Journal of Research Administration
Society of Research Administrators International

NECESSARY REQUIREMENTS FOR DEVELOPING NAJRAN UNIVERSITY STUDENTS' FUTURE SKILLS IN LIGHT OF THE REQUIREMENTS OF FUTURE PROFESSIONS AND THE KINGDOM'S VISION 2030: FACULTY MEMBERS' VIEWPOINT

Mahmoud Mustafa Mohammed[1], Said Abdelmawgoud El aasar[2], & Mohammed Maher Mohammed[3]

[1] Assistant Professor, College of Education, Najran University, Saudi Arabia,
[2] Associate Professor, College of Education, Najran University, Saudi Arabia,
[3] Assistant Professor, College of Education, Najran University, Saudi Arabia,

Abstract

The study aims to identify the essential requirements for equipping Najran University students with the necessary future skills for professions in light of the Kingdom's Vision 2030. This pertains to areas related to university planning and policies, as well as administrative, cognitive, human, and organizational aspects. The study assesses the availability of these requirements from the perspective of Najran University faculty members, using a descriptive survey methodology. A questionnaire consisting of several domains and statements, totaling 52, was developed and administered to a sample of 144 faculty members at Najran University. The study revealed several findings, including the overall moderate availability of the requirements. Organizational requirements were found to be highly available, while those related to planning, policies, administrative, cognitive, and human aspects were moderately available. The study recommends taking all measures and actions to provide these requirements, aiming to enhance the future skills of university students in response to the demands of future professions and the directions of Vision 2030 in the Kingdom.

Keywords: future skills requirements - Vision 2030, university students, future professions

Introduction

Throughout the ages, societies have faced a series of successive revolutions—swift in their transformations, profound in their impacts, and extensive in their scope—encompassing all aspects and domains of society. There is no society, no matter how isolated, that has not been significantly touched by these revolutions. One of the most profound, powerful, and impactful of these revolutions is commonly referred to as the Fourth Industrial Revolution. This revolution has altered life in various societies, paving the way for further inevitable and successive radical changes.

The most significant reflections of this revolution are manifested in the emergence of complex creative digitization, based on interactive and interconnected possibilities. This involves the integration of multi-purpose capabilities and a vast array of intelligent algorithms, encompassing a tremendous amount of complex information and data (Gillies, 2015). It involves the integration of technologies that blur the boundaries between biological, physical, and digital domains, collectively referred to as the 'cyber-physical' society. The application of emerging technologies

resulting from this integration spans various fields, including robotics, artificial intelligence, biotechnology, nanotechnology, the Internet of Things, quantum computing, fifth-generation wireless technologies, decentralized consensus, industrial IoT, 3D printing, additive manufacturing, and fully autonomous vehicles (Schwab, 2016).

The transformation imposed by the nature of the Fourth Industrial Revolution, along with its challenges and changes on all fronts, necessitates a qualitative leap in educational systems in response to the requirements of this transformation. Reports from some international organizations emphasize that elementary school students today will enter future jobs that have not yet emerged (Partnership for 21st Century Skills, 2019). Scientific studies also affirm that acquiring and developing skills among university students is a top priority for educational development to confront the challenges and changes of the Fourth Industrial Revolution. This undoubtedly underscores the importance of taking proactive measures, strategic steps, and future scientific studies aimed at uncovering the nature of these skills and their various classifications and areas. This perspective is particularly crucial given the scarcity of educational research in this field in the Arab environment.

In light of the obsolescence of current jobs and professions, as well as the emergence of future jobs and professions, and the increasing role of educational institutions in general—specifically higher education—in preparing their students to align with the requirements of the Fourth Industrial Revolution, universities should implement structural changes to keep pace with these developments. This need for adaptation has been highlighted by various sources, including the Centre for Future-ready Graduates (2017), Dwiyanti, Ana, Widianingsih (2018), Farisi (2016), and Kemp (2018).

