) as well as the graduates obtaining jobs suitable for their specializations in the labour market (British Times ranking). This requires Saudi universities to improve their graduates, providing them with the necessary support and communicating with them after graduation until they obtain satisfactory job opportunities (Mehdi, 2020).

The role of universities in supporting and communicating with graduates

Graduate students have high expectations that universities will provide them with the skills, experiences and knowledge necessary to enable them to move from education to work. They hope to get jobs that suit their specializations and achieve their ambitions in building themselves and serving their societies. Universities are responsible for equipping graduates with higher skills needed for development and economic advancement (Prelicean & Bejinaru, 2016). Supporting and developing graduates' skills is a necessity for today and future jobs. These skills require flexibility, initiative, and the ability to perform many different tasks. When higher education succeeds in this task, graduates are expected to obtain practical benefits such as academic success, workplace performance enhancement, and positive interpersonal relationships (Jeffrey & Eun, 2020). Jeffrey and Eun (2020) conducted a systematic review to examine the results of general skills development for graduates in the Gulf Cooperation Council countries, by identifying, evaluating and summarizing the results of policy-related studies. These results showed the effectiveness of general skills development at the level

of higher education in enhancing graduates' results in employability skills, the participation of stakeholders in curriculum development, and academic performance in the workplace, as well as affecting the social dimensions. Yukari (2020) confirmed that stakeholders in Japan focus on the following competencies: ability to work in a team, ability to communicate orally in a native language, interaction and communication skills, ability to act on an ethical basis, and a commitment to safety. On the other hand, stakeholders in European Union focus on ability to research and analyse information, ability to work independently, ability to learn constantly, ability to think abstractly, analyse and synthesise, as well as knowledge and understanding in a subject area.

In this context, Ljerka and Helga (2019) found agreement between employers and university professors regarding the skills and knowledge required for graduates. The research also indicated that there is a need for balance between acquiring knowledge and developing skills through curricula either as discrete modes or through existing programs of study, as well as providing and enhancing work-based learning and part-time internships while encouraging students to take advantage of external opportunities. Poder et al. (2019) focused on the role of university education in the development of projects and competency. The graduates thought that their university education helps them to develop much better, and learn problem-solving skills, critical thinking, self-evaluation skills, the ability to develop new ideas, leadership skills, and have much knowledge about business and financial projects during their studies. Education did not have a significant impact on their project activities and their evaluations of business projects. Cortes (2019) attempted to identify the effectiveness of communicating with alumni at Bronx Social College in New York using social media. The results of the study indicated that the establishment of this group on Facebook led to closer communication with new and former graduates, strengthened social ties among them as well as improved careers. It also enhanced the opportunities of graduates to get a job. It also contributed to identifying graduates' satisfaction about employers. It is considered a friendship group with graduates who completed the course as well as active students. It helped share career-related information, achievements and experiences. Khalifah and Puttaswamy (2019) developed a smart application to create a support network for alumni and to guide current college students at Middle East College (MEC). This application allows graduates to register with Alumni Association. It enables them to share knowledge, and experiences with the users of the application through the alumni experiences page. It allows them to have a chance to guide other graduates, advise them, as well as enable outstanding graduates to guide those still looking for work. This application helps graduates to interact easier and faster, and relieves the burden on the association's employees. The data of this application is shared among alumni, students and college staff through a common platform or database.

Additionally, Abas and Imam (2016) concluded that the current university-to-work transition programs are unsatisfactory. It identified the general skills that are recommended to be given the most attention when improving university curricula, designing a university-to-work transition program, and preparing an induction programme. The study concluded that general soft skills are more important than academic knowledge for graduates of non-scientific universities. It indicates that

universities play a role in providing students with these skills. The main general skills that graduates need, regardless of their specializations, come under three main groups. The first group refers to basic skills such as communication, problem solving and data management. The second group includes self-management skills such as positivity, responsibility, adapting to variables and continuous learning. The third group is related to teamwork skills, such as volunteering skills, working within a team and participating in various tasks. Chloe and Polly (2009) identified ways to build the capacity of university graduates through conferences, seminars and workshops. The results of the study confirmed a lack of studies related to the role of universities in supporting graduates, especially with regard to the issue of building partnerships with community institutions. This was indicated by the study of Abualhadid (2012) that the partnership between the university and civil society institutions did not achieve its goals for which it was set: qualifying graduates to participate in community service and development.

Alumni support approaches and methodologies used by universities

Universities use several methodologies or approaches to support graduates and develop their skills. Some focus on supporting the graduate's competencies necessary for work; others rely on supporting the graduate's professional identity as an entry point for professional development related to work. Others focus on professional socialization of the graduate as an entry point for professional development and self-building. Following is a presentation for these approaches and methodologies.

