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The Role of Scientific Research in Achieving Sustainable Development According to the Kingdom of Saudi Arabia's Vision 2030 from the Point of View of Faculty Members at the University of Ha'il

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Abstract

The study aimed to identify the role of scientific research in achieving the goals of sustainable development in light of the Kingdom of Saudi Arabia's Vision 2030 from the point of view of faculty members at the University of Ha'il.The study relied on the descriptive analytical approach, and to achieve the goal of the study, a questionnaire was developed consisting of 20 items distributed over three axes; The development and growth of universities, developing human resources and increasing the quality and number of research. The questionnaire was distributed to 200 faculty members at the University of Ha'il, after ensuring its validity and reliability. The questionnaire data was processed statistically using means, standard deviations, and an equation of Cronbach alpha. The results of the study concluded that scientific research plays an important and fundamental role in sustainable development in the Kingdom from the point of view of faculty members, especially with what the Kingdom seeks towards its ambitious 2030 vision. The researchers recommended that the university support research to achieve the requirements of sustainable development, address issues related to community problems, and link them to development plans.

Keywords: *Sustainable Development, Scientific Research, Saudi Arabia Vision 2030.*

Introduction

Scientific research is closely linked to sustainable development, because of its important role and significant positive impact on various development indicators. Scientific research is the main engine and the real gateway to the development of societies. It is not possible to talk about development apart from the role played by scientific research as an important base from which most projects and in all sectors start to achieve growth and social well-being. Scientific research also aims to develop knowledge, discover new information, and find solutions to problems. facing countries, and universities work to create effective human capital that contributes to sustainable development (Shahira and Ibrahim, 2023).

Through Vision 2030, the Kingdom of Saudi Arabia sought to develop a large number of public and private sectors in the Kingdom, education had the greatest and largest share among these sectors, and its role was represented by developing some sectors in the education system in general. The Kingdom of Saudi Arabia 2030 vision is considered education is an ambitious roadmap that aims to transform the Saudi economy and society through a set of comprehensive reforms. Education plays a pivotal role in achieving this vision, as it is the cornerstone on which sustainable development and economic prosperity are built. Therefore, Vision 2030 included many main aims that seek to carry out comprehensive reforms to the education system in the Kingdom, whether general or university, in addition to technical and vocational.

Saudi Vision 2030 came as a plan to reduce Saudi Arabia's dependence on oil, diversify its economy, develop public service sectors such as infrastructure, entertainment, and tourism (Bindajam & Al-Ansi, 2019). The most important of these topics are developing educational curricula, improving the quality of education, and investing in digital education. The vision focuses on enhancing higher education by supporting universities and developing distinguished research programs. Universities are encouraged to cooperate with

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international institutions to exchange knowledge and experiences. Vocational and technical education is considered an essential part of the Kingdom's 2030 vision in education, as it aims to provide young people with the practical skills they need to enter... Labor market and contribution to economic development.

It seeks to raise the level of academic achievement among students by improving the quality of education, providing a stimulating learning environment, promoting innovation and creativity in education, and creating an educational environment that encourages innovation and creativity by promoting scientific and artistic activities, encouraging students to think outside the box, and developing students' practical skills through education, vocational and technical, in addition to strengthening training and applied programs in the school curricula (Al-Anazi, 2024).

The scientific progress of individuals is measured by the number of scientific researches and the extent of their contributions to finding new information or a solution to a specific problem. Accordingly, scientific research is considered one of the most important contemporary topics that learners have been interested in throughout the ages. (Ali, 2010) believes that the tasks and objectives of scientific research are not achieved unless they are linked to with development, this means calling upon the civilizational and cultural characteristics of the nation, so that the fields of scientific research achieve a sufficient degree of self-knowledge, self-confidence, and a sense of belonging to a civilization rooted in science and progress (Yassin, 2019).

There has been a significant growth in interest in sustainability in business, management and organizational studies in recent years, this article applies the method (Oswick, 2009) Journal of Management, Spirituality & Religion, (6) 1, (2009) 15–25.In bibliometric research to ascertain how this growth is reflected in scholarly publishing, particularly in relation to business and management education over the twenty years 1994-2013. The research has found that sustainability as a general topic in business and management studies, as evidenced by scholarly publishing, has accelerated rapidly both in terms of articles published and cited.

In the middle of the first decade of the twenty-first century, the focus of books published in this field began to change from a book calling for "sustainable development" to a book that views sustainability as a management practice that can help companies and society simultaneously, and literature related to sustainability was in the field of management education. The business is smaller, but described a similar growth rate that accelerated sharply in the last five years of the data set. Most of the peer-reviewed scientific articles analyzed tend to call for the inclusion of sustainability in business school curricula, or show the different ways in which faculty members have integrated sustainability-related principles into their teaching (Cullen, 2017).