Digital transformation and automation have led to a significant shift in workplace requirements. There is a growing importance for these evolving skills to continue active participation in society. Currently, there is a pressing need for future skills, such as adaptability, digital literacy, and emerging skills like the development of digital transaction technologies, specifically blockchain. These skills are anticipated to become more crucial in the future. In the present context, approximately 25% of the workforce needs either to find new economic activities by 2025 or significantly enhance their technological skills, digital citizenship, and traditional skills. In other words, there is a demand for individuals to adjust their multi-disciplinary skills, including programming, adaptability, and the ability to cope with change. Primary school students must prepare for this change because, by 2030, 85% of them are expected to work in professions that do not currently exist (World Government Summit, Report, 2019, p. 4).

According to estimates, by the early 2030s, more than 40% of current jobs are expected to be significantly exposed to the risk of automation in some European economies (Hawksworth, 2018). Therefore, it is anticipated that many employees will need to reskill by the year 2025 (World Economic Forum).

Statement of the problem

The analysis of Saudi Arabia's Vision 2030 reveals a comprehensive emphasis on essential skills that educational institutions, especially universities, should instill in students to navigate

forthcoming changes and advancements in all sectors. The vision underscores the significance of global citizenship, effective communication, technical proficiency, time management, decision-making acumen, critical thinking, and creative problem-solving skills. It also highlights the importance of health and safety awareness, life skills, environmental consciousness, innovation, social interaction, multicultural adaptability, as well as a balance between specialized (hard) skills and personal (soft) skills. Furthermore, the vision recognizes the necessity of technical competencies, proficiency in the English language, and strong communication skills.

The National Transformation Program 2020 emphasized in its third strategic objective the importance of improving the educational environment that encourages creativity and innovation, fostering positive values, providing individuals with necessary knowledge and skills, and enhancing the educational system's ability to meet developmental requirements by equipping youth with the necessary knowledge and skills (National Transformation Program 2020).

Several studies such as Al-Shammari (2019), Al-Ghamdi (2018), and Aref et al. (2018) have pointed out weaknesses in aligning the outputs of Saudi universities with the needs of the labor market. There is a deficiency in the professional preparation of students, a lack of alignment between the academic curricula and the requirements of the job market, an imbalance between practical and theoretical aspects of the curriculum, and a mismatch between university specializations and the demands of the job market. Furthermore, the chosen university specializations often do not align with the student's preferences. Graduates and employers are dissatisfied with the quality of learning outcomes, and there are limited job opportunities for graduating students. In addition, several studies such as Al-Maallauf et al. (2018), Al-Dahshan et al. (2020), Malkawi (2020), Riniati (2022), and Al-Saghir (2021) have revealed the inadequacy of providing the requirements to equip students with future skills. There is a lack of embracing a renewed vision for universities that arises from the reality and needs of society, and the development of curricula and teaching methods in universities to include working on developing various skills that the university student needs after graduation. Moreover, there is a need to provide a set of requirements related to the objectives of higher education, the university environment, faculty members, educational curricula, as well as the university student. Furthermore, there is a call for stronger partnerships between the university and production and industrial institutions.

Many studies such as Baghdadi and Ismail (2020), Al-Rabie (2018), Trilling and Fadel (2013), Al-Harbi (2019), Al-Khaldi et al. (2019), Abdullah (2019), Baghdadi (2020), Layzell and Jame (2021), Tagoma and Barrera (2019), Kotsiou et al., (2022), McGuinness (2018), Pellegrino, (2017), Ryan (2023), and Ehlers and Kellermann (2019) agree that higher education needs new goals that reflect future requirements. These are often referred to as "future skills," encompassing knowledge, attitudes, values, skills, and competencies aimed at preparing learners for the future. There is a common emphasis on the need to teach such future skills, justified by the understanding that the future will present new challenges to society. To face these challenges, educators, HR specialists, policymakers, and educational technology developers should prioritize integrating

future skills into teaching, learning, and retraining. This will help ensure better preparation of students and professionals for success in an uncertain future.

Universities have become obligated to confront the challenges that have emerged in this era. In order to fulfill this role, they need to correct the path of higher education. Traditional universities are required to transform into more interactive and dynamic institutions that respond to the needs of the times and the requirements of sustainable economic development. They should also meet the demands of the job market by developing the competencies of graduates and equipping them with future skills that prepare them for the workforce and its requirements. The development of core competencies can be seen as part of a more general trend in education, where educational institutions work to achieve broader educational goals that go beyond traditional subjects. This includes enhancing students' learning in preparation for life and work in the twenty-first century (McGuinness, 2018).