First: Approach to supporting graduates' competencies necessary for work

This approach focuses on student-centred education and active participation in the educational situation. It is an extension of what Taylor stated that: "What the student learns is what the student does, not what the teacher does" (Tyler, 1949). This led to a major shift in curriculum development from being content-oriented to student-centred (Sturgis, 2016). Taylor followed Bloom in his book *Learning Objectives* (Bloom, 1956), in which he presented a comprehensive system for describing and evaluating learning outcomes by classifying learning objectives. This later developed into the theory of "mastery learning" (Bloom, 1968). Then Mager (1962) wrote his book *Preparing Instructional Objectives*, which was known and used by American educators as a guide for writing instructional objectives, together with developing criterion-referenced teaching which is a comprehensive set of methods for designing skills-related training programs (Eisner, 2000).

In competency-based education, students are expected to acquire specific and concretely described competencies through the class or any other educational unit. Grades and certificates are awarded based on the proficiency of the specific competencies when obtaining the expected learning outcomes. This orientation often focuses on compatibility and harmony between universities and employers. Higher education is the last educational stage before students enter the labour market. Therefore, college learning outcomes should be determined by taking into account the needs of society and job market. The list of competencies to be acquired in a college or university is usually prepared by the joint effort of academia and job market (Yukari, 2020).

Results-oriented and competency-based education has been implemented in all the Organization for Economic Co-operation and Development (OECD) countries since the 1990s. A strong pillar of implementation around the world is the report *Identifying and Selecting Competencies: Theoretical and Conceptual Foundations* prepared by OECD between 1997 and 2003, specifically in the European Union; in addition to Bologna Declaration at the end of the twentieth century, providing educational services commensurate with the needs of society, encouraging critical thinking and working to support employability. They aim to develop the skills and capabilities of graduates to keep pace with changes in the labour market. Therefore, results-oriented and competency-based education has become a very important means of quality assurance (Thijssen et al., p.171). *Tuning Educational Structures in Europe*, or what is known as *Project Harmonization*, is an example of building a bridge between academia and employers in a way that facilitates a better understanding of the knowledge and skills students need to succeed at a business and personal level. The project is also designed to facilitate mutual identification and information sharing among universities in different countries in terms of contents and methods of evaluating majors, courses and programs. To this end, *Harmonization Project* conducts surveys called “harmonization pilot studies” with academia, students, alumni, and employers, in which they are asked what competencies they expect university graduates to have. The list of competencies identified through these surveys reflects the needs of both academia and industry, as well as society (González et al., 2013).

Despite the widespread orientation of competency-based and normative education directed towards results and goals, these trends faced significant obstacles, especially in the implementation stages, including the difficulty of identifying competencies, preparing reports on them, and measuring and evaluating them. Setting standards related to competencies in higher education requires more seriousness on the part of universities because it is related to the labour market on the one hand, and issues of quality and accreditation based on results and efficiency on the other hand (Voorhees, 2001).

Second: Approach to supporting the professional identity of the graduates

One of the recent approaches to support graduates is skills development for employment by focusing on the identity of graduates. It is an approach that focuses on placing students’ sense of professional identity at the centre of the relationship between education and work. Following this approach leads to a set of questions about how students perceive the benefits of work-related education and attempt to reach them. Student identity theory provides a comprehensive view of the self-concept before embarking on various life roles. Graduates’ professional identity can be formed through (Stryker & Burke, 2000): acquiring the skills and abilities necessary for the profession that the graduate seeks; social processes are important in building and adapting the identity of the graduate. Social processes mean work-related models and role models, professional development networks, and work-related experiences; performance-related activities such as volunteering and work during or after study as well as other practice contexts. Nagarajan and Edwards (2015) studied the role of universities, employers,

graduates and professional associations in developing the professional skills of recent graduates. The study concluded that the role of universities is to use new methodologies in teaching and learning and the need to review the curricula and basic units in professional colleges to assess the learning outcomes in terms of their alignment with skills, employability, and criteria used in assessment. Graduates should take advantage of opportunities to develop their professional skills during university studies and after graduation and participate in volunteer activities and services. Employers should provide long-term support for the design of training programs for graduates, introducing them to their roles, as well as facilitating workplace learning, and developing the graduate's professional identity.

In this context, Smith et al. (2019) identified the extent to which work-related learning affects student identity. The transition process requires a kind of work related to the identity of the graduate student, which consists of a set of achievements, skills, understandings and personal traits that enhance the chances of graduates to obtain employment and succeed in the professions they joined. They identified the impact of work-related learning on student identity. Head (2016) confirmed that graduates who have a strong identity for a profession or work are more eager to participate in events and activities that develop their skills and knowledge required for this profession or work. Cardona et al. (2016) found that there is a relationship between graduates' job satisfaction and their professional identity that they had as a result of the training and skills they obtained, together with some other benefits that they obtain from their work in employment institutions.

This approach focuses on curriculum development and work-related education. One of the projects in this context is the Graduate Capacity Enhancement Project at University of Edinburgh in the United Kingdom. In this project, £1.3 million has been earmarked to improve graduate employment rates through special undergraduate courses at the university. The project came up with some recommendations, including (Smith et al., 2019, p. 362): curriculum development to introduce new work-related units, or to incorporate work-related learning into existing units and central support activities; inclusion of employability in the main curricular units in order to achieve positive results of employability.