Scientific research is the primary driver of economic activity and growth, and the primary guide to the well-being of society and citizens. Universities are the primary incubators of scientific research through the general plans and policies of the Kingdom of Saudi Arabia and through financing research related to comprehensive and sustainable development plans. In addition to the system of academic applied research and the issuance of contracts and regulations for grants, research contracts and consultations that provide the infrastructure for scientific research, and then the establishment of specialized research centers, the role of universities comes in encouraging, developing and evaluating the movement of scientific research in society.

As the world faces the problem of the failure of institutional, social, economic and other systems to solve all society's problems, and to solve these problems, those concerned can seek scientific research, inventions and modern scientific methods such as university research and other research, and this is the basis of sustainable development (Waas, et, al., 2010).

The Kingdom of Saudi Arabia, like other countries, pays great attention to scientific research and sustainable development. Higher education and scientific research in the Kingdom have achieved clear and tangible progress at a rapid pace from its beginnings until now. Scientific research has contributed to development and development in a way that serves the needs of society and is consistent with the

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aspirations of the people, by trying to link university and higher education programs and plans with sustainable development plans and goals in various scientific and life fields (Hassouna, 2019).

The role of universities in sustainable development: The university is a social scientific institution whose primary function is to serve society, and its primary goal is to develop society and advance it to the best technical, economic, social and health levels. The relationship and role existing between the university and sustainable development can be achieved through cognitive growth; The university contributes to obtaining, storing, retrieving and analyzing knowledge, which makes it the main focus for social, economic and cultural progress and achieving comprehensive development through the capabilities and expertise it provides for continuous education and training through scientific and applied research and its connection to the reality of work, and research and discussion of industrial and agricultural problems and obstacles to progress and finding solutions for them. Scientific research also prepares the human competencies that society needs in various administrative, technical and social fields in light of technological development and provides them with knowledge and experience (Zakora and Salem, 2016).

Hence, attention to educational institutions is an inevitable necessity through which the role of research can be activated, which requires the state to take upon itself all research requirements and provide the needs for spending on scientific research in order to achieve the goals of sustainable development, and sustainable development needs to be a sustainable strategic development that is reflected in The life of society and people is linked to their development, so it took on the characteristic of sustainability. Saudi Vision 2030 came as a plan to reduce Saudi Arabia's dependence on oil, diversify its economy, and develop public service sectors such as infrastructure, entertainment, and tourism (Bindajam & Al-Ansi, 2019).

The role of scientific research, social and economic development, and sustainable development: Scientific research is the true and correct approach to the development of society, as it is not right to talk about development apart from establishing the role of scientific research as an important basis from which all development projects and all their various sectors start to produce a natural and necessary result, which is achieving social well-being. Accordingly, the role of science at all levels is the factor. Actor to achieve this purpose. In fact, scientific research requires the state to harness financial capabilities in order to cover spending on scientific research, and this should be done within firm convictions of the importance of scientific research in achieving sustainable development and the necessity of providing the capabilities and requirements necessary to achieve it and spend on it, and since the interest in institutions of higher education and scientific research It is a matter that is mostly entrusted to the state, and it also requires that civil society organizations and institutions have a role in it (Mansour, 2020).

From a social standpoint, scientific research aims to develop individuals spiritually and emotionally and develop society, this enables humans to adapt to and preserve their environment, and solve society's problems, from an economic standpoint, scientific research provides applied research and scientific innovation that lead to economic returns and investment products that support economic development. As for sustainable development, scientific research provides knowledge based on meeting the needs of present generations without harming subsequent generations and preserving natural sources of local wealth (Nasser, 2002).

Importance of study

Scientific research is one of the most important foundations of development and the foundations of its success. It is what gives it the ability to achieve development and sustainability, and also provides it with flexibility in adapting and responding to transformations in society and external influences. This is due to the methodologies of work that sustainable development includes, quality of performance, diversity and innovation in tools, and strength in Legislation and accuracy in analysis and diagnosis in anticipating the future. The importance of scientific research also comes from the contribution it contributes to the development industry and the development of new and modern mechanisms in confronting challenges.

Despite the presence of trends towards deepening the value of scientific research in life and managing development programs, creating institutions concerned with scientific research, and activating the role of

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universities and academic institutions in this aspect, and the associated national policy to spread the culture of scientific research in educational institutions in the form of study materials or competitions. There are research contributions that address various issues in development, but scientific research still needs attention, development, and sustainability (Hassouna, 2019). Scientific research is witnessing a qualitative transformation in its institutions and the formation of its researchers at the local and global levels, and the development of competitive policies in promoting scientific research, which is based primarily on innovation and experimentation in strategic fields, such as oil, gas, energy, natural resources, clean energy, nuclear energy, and others. The issue remains linked to the degree of conviction in scientific research as an added value for transformation in all areas of work and production, and that the integration between scientific research and sustainable development is linked to the roles that scientific research plays in the qualitative shift in tools and mechanisms.