Universities and schools are facing increasing demands to prepare students for rapid economic, environmental, and social changes, as well as for jobs that have not been created yet and technologies that have not been invented. Education can empower learners with the strength, competencies, and sense of purpose to shape their lives and contribute to the lives of others (OECD, 2018). For example, the development of future skills aligns with theories emphasizing the active role of learners in the learning process, such as constructivist and learner-centered approaches, or highlighting the continuously changing nature of knowledge, such as the emphasis on communication. However, professional development programs for teachers are particularly important to ensure that teachers not only are aware of future skills but also know how to better integrate them into their daily practices (Kotsiou et al., 2022). A study by Gouda (2022) revealed a statistically significant positive relationship between learning abilities and the development of future skills. Additionally, there is a statistically significant positive relationship between technological advancements and the development of future skills, as well as a statistically significant positive relationship between market changes and the development of future skills. The nature and diversity of these requirements mean that teachers, more than ever, need to be professionals who make decisions based on a strong and up-to-date knowledge base. Supporting "deep learning" and "21st-century skills" in the thinking and actions of students is crucial (Pellegrino, 2017).

The expectation for skill development in the 21st century imposes requirements on teachers. Teachers of the 21st century must possess competence in their own learning and practical skills. They need abilities and educational practices that support the development of their students' skills. Teachers should be able to integrate training on 21st-century skills into educational curricula (Valtonen et al., 2021). The competence and digital skills of teachers, along with their beliefs related to their competency in information and communication technology (ICT), are crucial for the successful integration of digital technology in teaching and learning settings (Rubach & Lazarides, 2021). It is important to consider that some high-quality teaching and learning processes in higher education are practically inconceivable without the use of technology, especially due to its impact on developing the skills and capabilities needed for the 21st century. This highlights the

need to integrate information and communication technology into the educational model, making training teachers in digital skills of significant importance (Liesa-Orús et al., 2020).

The results of the study by Dilekçi and Karatay (2023) demonstrated that student participation in activities significantly improved their creative thinking skills. There was also an enhancement in students' desire to learn, as well as improvements in innovation skills, reading and writing skills, and technological and digital literacy. Project-based learning (PBL) was identified as a relatively recent innovation in teaching methodology, utilizing real-world learning activities to engage and motivate students. PBL equips students with essential skills for the current job market, including communication, collaboration, creativity, and critical thinking. This paper provides an overview of project-based learning (Almazroui, 2023). However, a study by González-Pérez and Ramírez-Montoya (2022) revealed a lack of these frameworks for teachers and schools. Most of these frameworks are directed towards students, developing competencies through personal dimensions, self-directed learning, and linking active learning teaching strategies. Consequently, there has been a decrease in student motivation, difficulties in integrating multiple skills, challenges in time management, lack of understanding of students' concepts, difficulties in lesson planning, and limitations in educational materials. To overcome these issues, efforts have been made (Inganah et al., 2023).

To better prepare students for their future lives and careers, efforts should be made to renew educational curricula by focusing on the concept of deep learning. Deep learning involves developing students' understanding of the core elements within a subject and their ability to apply their knowledge and skills to new problems and situations, both individually and collaboratively with others (Haug & Mork, 2021). With the advent of computers, digital technologies, new means of interpersonal interaction, and increasing international competitiveness, organizations now demand new skills from their employees. This necessitates educational systems to strive to provide appropriate continuous training and to continually renew and develop curricula to align with the ongoing developments and changes in the job market (Thornhill-Miller et al., 2023). Moreover, adapting workers' education to new teaching and learning models that focus on developing multidisciplinary competencies is essential. This adaptation requires a new model of education and learning that emphasizes the development of multidisciplinary skills and expands the youth's capabilities to solve problems and face the challenges posed by the Fourth Industrial Revolution (Kipper et al., 2021).