Third: Approach to socialization for graduates

Professional socialization includes the development of knowledge, skills, beliefs, and values that prepare new graduates to join the profession (Weidman et al., 2001). Graduates learn the formal policies and rules of their profession and share informal expectations and standards as well. Thus, professional socialization is “a process that involves the transmission of culture that graduates acquisition” (Tierney & Rhoads, 1993). Socialization processes provide diverse opportunities for graduates to gain motivation in their disciplines, and shared values in their professional fields in general. Weidman and Stein (2003) describe three essential components of graduate socialization: (1) acquiring knowledge and skills, (2) engaging in a professional role as an entry-level professional, and (3) investing that includes commitment to the role, and adoption of its expectations. The cognitive dimensions of the professional role -

knowledge and skills - can be conveyed through formal instruction and are often explicit in department goals, while emotional and integrative dimensions are more implicit and transmitted through informal processes such as interpersonal interactions and the general atmosphere.

Examples of socialization programs include the Graduate Teaching Fellowship Program, which aims to help graduate students acquire professional skills, enhance STEM learning and teaching in schools, and strengthen partnerships among stages of education (K-12), together with graduate studies stage in STEM. Each year a science group consists of four to six graduate students studying STEM in fields related to biomedical sciences. They visit the classrooms of a K-12 school with the aim of leading inquiry-based science lessons (Laursen et al., 2012).

Graduate students are selected for entry into the program in a rigorous application process. They participate in the science group rather than as teaching assistants. They continue their thesis research at the same time. Each member works with the program staff to create four presentations in their field of science focusing on inquiry-based practical activities aligned with current best practices in science education (Olson & Loucks-Horsley, 2000). As presentations are short and delivered to a range of classes, schools, and educational districts, they are not aligned with any specific curriculum or set of standards for any school district, but teachers align them with learning goals in the classroom through their choice of topics and scheduling in practice. The program ranges appropriate grade levels for each presentation. Members receive training in how to modify presentations to suit different developmental levels (Laursen et al., 2004).

Field study

Study Methodology: Based on the objectives that this study, the descriptive survey method was used.

Study population: graduates of Saudi universities whose graduation did not exceed five years during the period of conducting the study in the first semester of the 2021-2022 academic year.

Study sample

The sample was chosen by the available or accidental sampling method. This method is used when the researcher does not have any option to select the sample by regular methods (Durr, 2017).

Given the difficulty of studying all of the study population, the study sample size was chosen in the light of the specific statistical equations for the appropriate samples that accurately represent the study population. This was done according to the statistical equations applied by American Education Association. They show the appropriate minimum sample size, according to the following equation:

$$n = \frac{\chi^2 * N * p(1 - P)}{d^2 * (N - 1) + \chi^2(p * (1 - p))}$$

n = minimum sample size

N = population size

P = population proportion, equal to (0,50)

(P-1) = complemented and estimated ratio (0,50)

D = permissible error in estimating the ratio, equal to (0.05)

X² = value of the chi-square at a significance level of (5%) and degree of freedom equal to (3.841) (Krejcie & Morgan, 1970).

Using statistical equations, the minimum appropriate sample size for the study population is (384), as the study population is more than ten thousand, as approximately 130 thousand graduates graduate from Saudi universities annually (Ministry of Education, 2017).

The researcher distributed a larger number of questionnaires through social media (Twitter - WhatsApp) and eventually obtained (724) valid questionnaires for analysis, which is nearly double the number required for such a study.

Study instrument: A questionnaire was used to collect the necessary information and data. An electronic questionnaire was designed for this purpose. The questionnaire consisted of two main axes:

First axis: the reality of the university's support for graduates during the study. It contained (35) statements divided into six dimensions and related to the graduate competencies that need to be supported by universities: **First dimension:** self-learning competencies with (6) statements. **Second dimension:** self-management competencies with (7) statements. **Third dimension:** job and professional management competencies with (7) statements. **Fourth dimension:** teamwork competencies with (6) statements. **Fifth dimension:** competencies of communication and relationship building with (5) statements. **Sixth dimension:** competencies of commercial awareness and self-employment with (4) statements.

Second axis: university's communication with graduates after graduation with (15) statements.

The five-point Likert scale was used to respond to the questionnaire statements (always - often - sometimes - rarely - never). They correspond to the following grades: (high, above average, average, below average, weak).

Questionnaire Reliability

To measure the reliability of questionnaire, the Cronbach's Alpha (α) equation was used to ensure the reliability of the study tool. Table 1 shows the reliability coefficients of the study tool.