There is no doubt that scientific research is considered the main reason for the superiority of developed countries over developing countries, and in recognition of the importance of scientific research, developed countries allocate a large percentage of their domestic product to spending on scientific research, and the backwardness of developing countries in this field is due to the small percentage of spending on scientific research. There are several reasons that prompted the researcher to pay attention to this topic, the most prominent of which is the conviction that the most important causes of development for any country begin with scientific research, presenting a study of the reality of scientific research in Arab countries and in the Kingdom of Saudi Arabia in particular, and the lack of studies that address the topic of scientific research and its role in achieving sustainable development. This confirms the need to shift scientific research to the stage of practical applications, conscious practices and serious initiatives, by deepening the role of research centers and universities in achieving sustainability.

On the other hand, it requires attention to applied research, which includes a high degree of innovation, exploration, and analysis of social, environmental, and economic problems, which contributes to building a research system based on diversity in the research product, and directing attention to operations research, market and quality research, experimental research, and case studies to achieve sustainability.

This is confirmed in master's and doctoral research, promotions of college professors at universities, personal research carried out by researchers published in local and international scientific journals, and moving human research to depth in methodology and diving into the depths of social behavior that promotes development, especially in measuring trends, paths of thought, etc. Which contributes to giving development opportunities for sustainability, ensuring its quality, competitiveness, and presence in the beneficiary's mind. This will be reflected positively in deepening the role of scientific research in achieving sustainability and will form a fundamental focus in national decision-making because of the analysis it will provide of the reality of development and development trends in the Kingdom of Saudi Arabia, and the statistics, achievement indicators, comparisons, standards and analyzes it will provide that examine sustainability priorities. Awawda (2018) points out that the matter requires the availability of a national mechanism and a strong system that obliges educational and research institutions to rely in their work on a clear methodology for scientific research that is consistent with the goals of strategic and sustainable development, and to adopt national tools and mechanisms that can be measured and evaluated. This enables scientific research to move in two main directions, so that it exercises its innovative and developmental role on the one hand, and on the other hand, it enhances administrative development and paves the way for building a true institutional work culture.

Study problem

In light of the talk about scientific research and its importance in achieving the aspirations of nations and finding ways for their renaissance, it is necessary to address the current situation regarding the scientific research going on in the concerned circles, which was originally expected to achieve noble goals that would ultimately lead, if the desired fruits were achieved, to the crystallization of a real model. It satisfies ambitions, fulfills aspirations, and elevates us towards bright horizons.

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Scientific research in the Kingdom of Saudi Arabia - which is like all other Arab countries, near and far, to varying degrees - has followed a path for decades that has been crawling towards a specific goal that does not achieve national ambitions. Those interested and researchers in the field of scientific research have sought to achieve the goals of rising from one rank to another without caring about higher benefits. The greatest thing they share is the national interest. The criteria for promotion in universities have been determined, just as the instructions and conditions for renewing or obtaining an official identity or passport have been determined.

The scientific research required is other than all of this, as we do not accept in any way that the bridges that carry us to the brightness of the future are built from routine requirements for promotion, as when developed nations seek distinction and progress or face problems or emergency circumstances, they resort to scientists and support for research. scientific research in order to confront these circumstances. Rather, our scholars themselves have been led by what their immediate and distant surroundings dictate to them and have forgotten that their mission involves being shining beacons for society.

It is time to turn to everyone who stopped scientific production as soon as they reached the top of the ladder in their academic promotions, to ask them to continue giving, which will not only benefit the nation, but will also provide them and their communities with a decent life, now and in the future (Ali, 2012).

The Kingdom of Saudi Arabia is rich in its natural resources, rich in the human energies of its people, and in an abundance of higher scientific institutes, including universities, colleges, and institutions that were originally established to achieve sustainable development ambitions. If we do not exploit this abundance of energies in the right direction, we will continue to waste the nation's resources.

From the above, it is clearly evident the strong connection between scientific research and sustainable development, as scientific research at the University of Hail is closely and directly linked to the goals of sustainable development in the Kingdom from the point of view of its faculty members. Therefore, the problem of the study emerged by revealing the role of scientific research in achieving sustainable development in the Kingdom from the point of view of faculty members at the University of Ha'il.