Several studies, including those conducted by Alkhudairy (2022), Ryan (M. 2023), Ehlers and Kellermann (2019), Alshahrani (2022), Alonazi (2021), and Khiyatt with Yamaada (2019), have underscored critical requirements for Saudi universities to meet the growing demand for future skills aligned with the job market. These requirements encompass a multifaceted approach. First and foremost, there is a need for a comprehensive reform of academic curricula, aiming to enhance educational standards and bridge the skills gap between graduates and workforce needs. Additionally, fostering strategic partnerships with industry players is crucial, offering students exposure to authentic work environments and aligning educational programs with practical requirements. Cooperative training, vocational programs, counseling, and real-world experiences

through practical training or apprenticeships emerge as essential components. Furthermore, the adoption of skill-based education models, emphasizing practical competencies, is advocated.

Based on that, the study attempts to answer the following questions: What are the essential requirements for equipping Najran University students with the skills necessary for future professions? This leads to the following questions:

1. What are the requirements to equip Najran University students with future skills related to university planning and policies? And to what extent are they available from the perspective of faculty members at Najran University?
2. What are the administrative requirements needed to equip Najran University students with the skills necessary for future professions? And to what extent are they available from the perspective of faculty members at Najran University?
3. What are the knowledge requirements needed to equip Najran University students with the skills necessary for future professions? And to what extent are they available from the perspective of faculty members at Najran University?
4. What are the human requirements needed to equip Najran University students with the skills necessary for future professions? And to what extent are they available from the perspective of faculty members at Najran University?
5. What are the organizational requirements needed to equip Najran University students with the skills necessary for future professions? And to what extent are they available from the perspective of faculty members at Najran University?

Research objectives

The study aims to identify the requirements to equip Najran University students with the necessary future skills for professions related to university policies and planning, as well as administrative, knowledge, human, and organizational aspects. Also, it assesses the availability of these requirements from the perspective of faculty members at Najran University.

Methods

The study employed the descriptive survey method, chosen for its suitability to the nature and objectives of the study. This method is selected based on its focus on identifying the conditions and relationships associated with the phenomenon. It goes beyond merely collecting and organizing data, extending to the analysis and interpretation of data to derive a set of results that contribute to understanding the reality and subsequently working towards its improvement.

Research tool

The current research utilized a questionnaire as a data collection tool from the perspective of the faculty. The questionnaire comprised two sections, with the first section dedicated to basic data about the sample. The second section included a set of statements aimed at identifying the requirements necessary for the development of future skills. These statements were categorized into five domains. The first domain addressed requirements related to university planning and policies, the second domain covered administrative requirements, the third domain focused on knowledge requirements, the fourth domain emphasized human requirements, and the fifth domain dealt with organizational requirements.

Validity and reliability

The questionnaire's validity and content accuracy were ensured by presenting it to specialists and academics to verify the linguistic formulation accuracy of the questionnaire statements. Additionally, the questionnaire's reliability was confirmed by calculating internal consistency using Cronbach's alpha, as shown in Table 1.

Table 1. Questionnaire's reliability

domain	No of items	Cronbach's alpha Coefficients
The first domain: requirements related to university planning and policies	12	0.789
The second domain: administrative requirements	6	0.736
The third domain: cognitive requirements	12	0.741
Fourth domain: human requirements	12	0.786
The fifth domain: regulatory requirements	10	0.804
Scale	52	0.796

Through Table 1, it is evident that Cronbach's alpha coefficients for the questionnaire sections are high, ranging between (0.741 to 0.804). The overall Cronbach's alpha coefficient for the entire questionnaire reached a value of (0.796), indicating a high-reliability ratio for the questionnaire. To calculate the reliability of internal consistency for the questionnaire items, correlation coefficients were calculated using Pearson's correlation coefficient between each questionnaire item and the dimension to which it belongs, as illustrated in Table 2.