Table 1
Cronbach's alpha coefficient to measure the reliability of the study tool

Questionnaire axes	Number of statements	Axis reliability
First dimension: competencies of self-learning	6	0.929
Second dimension: competencies of self-management	7	0.929
Third dimension: graduates' job and professional management competencies	7	0.937
Fourth Dimension: teamwork competencies	6	0.949
Fifth dimension: competencies of communication and building relationships	5	0.920
Sixth dimension: competencies of commercial awareness and self-employment	4	0.919
The axis of the reality of the university's support for the graduate competencies necessary for work	35	0.977
The axis of the university's communication with alumni	15	0.982
General reliability	50	0.973

Table 1 shows that the reliability coefficients for the axes and dimensions ranged between (0.92 - 0.98), which are high. The general reliability coefficient for the study axes is high, reaching (0.97). It was found that all values exceed (0.70), and this indicates that the questionnaire has a high degree of reliability and confidence and can be relied upon in the field application of the study.

Questionnaire Validity

In the beginning, the questionnaire was presented to a group of specialized arbitrators who agreed with it, while making some suggestions that were taken into account when preparing the questionnaire in its final form. Then Pearson correlation coefficient was calculated to find out the internal validity of the questionnaire by calculating the correlation coefficient between the score of each statement of the questionnaire and the statements of the questionnaire in the total score of the axis or dimension to which the statement belongs to, as shown in Table 2 and Table 3.

Table 2

The values of the Pearson correlation coefficient to measure the validity of the content of the dimensions of the reality of the university's support for the graduate competencies necessary for work

Dimensions	Correlation coefficient	Significance level
First dimension: competencies of self-learning	**0.866	0.000
Second dimension: competencies of self-management	**0.896	0.000
Third dimension: graduate's job and professional management competencies	**0.880	0.000
Fourth dimension: teamwork competencies	**0.830	0.000
Fifth dimension: competencies of communication and building relationships	**0.870	0.000
Sixth dimension: competencies of commercial awareness and self-employment	**0.804	0.000

** The correlation is statistically significant at the significance level of 0.01 or less

Table 2 shows that the values of the correlation coefficient between the dimensions of axes of the reality of the university's support for the graduate competencies needed to work are statistically significant, and have a positive correlation at the level of (0.01) or less. This confirms the validity of the dimensions for measurement.

Table 3

Values of Pearson correlation coefficient to measure the validity of the content of the statements of the axis of the university's communication with graduates

Statement number	Correlation coefficient	Significance level
36	**0.849	0.000
37	**0.859	0.000
38	**0.859	0.000
39	**0.887	0.000
40	**0.899	0.000
41	**0.898	0.000
42	**0.913	0.000
43	**0.899	0.000
44	**0.911	0.000
45	**0.903	0.000
46	**0.913	0.000
47	**0.912	0.000
48	**0.911	0.000
49	**0.904	0.000
50	**0.898	0.000

** The correlation is statistically significant at the significance level of 0.01 or less

Table 3 shows that the values of the correlation coefficient among the statements the axis of the university's communication with graduates are statistically significant, and have a positive correlation at the level of (0.01) or less. This confirms the validity of the statements for measurement.

Administration: The questionnaire was administered in the first semester of the (2021-2022) academic year by publishing the questionnaire's electronic link via social media (Twitter - WhatsApp): the administration took about two months. The researcher got a response from more than 724 graduates, male and female, of Saudi universities.

FINDINGS AND DISCUSSION

The results of the study are presented by providing the responses of the study sample participants to statements, and discussing them in accordance with the scientific methodology, then presenting the statistical analysis of the values in terms the averages and standard deviations.

First: Descriptive statistics for demographic data:

Table 4
Descriptive statistics for demographic data

Demographics	Category	Frequency	Percentage
Graduate type	Male graduate	211	29.1
	Female graduate	513	70.9
	Total	724	%100
Graduation Duration	Fresh graduate for a year or more.	149	20.6
	Graduated from two to less than three years.	180	24.9
	Graduated from three years to less than four years.	237	32.7
	Graduated from four to five years.	158	21.8
	Total	724	%100
The work	Working currently	533	73.6
	Not working currently	191	26.4
	Total	724	%100

Second: Approved Study Criterion

To determine the level of answer to the scale alternatives, a weight was given to the alternatives as follows: (always = 5, often = 4, sometimes = 3, rarely = 2, never = 1), as shown in Table 5, then the answers were classified into five levels of equal extent by using the following equation:

$$\text{Category length} = (\text{largest value} - \text{least value}) \div \text{number of scale alternatives} = (5-1) \div 5 = (0.80)$$

Table 5
The degrees of the categories of the study results criterion and their limits according to the five-point Likert scale

Arithmetic mean value		Relative weight	Scale	Degree of response
From	to me			
1	1.80	%20 to 36%	Never	None
1.81	2.60	Greater than 36% to 52%	Scarcely	Low
2.61	3.40	Greater than 52% to 68%	Sometimes	Medium
3.41	4.20	Greater than 68% to 84%	Frequently	High
4.21	5	Greater than 84% to 100%	Always	Very high

Third: Answering the Study Questions

First question: What is the role of Saudi universities in supporting graduates and communicating with them in light of contemporary international changes before graduation from their point of view?