Study objectives

The study aims to identify the role of scientific research in achieving sustainable development in the Kingdom from the point of view of faculty members at the University of Hail. This goal can be achieved by identifying the role of scientific research in achieving sustainable development goals through developing and developing universities, developing human resources, and increasing knowledge. Scientific research related to the quality and number of research.

Study questions

The main question: What is the role of scientific research in achieving sustainable development in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Hail?

The following sup- questions out from it:

Is there a role for scientific research in achieving sustainable development through the development and growth of universities in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il?

Is there a role for scientific research in achieving sustainable development through developing human resources in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Hai'l?

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Is there a role for scientific research in achieving sustainable development by increasing scientific knowledge related to the quality and number of research in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il?

Study hypotheses

- There is a statistically significant role for scientific research at the level ($\alpha \leq 0.05$) in achieving sustainable development through the development and growth of universities in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il.

- There is a statistically significant role for scientific research at the level ($\alpha \leq 0.05$) in achieving sustainable development through developing human resources in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il.

- There is a statistically significant role for scientific research at the level ($\alpha \leq 0.05$) in achieving sustainable development through increasing scientific knowledge related to the quality and number of research in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il.

Definition of terms

Scientific research: It is a process that seeks to answer a question or study a phenomenon through organized and studied procedures, through which the researcher collects, describes and analyzes data, to extract and interpret results. This process must be carried out with the highest level of accuracy and a high degree of objectivity in order to enjoy credibility and achieve The desired benefit from it (Singh, 2021).

Salama (2017) defines it as intellectual work and the expenditure of organized mental effort on a group of issues or issues, by inspecting and investigating the principles or relationships that link them, arriving at the truth on which the best solutions are built.

Sustainable development: is that development that meets the needs of the present without compromising the ability of future generations to meet their needs (Egelston, 2012) and takes into account the environment, society and economy (OECD, 2005). The current study including three axes for sustainable; the development and growth of universities, developing human resources and increasing the quality and number of research.

Saudi Arabia Vision 2030: It is an ambitious road map based on the strengths in terms of Arab and Islamic depth, investment strength, and strategic location between three continents. The vision was placed at the core of its priorities: empowering citizens, diversifying the economy, and enhancing the Kingdom's global leadership. The vision is based on (3) axes: a vibrant society, a prosperous economy, and an ambitious nation. These axes are integrated and consistent with each other in order to achieve the goals of the Kingdom of Saudi Arabia in 2030, and 96 strategic goals branch out from them (Vision2030.gov.sa)

Study limitations

The results of the study were determined within the following limits:

The human limit: The study was conducted on faculty members at the University of Hail in the Kingdom of Saudi Arabia.

Spatial limitation: The study was applied in all branches of the University of Hail in the Kingdom of Saudi Arabia.

Time limit: The study was conducted in the first semester of the academic year 2024 AD.

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Research Methodology

The research methodology was based on two aspects:

The first approach: The researchers used the inductive approach through which the necessary data is collected from the research, using a group of Arab and foreign references. The second approach: The researchers used the descriptive analytical approach to analyze and describe the data, and the statistical analysis program (SPSS Vs. 29) was used.

Study population: The study population included all faculty members at the University of Ha'il.

Study sample: The sample included (200) faculty members randomize at the University of Ha'il in the Kingdom of Saudi Arabia, from all specializations and academic ranks.

Study Instrument: The researcher relied on the questionnaire for all study data. A questionnaire consisting of (20) items was prepared after ensuring its validity and reliability, distributed over three areas: the role of scientific research in achieving sustainable development goals through the development and growing of universities (9 items), by developing human resources (6 items), and by increasing scientific knowledge related to the quality and number of research (5 items).

Instrument Validity: The validity of the questionnaire was confirmed in two ways; Content validity: The questionnaire was presented to (6) specialists in the fields of scientific research and sustainable development, and their comments on the questionnaire paragraphs were addressed in terms of clarifying the paragraphs and modifying some of them to suit the field to which they belong. Construct validity: The questionnaire was applied to a pilot sample that included (30) faculty members from the study community, and the correlation coefficient was extracted between each item and the field to which it belongs. Table (1) shows this.