Table 2. Internal consistency for the questionnaire items

domain	items						
first domain	No	1	2	3	4	5	6
	P.value	0.439*	0.511**	0.487*	0.493*	0.533**	0.519**
	No	7	8	9	10	11	12
	P.value	0.488*	0.564**	0.523**	0.488*	0.561**	0.522**
second domain	No	1	2	3	4	5	6
	P.value	0.488*	0.537**	0.527**	0.488*	0.529**	0.541**
third domain	No	1	2	3	4	5	6

	P.value	0.512**	0.533**	0.489*	0.539**	0.529**	0.491*
	No	7	8	9	10	11	12
	P.value	0.488*	0.529**	0.533**	0.527**	0.489*	0.477*
Fourth domain	No	1	2	3	4	5	6
	P.value	0.521**	0.529**	0.501*	0.538**	0.503*	0.489*
	No	7	8	9	10	11	12
	P.value	0.488*	0.514**	0.534**	0.522**	0.507**	0.522**
fifth domain	No	1	2	3	4	5	6
	P.value	0.498*	0.488*	0.529**	0.577**	0.568**	0.547**
	No	10	7	8	9	10	
	P.value	0.517**	0.498*	0.567**	0.579**	0.517**	

Through Table 2, it is apparent that the correlation coefficients for all questionnaire items are statistically significant. This result suggests a significant correlation between the items of each domain and the domain to which they belong. Based on this, there is evidence of internal consistency for the questionnaire, indicating its reliability for application.

Sample profile

The finalized questionnaire was sent to the faculty via email and social media platforms for a total of (156) faculty members. They were requested to assess their responses to each statement in the questionnaire to determine their agreement level with each requirement mentioned. The recorded responses were obtained from (114) faculty members. Descriptive statistical tests (means, standard deviations, and rankings) were then employed to determine the faculty's level of agreement with these requirements.

Results and discussion

The responses were collected and analyzed using SPSS v25.0 software. Descriptive statistics, including mean, standard deviation, and rankings, were calculated. Since the response levels were three-point, response averages were determined with a value of (0.66). Based on this, response averages were categorized as follows: (2.34 to 3 indicates high or strong agreement, 1.67 to 2.33 indicates moderate agreement, and 1 to 1.66 indicates weak agreement). Through statistical analysis of the collected responses, it was found that the highest category of requirements approved by the faculty was organizational requirements with an average of (2.34) and high agreement. Following that, the second domain, which is knowledge requirements, had an average of (2.29) with moderate agreement. Planning and university policies requirements came next with an average of (2.25) and moderate agreement, followed by the fourth domain related to administrative

requirements with an average of (2.24) and moderate agreement. Lastly, human requirements had an average of (2.23) with moderate agreement.

This result can be attributed to the university's substantial efforts in organizational aspects, such as establishing partnerships with the local community to market and employ its graduates. The university also strives to coordinate and collaborate with various business sectors to train its students on future skills in different institutions. The placement of human requirements in the last position according to the study's sample indicates that the university needs more effort in developing human resources, including faculty members and students, in enhancing future skills. The detailed results answer the research questions and align with studies conducted by Almouloof et al. (2018), Aldahshan et al. (2020), Malkawi (2020), Riniati (2022), and Al-Sagheer (2021).

Research question 1: What are the requirements to equip Najran University students with future skills related to university planning and policies from the perspective of faculty members at Najran University?

To answer the first question related to the faculty members' responses regarding the availability of requirements necessary to equip Najran University students with future skills associated with university planning and policies, the mean, standard deviation, and rankings were calculated, as illustrated in Table 3.

Table 3. The results of calculating the means, standard deviations, and rankings for the first domain (Requirements related to university planning and policies)

Items	Mean	Standard deviation	Rank	Response Level
The university operates according to policies that make the development of future skills an integral part of its organizational culture.	2.26	0.17	4	Moderate
The university adopts advanced policies to support and build future skills for its students.	2.24	0.27	5	Moderate
The university focuses on incorporating the development of future skills into its strategic plans.	2.13	0.24	11	Moderate
University policies work to enhance the benefits of government initiatives and provide opportunities for the development of future skills for its students.	2.24	0.19	6	Moderate
The top management at the university invests in various behaviors (such as creativity, innovation, proactiveness, adventure, competitiveness, risk-taking, and independence)	2.19	0.18	8	Moderate

to implement strategies related to the development of future skills.				
The university strengthens its ability to continuously develop its strategies to compete with peer institutions in providing a supportive university environment for the development of future skills.	2.37	0.22	2	High
The university builds measurement tools to survey the opinions of employers about the level of its graduates.	2.17	0.27	10	Moderate
The university plans to enhance both internal and external efficiency of its programs and improve their outcomes in what and how.	2.13	0.12	12	Moderate
The university regularly reviews and redesigns its academic programs to integrate future skills.	2.18	0.22	9	Moderate
The existence of a clear policy contributes to achieving excellence, stemming from the university's overall policy.	2.21	0.23	7	Moderate
The university regularly anticipates the job market, conducts feasibility studies, identifies labor market needs, and develops future plans based on the results.	2.26	0.18	3	Moderate
The university plans to benefit from government initiatives that aim to enhance students' future skills.	2.66	0.26	1	High
Total degree (Requirements related to university planning and policies)	2.25	0.14	Moderate	