The reality of Saudi universities' support for graduates during the study was identified through the graduates' evaluation of the reality of university education support for the graduate competencies needed for work. Arithmetic averages, standard deviations, and ranks were calculated for the responses of the study sample participants on the dimensions of the university education support axis for the graduate competencies needed for work. The results are shown in Table 6:

Table 6
Saudi universities' support for the graduate competencies

No.	Axes	Arithmetic mean	Standard deviation	Degree of response	Ranking
1	First dimension: competencies of self-learning	3.79	0.884	frequently	1
2	Second dimension: competencies of self-management	3.66	0.883	frequently	3
3	Third dimension: graduate's job and professional management competencies	3.62	0.933	frequently	5
4	Fourth dimension: teamwork competencies	3.66	0.952	frequently	4
5	Fifth dimension: competencies of communication and building relationships	3.72	0.911	frequently	2
6	Sixth dimension: competencies of commercial awareness and self-employment	3.46	1.044	frequently	6
7	Reality of the university's support for graduate competencies necessary for work	3.65	0.800	frequently	

(The arithmetic means and standard deviations of the responses of the study sample participants to the dimensions of the axis of the reality of the university's support for the graduate competencies needed for work)

Table 6 shows that Saudi universities often support competencies of its graduates before graduation - according to their assessment - with an above-average score, with a general average (3.65 out of 5). The main dimensions of the reality of the university's support for the graduate competencies needed for work include the competencies of self-learning, followed by the competencies of communication and relationship building, the competencies of self-management (ranked fourth), the competencies of teamwork, then the competencies of job and professional management for graduates, and finally the competencies of commercial awareness and self-employment. This result is consistent with the studies of (Daraghmeh, 2020), (Alkurd & Alhabib, 2018) and (Abas & Imam, 2016). They proved the success of higher education institutions in preparing students for the labour market, and that university education plays its role in providing students with the skills necessary for employment. The problem lies in a gap between theoretical and practical education. The transition programs are unsatisfactory and call for a balance between knowledge acquisition and skills development. However, the result of this study differs with the studies of (Karam & Sadiq, 2019), which indicated the low attention given by higher education institutions in supporting the employability of graduates.

1. *Self-learning competencies*

Table 7
Arithmetic mean and standard deviation of the self-learning competency dimension from the graduates' point of view

No.	Dimension	Arithmetic mean	Standard deviation	Percentage	Degree of response	Ranking
1	University education tends to be flexible in the use and diversification of learning resources (electronic - paper - learner experiences).	4.00	0.945	80	Frequently	1
2	University education develops the skills of searching for information rather than presenting it in ready-made templates for them.	3.83	0.963	76.6	Frequently	2
3	University education enhances problem-solving skill through their work on various projects and tasks.	3.79	1.030	75.8	Frequently	3
4	The university directs students to complete their learning through Arab and international electronic self-learning platforms.	3.69	1.053	73.8	Frequently	6
5	University students participate in planning the learning process with the course professor and express their expectations for learning outcomes, methods, and assessment methods used.	3.71	1.020	74.2	Frequently	5
6	Studying university courses helps to use logic in a careful examination of the sources and information presented to them.	3.73	1.054	74.6	Frequently	4
	Self-learning competencies	3.79	0.884	75.8	Frequently	

Table 7 shows that Saudi universities support the self-learning competencies of graduates with an above-average degree, with an average of (3.79), according to the graduates' assessment. These competencies rank first in the graduate competencies necessary for work. This may be due to the fact that these competencies are directly related to the teaching and learning processes and the orientation of higher education towards supporting student-centred learning. At the forefront of the self-learning competencies supported by university education, according to the graduates' assessments: competencies of using different sources of learning, and the student's search for information, the skill of solving problems, and then using logic to examine sources and information, followed by the participation of students in planning the learning process. This is consistent with the study of Poder et al. (2019) as the graduates see that their university education helps them to develop much better and learn problem-solving skills, critical thinking, self-assessment skills, the ability to develop new ideas. Self-learning competencies are ranked last and to a lesser extent students' use of self-learning platforms. This result is consistent with a study by (Alkurd & Alhabil, 2018), which called for the necessity of providing the supportive physical and information infrastructure for graduates to continue their learning.