Table (1) Results of correlation coefficients between the questionnaire items and their fields on the pilot sample

Development and growing of universities		No	Correlation	No	Correlation
No	Correlation	8	0.65**	6	0.70**
1	0.72**	9	0.76**	Total field	0.91**
2	0.68**	Total field	0.88**	**The quality and number of research**	
3	0.64**	**Developing human resources**		1	0.68**
4	0.81**	1	0.69**	2	0.66**
5	0.74**	2	0.77**	3	0.74**
6	0.61**	3	0.72**	4	0.75**
7	0.66**	4	0.66**	5	0.78**
8	0.69**	5	0.81**	Total field	0.87**

**($\alpha \leq 0.01$) *($\alpha \leq 0.05$)

It appears from the table (1) that all the values of the correlation coefficients between the items and the field to which they belong are statistically significant at ($\alpha \leq 0.01$), as they ranged between (0.61-0.81) which are acceptable coefficients for applying their field. The correlation coefficient for the field of development and development of universities with the questionnaire as a whole reached (0.88), and the field of developing human resources. (0.91), and the scope of increasing scientific knowledge related to the quality and number of research (0.87), which is high and indicates an acceptable degree of validity for applying the study tool.

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Instrument reliability: To ensure the stability of the questionnaire, it was applied twice with a two-week interval on a pilot sample consisting of (30) faculty members from the study population, and the repetition reliability (test. R.test) was extracted, as it ranged between (0.88-0.91) and reached (0.95) for the questionnaire as a whole. Applying the Cronbach alpha' equation, which ranged between (0.84-0.89), and reached for the questionnaire as a whole. (0.91), Table (2) shows this.

Table (2) Reliability results; Test. R.test, and Cronbach alpha' values on the pilot sample

Domain	Cronbach alpha	Test. R.test
Developing and growing universities	0.89	0.88
Developing human resources	0.86	0.90
Increasing scientific knowledge related to the quality and number of research	0.84	0.91
The questionnaire as a whole	0.91	0.95

Statistical processing

To achieve the objectives of the study, the questionnaire information was processed statistically using (SPSS) program, which included means, standard deviations, the Cronbach alpha equation, and the values of Pearson correlation coefficients to ensure the validity and reliability of the questionnaire; the value of the t-test to hypotheses testing by combative between means of total items and the critical value (3) for five-point Likert scale which used in the questionnaire.

The Results and Discussion

The following includes presenting the analysis of the questionnaire data, answering the study questions, and the results of hypothesis testing:

The first question: Is there a role for scientific research in achieving sustainable development through the development and growth of **universities in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il?**

To answer this question, the means and standard deviations were calculated for each item in the field of role of scientific research in achieving sustainable development through the development and growth of universities in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il. Table (3) shows this.

Table (3) Means and standard deviations for items of the role of scientific research in achieving sustainable development through the development and growth **of universities**

No	Items	Means	St. dev	weight %	Rank
1	Researchers carry out scientific research and studies according to the priorities of scientific research in the Kingdom.	3.55	0.88	71	7
2	Research and scientific dissertations contribute to the development of higher education institutions at the university, college and study programs levels.	3.94	0.84	78.8	1
3	Research and scientific dissertations contribute to providing educational ideas that help develop the educational structure.	3.88	0.79	77.6	2
4	The university encourages research cooperation with other local universities through research teams that work in a team spirit in all fields.	3.75	0.68	75	5

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5	The university seeks to achieve the requirements of sustainable development by directing research and scientific dissertations and linking them to comprehensive and sustainable development plans.	3.20	1.08	64	9
6	The university communicates with local universities in the field of scientific research and graduate studies in a way that serves the sustainable development process.	3.43	0.87	68.6	8
7	A database of previous research and studies is available at the University of Hail, which researchers rely on to conduct their research and dissertations.	3.88	0.91	77.6	3
8	Universities provide the necessary capabilities and funding to conduct research and scientific studies to benefit from their results.	3.67	0.104	73.4	6
9	Universities provide advanced electronic libraries that contain modern, advanced, and translated references to serve scientific research.	3.87	0.78	77.4	4
	Means as a whole	3.69	0.38	72.8	

Table (3) shows that the means for the paragraphs in the field of the role of scientific research in achieving sustainable development through the development and growth of universities in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il, ranged between (3.20 - 3.94), the most prominent of which was paragraph No. (2): Research and scientific dissertations contribute to the development of higher education institutions at the university, college and study programs levels, then came paragraph No. (3): Research and scientific dissertations contribute to providing educational ideas that help develop the educational structure, with mean of (3.88) and a standard deviation of (0.79), while the lowest mean were (3.20) with a standard deviation of (1.08) for paragraph No. (5): The university seeks to achieve the requirements of sustainable development by directing research and scientific dissertations and linking them to comprehensive and sustainable development plans. The mean for the field as a whole was (3.69) and the standard deviation was (0.38), with a high degree.

The second question: **Is there a role for scientific research in achieving sustainable development through developing human resources in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Hai'l?**

To answer this question, the means and standard deviations were calculated for each item in the field of scientific research in achieving sustainable development through developing human resources in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il. Table (4) shows this.