Through Table 3, it is evident that the arithmetic mean for the overall score of the domain related to university planning and policies was (2.25), indicating a moderate level. This result suggests that faculty members moderately agree on the availability of these requirements. The results also indicate that faculty members strongly agree on two specific requirements: the university's plans to benefit from government initiatives that enhance students' future skills and the university's continuous development of strategies to compete with peer institutions in providing a supportive university environment for the development of future skills. On the other hand, faculty members'

agreement on the remaining (10) requirements in this domain was moderate. This result could be attributed to the university's efforts in planning and coordination with government entities, but there is a lack of clear policies for building and developing future skills for its students. The university might also benefit from scientific studies on labor market requirements, enabling it to restructure its academic programs in line with these changes and demands. These results align with studies conducted by various researchers, including Baghdadi et al. (2020), Al-Rabie (2018), Trailinger and Fadel (2013), Al-Harbi (2019), Al-Khaldi et al. (2019), Abdullah (2019), Baghdadi (2020), Layzell and Jame (2021), Tagoma and Barrera (2019), Kotsiou et al. (2022), McGuinness (2018), Pellegrino (2017), Ryan (2023), and Ehlers and Kellermann (2019).

Research question 2: What are the administrative requirements needed to equip Najran University students with the skills necessary for future professions from the perspective of faculty members at Najran University?

To answer the second question regarding the responses of faculty members regarding the availability of the requirements to equip Najran University students with the future skills associated with administrative requirements, the mean, standard deviation, and ranks were calculated as shown in Table 4.

Table 4. The results of calculating the means, standard deviations, and rankings for the second domain (Requirements related to administrative requirements)

Items	Mean	Standard deviation	Rank	Response Level
Legislation and policies necessary to enhance future skills among students	2.21	0.02	6	Moderate
Updating regulations, plans, and strategies associated with academic programs within the university to work on developing future skills.	2.26	0.10	3	Moderate
The university adopts principles of competitiveness in both administrative and academic work, whether at the local or global level.	2.26	0.08	2	Moderate
Procedures that enhance future skills within the university are characterized by ease and flexibility.	2.21	0.08	5	Moderate
The university adopts a governance policy for all its administrative operations.	2.29	0.06	1	Moderate
The university promotes digital transformation processes in administrative operations.	2.22	0.01	4	Moderate

Total degree (Requirements related administrative requirements)	2.24	0.03	Moderate

From Table 4, it is evident that the average score for the total degree of Domain 2: Administrative Requirements was (2.24), indicating that faculty members moderately agree on the availability of these requirements. This result could be attributed to the absence of administrative processes that encourage the acquisition of future skills. The statements "Procedures that enhance future skills are characterized by ease and flexibility" and "Updating the necessary legislation and policies to enhance future skills among students" obtained the lowest averages (2.21), confirming the inadequacy of regulations and administrative processes in meeting the requirements for the development of future skills. This result aligns with studies conducted by Alshammari (2019), Alghamdi (2018), Aref et al. (2018), Almulaifi et al. (2018), AlDhshan (2020), Malkawi (2020), Riniati (2022), and Al-Sagheer (2021).

Research question 3: What are the knowledge requirements needed to equip Najran University students with the skills necessary for future professions from the perspective of faculty members at Najran University?

To answer the third question regarding the responses of faculty members about the availability of the requirements to equip Najran University students with the future skills associated with knowledge requirements, the average, standard deviation, and rankings were calculated, as shown in Table 5.