2. *Self-management Competencies*

Table 8
Arithmetic mean and standard deviation of the self-management competency dimension from the graduates' point of view

No.	Dimension	Arithmetic mean	Standard deviation	Percentage	Degree of response	Ranking
7	Programs, courses, and activities help students adapt to new changes.	3.76	0.977	75.2	Frequently	2
8	University students are involved in making decisions that concern themselves.	3.57	1.078	71.4	Frequently	6
9	The university directs students to use electronic portfolios to collect evidence and documents that confirm their achievements.	3.65	1.062	73	Frequently	4
10	Undergraduate programs and courses contribute to enhancing students' perception of the job opportunities available to them.	3.55	1.103	71	Frequently	7
11	The university environment promotes positive behavior and initiative among students.	3.67	1.054	73.4	Frequently	3
12	University study develops students' self-marketing skills, such as the ability to present ideas in an attractive way.	3.61	1.059	72.2	Frequently	5
13	The educational process at the university develops self-reliance and responsibility in various situations.	3.78	1.034	75.6	Frequently	1
	Self-management competencies	3.66	0.883	73.2	Frequently	

Table 8 shows that Saudi universities support the graduates' self-management competencies with an above-average score, with an average of 3.66, according to the graduates' assessment. These competencies are ranked third in the graduate competencies needed for work. This result is consistent with the study of (Daraghmeh, 2020), which showed that graduate trainees get many benefits from the training offered by universities during university studies, including introducing the trainee to one's abilities and their suitability for future professions, and increasing the trainee's ability to market oneself in the labor market. The statement "the educational process develops self-reliance and responsibility in different situations" is ranked first in this dimension. This may be due to the fact that the nature of university education depends on the student's taking responsibility for learning. Students' observation of the job opportunities available to them is ranked last. This may indicate that universities do not give priority to helping students notice the opportunities available to them clearly. This is consistent with the study of (Ljerka & Helga, 2019), which called for encouraging students to take advantage of external opportunities.

3. *Competencies of Job and Professional Management for Graduate*

Table 9
Arithmetic mean and standard deviation of the graduates' job and professional management competencies dimension from the graduates' point of view

No.	Dimension	Arithmetic mean	Standard deviation	Percentage	Degree of response	Ranking
14	University education enhances mastery of dealing with technology by integrating it with academic courses.	3.76	1.030	75.2	Frequently	1
15	Undergraduate education develops students' use of spoken and written English.	3.55	1.118	71	Frequently	6
16	University education contributes to developing the use and handling of the language of numbers.	3.58	1.096	71.6	Frequently	5
17	Undergraduate study enhances the student's ability to analyze, present, and represent data.	3.64	1.071	72.8	Frequently	3
18	What students learn at the university is consistent with the requirements of the job or profession so that the student can apply the knowledge in his/her field of work.	3.61	1.088	72.2	Frequently	4
19	The university encourages students to work for some time outside the university during their undergraduate studies.	3.46	1.192	69.2	Frequently	7
20	The university directs students to adhere to professional ethics during university studies and in the training phase.	3.72	1.066	74.4	Frequently	2
	Career and professional management of graduates	3.62	0.933	72.4	Frequently	

Table 9 shows that Saudi universities support the competencies of job and professional management for graduates with an above-average score, with an average of (3.62), according to the graduates' assessment. These competencies are ranked fifth and before last in the assessment of graduates. This is consistent with the study of (Karam & Sadiq, 2019), which called for the development of new professional programs and courses to provide students with the skills that enable them to perform their job duties to the fullest: through interactive teaching and the provision of training opportunities outside the universities with employers and employment institutions. The statement "university education enhances mastery of dealing with technology by integrating it with academic courses" is ranked first. This may be due to much attention paid by of Saudi universities to using technology in teaching in recent years to achieve quality requirements. The statement "university education develops students' use of the spoken and written English language" is ranked sixth and before last of career and professional management competencies. It means that university education does not give priority to the graduate's mastery of English as an indispensable second language in the world of jobs and business, despite its great importance in marketing. The statement "the university encourages its students to work part-time outside the university during university

studies” ranked seventh and last. This may suggest that this trend is not a priority for university education, despite the call of many studies and research to link learning and work by all means, such as the study of (Daraghmeh, 2020), which recommended spreading the culture of training among students during the study, and coordination between universities and training institutions to facilitate this task for students, as well as the study of (Ljerka & Helga, 2019), which called for the provision and promotion of work-based learning.

4. Teamwork Competencies

Table 10

The arithmetic mean and standard deviation of the teamwork competency dimension from the graduates’ point of view

No.	Dimension	Arithmetic mean	Standard deviation	Percentage	Degree of response	Ranking
21	All members of the working group have the responsibility assigned to them to get the work done.	3.69	1.052	73.8	Frequently	2
22	Group members use constructive criticism to address errors rather than grumbling and complaining.	3.61	1.051	72.2	Frequently	5
23	The members of the work group respect the authority of the group leader and comply with his directives.	3.67	1.089	73.4	Frequently	3
24	Working group members, in joint activities, feel a sense of belonging to the group.	3.61	1.080	72.2	Frequently	6
25	Group members are good at working under pressure when needed.	3.66	1.071	73.2	frequently	4
26	The team fulfils work on time.	3.70	1.052	74	Frequently	1
	Teamwork competencies	3.66	0.952	73.2	Frequently	

Table 10 shows that Saudi universities support the collective work competencies of graduates with an above-average score, with an average of 3.66, according to the graduates’ assessment. These competencies are ranked fourth in the competencies necessary for work in terms of the university’s support for them in the assessment of graduates. They are among the important competencies confirmed by Jeffrey and Eun (2020) and Cortes (2019). The competencies of completing the work on time, and the group members bearing the responsibilities entrusted to them are ranked first and second, as they are basic competencies of group work. The competencies of using criticism and a sense of belonging to the group are ranked last despite their importance as competencies required at work after graduation, as indicated by a number of studies such as Abas and Imam (2016), Kelleher (2011) as well as the study of Poder et al. (2019).