Table (4) Means and standard deviations for items of the role of scientific research in achieving sustainable development through developing human resources

No	Items	Means	St. dev	weight %	Rank
1	Practical research helps researchers achieve professional and career growth and develop their abilities.	3.86	0.87	77.2	3
2	Scientific research contributes to preparing the trained human cadres necessary for the advancement of economic and social projects.	3.67	0.79	73.4	4
3	Practical research helps advance the individual and society in a way that serves sustainable human development.	3.44	0.98	68.8	6

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4	Scientific research provides society with trained national competencies in all fields and specializations, which contributes to achieving comprehensive and sustainable development	3.55	0.86	71	5
5	Scientific research develops the academic personality capable of objective scientific thinking.	3.89	0.72	77.8	2
6	Practical research provides society with thinkers and scholars who contribute effectively to the production of scientific and cultural heritage and the development of society.	3.96	0.93	79.2	1
	Means as a whole	3.72	0.36	74.4	

Table (4) shows that the means and standard deviations for the paragraphs in the field of the role of scientific research in achieving sustainable development through developing human resources in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il, ranged between (3.44 - 3.96), the most prominent of which was paragraph No. (6): Practical research provides society with thinkers and scholars who contribute effectively to the production of scientific and cultural heritage and the development of society. Then came Paragraph No. (5): Scientific research develops the academic personality capable of objective scientific thinking, with mean of (3.89) and a standard deviation of (0.72), while the lowest mean were (3.44) and a standard deviation of (0.98) for Paragraph No. (3) Practical research helps advance the individual and society in a way that serves sustainable human development. The mean for the field as a whole was (3.72) and the standard deviation was (0.36), with a high degree.

The third question: Is there a role for scientific research in achieving sustainable development by increasing scientific knowledge related to the quality and number of research in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il?

To answer this question, the means and standard deviation were calculated for each item in the field of role of scientific research in achieving sustainable development by increasing scientific knowledge related to the quality and number of research in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il. Table (5) shows this.

Table (5) Means and standard deviations for items of the role of scientific research in achieving sustainable development through increasing scientific knowledge related to the quality and number of research

No	Items	Means	St. dev	weight %	Rank
1	The quality and number of research and scientific dissertations in various scientific fields contribute to serving comprehensive and sustainable development.	3.89	0.97	77.8	2
2	The quality and number of scientific research helps spread scientific knowledge in society.	3.97	0.92	79.4	1
3	Research encourages the movement of scientific writing and production that serves universities and society.	3.41	0.87	68.2	4
4	It contributes to enriching the scientific fields in universities.	3.78	0.81	75.6	3
5	It contributes to enriching the university library through modern and translated books, references, and periodicals to assist researchers in conducting scientific research.	3.23	0.94	64.6	5
	Means as a whole	3.66	0.39	73.2	

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Table (5) shows that the means and standard deviation for the paragraphs on the role of scientific research in achieving sustainable development in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il, through increasing scientific knowledge related to the quality and number of research, ranged between (3.23 - 3.97), the most prominent of which was paragraph No. (2). The quality and number of scientific research helps spread scientific knowledge in society. Then came Paragraph No. (1): The quality and number of research and scientific dissertations in various scientific fields contribute to serving comprehensive and sustainable development, with the mean of (3.89) and a standard deviation of (0.97), while the lowest means reached (3.23) and a standard deviation of (0.94) for the paragraph No. (5): It contributes to enriching the university library through modern and translated books, references, and periodicals to assist researchers in conducting scientific research. The mean for the field as a whole was (3.66) and the standard deviation was (0.39), with a high degree.

Hypothesis testing

To examine the study hypotheses, the value of the test (t) was calculated for the field of the role of scientific research in achieving sustainable development according to the vision of the Kingdom of Saudi Arabia 2030 from the point of view of the faculty members at the University of Ha'il through the development and growth of universities, by comparing the calculated average (3.69) with the score (3) which represents the hypothesized mean of the five-point scale of the answer. The results showed that the value of (t) for the first hypothesis was (23.39) and statistically significant (0.00) table (6) shows that.

As for the second hypothesis related to the field of the role of scientific research in achieving sustainable development through developing human resources in accordance with the vision of the Kingdom of Saudi Arabia 2030 from the point of view of faculty members at the University of Ha'il, the mean was (3.72) and the (t) value was (30.06) with statistical significance (0.00). The mean for the field of the role of scientific research in achieving sustainable development through increasing scientific knowledge related to the quality and number of research according to the Kingdom of Saudi Arabia's Vision 2030 from the point of view of faculty members at the University of Ha'il, which includes the third hypothesis (3.66) and a value (t) of (21.41). With statistical significance (0.00), therefore all hypotheses of the study are accepted, Table (6) shows this.