Table 5. The results of calculating the means, standard deviations, and rankings for the second domain (Requirements related to knowledge requirements)

Items	Mean	Standard deviation	Rank	Response Level
The university relies on educational programs that contribute to providing job opportunities for students.	2.29	0.22	5	Moderate
The university offers training programs to prepare students for the job market.	2.25	0.10	7	Moderate
The university provides academic specializations that offer practical applications considering the needs of the job market.	2.13	0.08	12	Moderate
The university offers courses that encourage students to be entrepreneurial and innovative.	2.24	0.08	9	Moderate
There is a balance in the curriculum between theoretical and practical aspects.	2.23	0.16	10	Moderate

The university has a plan to monitor students during practical training.	2.25	0.11	8	Moderate
The curricula contribute to enhancing students' ability to solve problems they encounter.	2.26	0.10	6	Moderate
The university applies quality standards in the curricula that align with the requirements of the job market.	2.45	0.19	1	High
The knowledge acquired by students contributes to their ability to make sound decisions.	2.35	0.12	4	High
The curricula encourage students to analyze and creatively solve problems they face.	2.35	0.15	3	High
The university's curricula focus on equipping students with future skills.	2.41	0.12	2	High
The university works on incorporating 21st-century skills and knowledge into various academic programs.	2.22	0.02	11	Moderate
Total degree (Requirements related knowledge requirements)	2.29	0.09	Moderate	

From Table 5, it is evident that the average score for the total degree of the cognitive requirements domain is (2.29) at a medium level. This result indicates that faculty members moderately agree on the availability of these requirements. The result can be attributed to the insufficient inclusion of future skills in the curricula and the lack of specialized training programs in this field. The results also show that faculty members highly agree with statements such as the university applies quality standards in the curricula that align with the requirements of the job market, and that the curricula at the university focus on equipping students with future skills. This may be due to some university programs working on developing future skills through their curricula, while others have shortcomings in this aspect (Al-Shammari, 2019; Al-Ghamdi, 2018; Aref et al., 2018; Al-Ma'loof & others, 2018; Al-Dahshan et al., 2020; Malkawi, 2020; Riniati, 2022; Al-Sagheer, 2021).

Research question 4: What are the human requirements needed to equip Najran University students with the skills necessary for future professions from the perspective of faculty members at Najran University?

Results of calculating the mean, standard deviation, and ranks for the third domain related to the responses of faculty members regarding the availability of the requirements to equip Najran University students with the future skills required for professions associated with human requirements are shown in Table 6.

Table 6. The results of calculating the means, standard deviations, and rankings for the second domain (Requirements related to human requirements)

Items	Mean	Standard deviation	Rank	Response Level
The university encourages students to participate in approved projects within the university.	2.12	0.22	11	Moderate
The university promotes student involvement in work teams, providing them with leadership and interpersonal skills.	2.13	0.10	10	Moderate
The university works on imparting effective communication skills to students.	2.24	0.08	8	Moderate
The university assists students in acquiring technical skills and their various applications.	2.15	0.08		Moderate
The university works on qualifying and training graduating students before entering the job market.	2.26	0.16	4	Moderate
The university seeks to attract experts and specialized trainers to ensure the success of training graduating students and equip them with future skills to meet the needs of the job market.	2.34	0.11	1	High
The university utilizes all material, human, scientific, health, and sports resources within the university to develop students' future skills.	2.22	0.10	9	Moderate
The university forms online learning communities where expertise and perspectives related to the best teaching methods and strategies are exchanged to contribute to achieving future skills.	2.24	0.19	6	Moderate
The university works on developing the academic capacities of faculty members.	2.26	0.12	5	Moderate
The university supports innovation, creativity, and entrepreneurship among students.	2.31	0.15	2	Moderate

The university allocates rewards and prizes to outstanding faculty members in research and teaching.	2.24	0.12	7	Moderate
The university offers continuous professional development programs for faculty members.	2.29	0.02	3	Moderate
Total degree (Requirements related human requirements)	2.23	0.07	Moderate	

Based on Table 6, the overall average score for the dimension of Human Requirements is (2.23), indicating a moderate level of agreement among faculty members regarding the availability of these requirements. This result could be attributed to a lack of a culture emphasizing the development of future skills, limited awareness of their importance, and a scarcity of their incorporation into the curricula. Additionally, there seems to be a shortage of specialized programs aimed at fostering these skills among the university's workforce.