5. Communication and Relationship Building Competencies

Table 11
Arithmetic mean and standard deviation of the dimension of communication and relationship building competencies from the perspective of graduates

No.	The dimension	Arithmetic mean	Standard deviation	Percentage	Degree of response	Ranking
27	University students communicate positively in the university environment.	3.74	0.987	74.8	Frequently	2
28	University students use social networks to develop their social relationships.	3.76	1.018	75.2	Frequently	1
29	University students constantly form new relationships in the training sites and during the completion of projects and tasks.	3.73	1.038	74.6	Frequently	3
30	University students interact with the local community and form relationships with their potential employers.	3.65	1.092	73	Frequently	5
31	Graduates uses social relations to get jobs.	3.69	1.097	73.8	Frequently	4
	Communication and relationship building competencies	3.72	0.911	74.4	Frequently	

Table 11 shows that Saudi universities support the competencies of communication and relationship building for graduates with an above-average score, with an average of (3.72), according to the graduates' assessment. These competencies are ranked second in the competencies necessary for work in terms of the university's support for them in the assessment of graduates. This may be due to the nature of Saudi society and its Islamic culture, which pays attention to communication and building relationships. A number of studies emphasized the importance of building relationships for graduates, such as Abdelwahed (2016) that emphasized the importance of networking and building relationships in marketing the graduate and enhancing his/her chances of obtaining a job, as well as Cole and Tibby (2013) that found that how graduates obtain a job or their employability is affected by the social relationships of graduates.

6. Competencies of Commercial Awareness and Self-employment

Table 12
Arithmetic mean and standard deviation of the dimension of commercial awareness and self-employment competencies from the perspective of graduates

No.	Dimension	Arithmetic mean	Standard deviation	Percentage	Degree of response	Ranking
32	The university promotes among students the culture of self-employment by holding special events and activities.	3.45	1.158	69	Frequently	3
33	University education develops personality traits related to productivity, such as intelligence and motivation.	3.51	1.111	70.2	Frequently	1
34	The university student obtains academic knowledge through courses on self-employment and its requirements.	3.47	1.203	69.4	Frequently	2
35	The graduate can create his/her own project, taking advantage of his/her university studies.	3.40	1.183	68	Sometimes	4
	Competencies of commercial awareness and self-employment	3.46	1.044	69.2	Frequently	

Table 12 shows that Saudi universities support the competencies of communication and relationship building for graduates with an above-average score, with a general average of (3.46), according to the graduates' assessment. These competencies are ranked sixth and last in the competencies necessary for work in terms of the university's support for them in the assessment of graduates. This may refer to the university education's attention to these competencies is not a priority topic. This is consistent with (Poder et al., 2019) as the graduates assessed that their university education helps them to develop much better and learn problem-solving skills, critical thinking, and self-evaluation skills, the ability to develop new ideas, as well as leadership skills, and to acquire much less knowledge about business and financial projects during their studies, but university education did not have a significant impact on their project activities and on their evaluations of business projects. These competencies are ranked last due to the recent interest in this matter by Saudi universities, and that the universities' orientation towards supporting this type of competencies is still in its infancy.

Second question: What is the role of Saudi universities in communicating with graduates after graduation from their point of view? In order to identify the extent to which Saudi universities communicate with graduates after graduation from their point of view, the arithmetic averages, standard deviations, and ranks of the answers of the study sample participants were calculated regarding the axis of the university's communication with graduates after graduation. The results are illustrated in Table 13:

Table 13
The arithmetic mean and standard deviation of the axis of the university's communication with graduates