Table (6) results of hypothesis testing

Hypothesis	Field	Mean	St.dev	(t) value	Sig.	Hypothesis results
H1	the development and growth of universities	3.69	0.38	23.39	0.00	Accepted
H2	Developing human resources.	3.72	0.36	30.06	0.00	Accepted
H3	Increasing the quality and number of research.	3.66	0.39	21.41	0.00	Accepted

By accepting all the study hypotheses, it can be said that there is a role for scientific research in achieving sustainable development in accordance with the Kingdom of Saudi Arabia's Vision 2030 from the point of view of faculty members at the University of Ha'il.

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This is agree with the study (Hassouna, 2019), which pointed to the trends of scientific research towards deepening the value in life and managing development programs, and activating the role of universities and academic institutions in this aspect.

The related national policy is to spread the culture of scientific research in educational institutions in the form of study materials, competitions, and research participations that address various issues in development. However, scientific research still needs attention, development, and sustainability according to the vision of the Kingdom of Saudi Arabia 2030.

Awada, (2018) indicated that developing scientific research requires the availability of a national mechanism and a strong system that obligates educational and research institutions to rely in their work on a clear methodology for scientific research that is consistent with the goals of strategic and sustainable development, and to adopt national tools and mechanisms that can be measured and evaluated. This enables scientific research to move in two main directions, so that it exercises its innovative and developmental role on the one hand, and on the other hand, it enhances administrative development and paves the way for building a true institutional work culture.

According to the global ranking of the most scientifically advanced countries through their distinguished scientific research, which is issued by the international Nature Foundation in accordance with the criteria specified by it, 19 Arab countries have achieved positions in the global classification, and both the Kingdom of Saudi Arabia and Egypt have obtained advanced positions in the classification, so the Kingdom of Saudi Arabia occupied First place with 25%, followed by Egypt with 24%.

In view of this steady development in scientific research methodologies, the matter requires the formation of a joint research system between universities with the aim of supporting research projects of common interest, which supports and makes scientific research an effective role in achieving sustainable development, and that the interest in scientific research and strategic research be together to achieve sustainable development.

Conclusion

Interest in sustainable development has emerged since the last century, with the preservation of natural and local and international resources in the world, and scientific research has developed to become an essential pillar of development, progress and innovation around the world. The role of universities was essential in deepening the concept of scientific research and supporting it financially and considering it an important indicator in the promotion and distinction of universities and their faculty members. Therefore, the justification for this study was to shed light on the role of scientific research in achieving sustainable development in accordance with the vision of the Kingdom of Saudi Arabia 2030 from the point of view of faculty members. University of Ha'il.

Research requires different tools and approaches for application, and there is a very important factor, although backward societies do not pay attention to it, but it constitutes the effective factor in determining the field concerned with research, and developed countries pay great attention to it, which is the statistical process and careful monitoring of the necessary requirements, in the light of which the need is determined.

The **results of this study** first revealed the presence of a statistically significant role for scientific research at the level ($\alpha \leq 0.05$) in achieving sustainable development in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Hail, in the axis of development and growth of universities, with an approval rate of (72.8%) from the sample answer that some positive aspects appear in the university's endeavor to achieve the requirements of sustainable development and link them to comprehensive development plans, providing a clear, electronic, and advanced central database with modern references to serve scientific research, and directing capabilities and funding to scientific research priorities that serve sustainable development and contemporary issues. Second: There is a statistically significant role for scientific research at the level ($\alpha \leq 0.05$) in achieving sustainable development in the

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Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il, in the axis of developing human resources. It is the effectiveness of programs that serve sustainable development through the development of human cadres, with an approval rate of (74.4%). This was demonstrated by the high contribution of university programs in general to supporting, developing and disseminating the culture of scientific research and its importance in achieving sustainable development, and the interest in preparing the human cadres necessary to advance projects. Third: There is a statistically significant role for scientific research at the level of ($\alpha \leq 0.05$) in achieving sustainable development in the Kingdom of Saudi Arabia from the point of view of faculty members at the University of Ha'il, in the axis of increasing scientific knowledge related to the quality and number of research, with an approval rate of (73.2%) and this appeared. Through the quality and number of scientific research and dissertations in various scientific fields to serve comprehensive and sustainable development, and the quality and number of scientific research in disseminating scientific knowledge in society.

Finally, it can be said that all developed countries are producers of scientific research, while on the other hand, there are countries whose societies are only consumers, and do not contribute to clear research production. It is important to realize that building the human element is the primary supporter and main driver of sustainable development, and in order to advance our societies to a comprehensive national renaissance, attention must be directed towards building the capabilities of individuals in society and their self-development, and all of this cannot be achieved without the financial support that meets the requirements of this advancement. It is noted that all developed countries in recent years have achieved clear and remarkable success in the field of scientific research, which is clearly evident through the development they have witnessed in this field. They have relied entirely on the role of scientific research in activating the movement of development and sustainable development, which has been directly reflected in the method the lives of their communities.