However, the requirement related to the university's efforts to attract experts and specialized trainers to ensure the success of preparing graduates and equipping them with future skills to meet the needs of the job market has been achieved at a high level. This result is attributed to the presence of practical and field applications in various university programs, involving experts from the workplace as supervisors to impart professional skills related to the job (Baghdadi, Manar Ismail, 2020; Al-Rabie, 2018; Trilling & Fadel, 2013; Al-Harbi, 2019; Al-Khaldi et al., 2019; Abdullah, 2019; Baghdadi, 2020; Layzell & Jame. 2021; Tagoma & Barrera, 2019; Kotsiou et al., 2022; McGuinness, 2018; Pellegrino, 2017; Ryan, 2023; Ehlers & Kellermann, 2019).

Research question 5: What are the organizational requirements needed to equip Najran University students with the skills necessary for future professions from the perspective of faculty members at Najran University?

To answer the fifth question regarding the responses of faculty members regarding the availability of requirements to equip Najran University students with the future skills required for professions associated with organizational requirements, the mean, standard deviation, and ranks were calculated as shown in Table 7.

Table 7. The results of calculating the means, standard deviations, and rankings for the second domain (Requirements related to organizational requirements)

Items	Mean	Standard deviation	Rank	Response Level
The university encourages collaboration with private companies to present their products and projects, aiming to enhance student engagement with them.	2.41	0.22	2	High

The university works to strengthen collaboration between the academic institution and the job market to meet their future needs for qualified personnel.	2.28	0.10	7	Moderate
The university is working to expand the establishment of business incubators and research centers.	2.47	0.08	1	High
The university regularly involves industry leaders in the development of its educational systems and engages them in the university council.	2.26	0.08	9	Moderate
The university seeks to open communication channels with the job market to provide support and benefit from academic research.	2.39	0.16	3	High
The university strives to create an attractive and stimulating environment to prepare graduating students and equip them with future-oriented skills.	2.28	0.11	8	Moderate
The university seeks to open up and engage with distinguished foreign universities to benefit from their experiences and expertise in the development of future skills.	2.37	0.10	4	High
The university builds partnerships to support the practical qualification of graduates and equip them with future skills to meet the needs of the job market.	2.31	0.19	6	Moderate
The establishment of research chairs is aimed at achieving excellence in the field of future skills.	2.26	0.12	10	Moderate
The creation of specialized research centers is intended for studying ways to align the outputs of the university with the requirements of the job market.	2.33	0.15	5	Moderate
Total degree (Requirements related organizational requirements)	2.34	0.07	High	

Through Table 7, it is evident that the overall average for the organizational requirements domain reached (2.34) at a high level. This result indicates that the faculty members highly agree on the

availability of these requirements. The result has been previously explained when presenting the ranking of the study domains. Table 7 also suggests that the availability of these requirements motivates the university to expand the establishment of business incubators and research centers, ranking them at the highest level. The university aims to create business incubators that support innovative projects by students. On the other hand, the requirement for establishing research chairs to achieve excellence in the field of future skills is ranked lower, indicating a potential lack of specialized research chairs in this area. Furthermore, the university periodically involves leadership from the job market in the development of its educational systems and engages them in the university council. However, this requirement is ranked at the lowest level, suggesting potential shortcomings in utilizing the expertise of employers (Al-Shammari, 2019; Al-Ghamdi, 2018; Aref et al., 2018; Pellegrino, 2017; Ryan, 2023 Ehlers & Kellermann, 2019).

Conclusion

The purpose of this study was to identify the essential requirements for developing future skills among its students from the perspective of the faculty members. The results indicated that the requirements are available to a moderate degree, with organizational requirements being available at a high level. On the other hand, the study sample indicated that administrative, planning, policy, knowledge, and human requirements are available to a moderate degree. This necessitates the need to take measures and actions that can ensure the provision of these requirements and contribute to the development of future skills for students, thereby improving the university's outcomes and bridging the gap between the university's outputs and the demands of the job market.

Acknowledgment

The authors are thankful to the Deanship of Scientific Research at Najran University for funding this work, under the Research Groups Funding program grant code (NU/RG/SEHRC/12/2).

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