No.	Axis	Arithmetic mean	Standard deviation	Percentage	Degree of response	Ranking
36	The university surveys the opinions of graduates about the suitability of study programs to employment requirements through various mechanisms and means.	3.06	1.326	61.2	Sometimes	1
37	The university strengthens its relationship with alumni by involving them in scientific and public events, and development plans.	3.04	1.321	60.8	Sometimes	2
38	The Graduates Unit holds training courses for unemployed graduates in order to qualify them for various jobs and professions.	2.97	1.319	59.4	Sometimes	3
39	The university strengthens its relationship with alumni through the website and makes use of modern technology in communicating with them.	2.92	1.341	58.4	Sometimes	5
40	The university provides data and information for alumni.	2.89	1.330	57.8	Sometimes	6
41	The university creates a scientific platform for the CVs of the graduates and the presentation of the scientific and practical production of the graduates.	2.84	1.324	56.8	Sometimes	12
42	The university issues an annual directory of potential graduate employers.	2.87	1.328	57.4	Sometimes	7
43	The university announces on its website the available jobs for the various majors.	2.87	1.334	57.4	Sometimes	8
44	The university cooperates with private sector institutions to train graduates and qualify them for the labor market.	2.84	1.367	56.8	Sometimes	14
45	The university communicates with labor market institutions to follow up on the jobs suitable for graduates' specializations.	2.82	1.361	56.4	Sometimes	15
46	The university provides the necessary guidance to graduates on how to search for work and employment requirements.	2.86	1.370	57.2	Sometimes	10
47	The university holds special alumni forums in which the graduates present the challenges they face while searching for work.	2.84	1.334	56.8	Sometimes	13
48	The university invites graduates to attend job fairs that bring together graduates with employers.	2.87	1.367	57.4	Sometimes	9
49	The university provides graduates with opportunities to use campus facilities.	2.85	1.356	57	Sometimes	11
50	The university provides graduates with opportunities to participate in the volunteer and charitable work announced on its online platform.	2.93	1.361	58.6	Sometimes	4
	University communication with alumni	2.90	1.201	58	Sometimes	

Table 13 shows that Saudi universities communicate with graduates after graduation to a moderate score, according to their assessment. The overall average for the axis is (2.90). This means that the role of Saudi universities in supporting the competencies of graduates before graduation is better than their role in communication with them after graduation, as the universities' attention to their graduates is clearly less. Certain studies confirm the importance of this communication, including the study of Cortes (2019), emphasizing the value of communication programs with graduates in strengthening the links between them and their universities, enhancing their chances of finding a job, and improving their careers. Khalifah and Puttaswamy (2019) emphasized the importance of communicating with graduates to guide and advise them. This result is consistent with Poder et al. (2019) as graduates stated that their university education helps them to develop much better, in terms of learning basic skills, but they get much less knowledge and support in relation to their projects after graduation. This result is also consistent with Alkurd and Alhabil (2018) who confirmed the existence of a gap between theoretical and practical education, difficulties faced by graduates to find work, their need for rehabilitation programs, the diversification of community activities and scientific trips, as well as the provision of material and information infrastructure supporting graduates, in addition to bringing the necessary funding for their programs. This result is consistent with Alissa (2016) and Abdelwahed (2016) who called for the need to support graduate programs after graduation through training and partnerships, and finding a supportive social network for them to help them get suitable jobs. This assessment by graduates confirms that the role of Saudi universities in communicating with graduates is still below expectations and that they expect their universities to have a greater role in communicating with them after graduation, supporting them by all possible means and helping them to obtain suitable jobs.

CONCLUSION

- Saudi universities support their graduates during university studies (with a score above average) according to the graduates' assessment, with an average of (3.65 out of 5). Among the supported competencies are self-learning, communication and relationship building, self-management, and teamwork; and to a lesser extent the graduate's career and professional management, commercial awareness and self-employment.

- Saudi universities communicate with their graduates (with a medium score), according to the graduates' assessment, with an average of 2.90 out of 5. This includes the universities' strengthening of their relations with graduates, and surveying their views on the topics that concern them. It also includes the roles of the graduates' units in universities in communicating with graduates and holding courses and events that concern them. Additionally, it involves supporting the employment of graduates, and enabling them to obtain data and information, and using facilities.

IMPLICATIONS

It is clear from the results of the study that Saudi universities do not play their hoped-for role in communicating with their graduates after their graduation and providing them

with the necessary support. These results may be linked to the traditional pattern of universities that are concerned with teaching and building knowledge for students regardless of the needs of the labour market in all fields, and regardless of the graduate's needs related to providing support and assistance in the immediate postgraduate stage.

The study results implicate that graduates still have problems in obtaining support and access to jobs. Stakeholders and employers increasingly complain about the poor level of graduates and the lack of skills required by the labour market in all fields. This requires the state's intervention in finding solutions, whether within or without the university, and finding various formulas to support graduates, train them and qualify them for the labour market and a better life.

RECOMMENDATIONS

In light of the study results, a set of recommendations are provided as follows:

- Saudi universities should review their strategic plans, programs and methods of education in light of contemporary changes and the needs of the labour market in terms of competencies and skills that help graduates in the journey of searching for work.
- Saudi universities should pay great attention to professionalizing graduates and developing their job and professional competencies, especially with regard to the use of technology, data analysis and the use of the English language.
- Focusing on building the graduates' teamwork competencies through curricular and extracurricular activities.
- The university programs should enhance self-management and marketing competencies and the ability to make decisions, as well as enhance the spirit of initiative.
- Universities should promote in their students a culture of self-employment, and develop their productivity-related features so that the graduate can create his/her own projects.
- The need to enhance the communication of universities with graduates after graduation to guide and advise them and develop their self and professional skills.
- That universities cooperate with private sector institutions to employ graduates and establish training and qualification programs for them through establishing partnerships.

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