Recommendations

Based on the previous results, the results of the study showed that there is a major role for scientific research in achieving sustainable development in the Kingdom of Saudi Arabia at the University of Ha'il, so the researcher recommends the following:

1. Develop a strategy for scientific research that directs scientific research to serve sustainable development issues.

2. Activating the relationship between the official scientific research bodies in the Kingdom of Saudi Arabia and the various productive sectors.

3. Increase funding for scientific research to support sustainable development.

4. Coordination between Saudi universities and some government agencies to choose scientific research topics to benefit from their results.

5. Recommending university professors in the Kingdom of Saudi Arabia to work on training and developing people with competencies to serve scientific research in their fields of specialization.

6. Developing electronic and central libraries and databases that include modern and advanced references to serve scientific research.

7. Do not neglect the results of research that are related to development in general and sustainable development in particular.

8. Scientific research must be part of the curricula at the various levels so that students' interest in the importance of research grows and develops as the academic stages progress.

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References

Al-Anazi, Rima. (2024). The Kingdom's Vision 2030 in education. Study ideas for research and development. Electronic link: https://study.sa/%D8%B1%D8%A4%D9%8A%D8%A9-%D8%A7%D9%84%D9%85%D9%85%D9%84%D9%83%D8%A9-2030-%D9%81%D9%8A-%D8%A7%D9%84%D8%AA%D8%B9% D9%84%D9%8A%D9%85/.

Ali, Assem, Sh. (2012). Financing scientific research and its impact on human development: Malaysia as a model. International Islamic University Malaysia, Arab Future Magazine, Lebanon, Volume (34), Issue (400): 79-94.

Awawda, Wadih (2018). Scientific Research and Sustainable Development, Institute for Palestine Studies, Lebanon.

Bindajam, Ahmed & Al-Ansi, N. (2019) Economic Diversity by Sustaining Historical Buildings: King Abdul Aziz Palace, as a Case Study. Environment-Behaviour Proceedings Journal 4(10). DOI:10.21834/e-bpj.v4i10.1556. See more at: https://www.researchgate.net/publication/330659093.

Cullen, John G. (2017). Educating Business Students About Sustainability: A Bibliometric Review of Current Trends and Research Needs. Journal of Business Ethics, Volume 145: 429–439.

Egelston, A. (2012) . Sustainable development: A history 2012.New York, Edition Springer.

Hassouna, Mohammed Al-Sayed. (2019). Education in Israel: A Vision for Arab Universities, first edition, Book Fair, Cairo.

Journal of Management, Spirituality & Religion, Volume 6, Issue 1 (2009).

Mansour, Kameel. (2020). Israel's General Guide to Scientific Research and Sustainable Development. Institute for Palestinian Studies, Lebanon.

Nasser, Jaber Jad. (2002), Principles and Arts of Scientific Research, Dar Al Nahda Al Arabiya, Egypt.

OECD, O. M. (2005). Guidelines for Collecting and Interpreting Innovation Data. Paris.

Oswick, C. (2009). Burgeoning workplace spirituality? A textual analysis of momentum and directions. Journal of Management, Spirituality and Religion, 6(1): 15–25.

Shahira, Bin Al-Nia and Ibrahim, Bodukha. (2023). The role of scientific research in achieving sustainable development. Journal of Law and Environmental Sciences, Volume (2), Issue (2): 1066-1078.

Singh, Ajit. (2021). An Introduction to Experimental and Exploratory Research. Department of Computer Science, Patna Women's College, Bihar,India.

Vision of the Kingdom of Saudi Arabia 2030: https://www.vision2030.gov.sa/en/overview.

Vision2030.gov.sa (2024). https://www.vision2030.gov.sa/media/rc0b5oy1/saudi_vision203.pdf

Waas, T., Verbruggen, A., & Wright, T. (2010). University research for sustainable development: definition and characteristics explored. Journal of Cleaner Production, 18(7): 629–636. https://doi.org/10.1016/j.jclepro.2009.09.017

Yassin, Muhammad. (2019). Scientific research in the Arab session, Institute of Scientific Research. At the link: (pubcouncil.kuniv.edu.kw/ajh/homear.aspx?id=8&Root=yes).

Zakora, Aounia and Salem. Maimouna (2016). The role of scientific research in achieving sustainable development. Maghreb Review of Economics and Management, Volume 3, Issue 1: 58-69.