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Activating Pedagogical Innovation Requirements for Vision Saudi Arabia 2030: A Delphi Study

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ABSTRACT

Objectives: This study aligns with Saudi Vision 2030 by identifying prerequisites for innovation in administration, finance, academia, and procedures. **Methods:** Utilizing the Delphi technique, 46 experts reached consensus on innovation strategy principles, emphasizing research funding, expert guidance, monitoring, incentives, and fostering a creative culture. Central goals include enhancing 21st-century skills, interdisciplinary collaboration, and aligning with labour market demands. **Results:** Advocated reforms involve policy realignment, procedural streamlining, and infrastructural enhancements to address regulatory hurdles, resource constraints, and cultural barriers. Advocacy for policy reform, training, partnerships, and resource optimization aims to empower educators and policymakers. **Recommendations:** Recommendations include training programs, curriculum integration, seminars, partnerships, and efficient resource allocation to promote innovation and contribute to Vision 2030 goals.

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Introduction

The Kingdom of Saudi Arabia has demonstrated a steadfast dedication to advancing scientific inquiry within its academic institutions, as evidenced by the establishment of specialized research hubs and substantial investment in fostering pioneering research endeavours spanning diverse academic domains (Ul Haq et al., 2020). This commitment is in accordance with the overarching goals of Saudi Arabia's Vision 2030, which aims to transition the national economy from its traditional reliance on oil to a knowledge-driven economy, thus catalysing innovation and facilitating economic expansion (Rahman & Qattan, 2021). Acknowledged as a fundamental priority for developed nations, scientific research assumes a pivotal role in driving societal advancement and facilitating progress (Ul Haq et al., 2020).

The colleges of education within Saudi universities hold esteemed status as among the earliest established educational entities, encompassing multiple provinces and regions. They are distinguished for their diverse array of scientific specializations and esteemed faculty members known for their high qualifications (Al-Hawsawi, 2016).

Pedagogy, a specialized discipline within the realm of educational sciences, occupies a significant position, particularly in its examination of global educational systems. It serves as the foundational cornerstone for the educational endeavour, establishing fundamental principles and objectives, guiding operational methodologies, and reflecting societal philosophies (Ahmed, 2018; Al-Wahsh, 2022). Pedagogy plays an active role in shaping educational policies, addressing concerns, overcoming challenges, and fostering community advancement. It delves into essential cognitive principles and foundational aspects encompassing philosophy, theology, politics, economics, culture, and beyond, thereby exerting a profound influence on the cultural fabric of society (Al-Wahsh, 2022).

Pedagogy holds a central position within educational sciences, serving as the bedrock for theoretical frameworks and guiding educational endeavours (Khalaf, 2022). This specialization within educational principles is focused on conceptualizing the educational process, delineating roles, analysing educational phenomena and challenges, envisioning prospective scenarios, and utilizing these principles as a scaffold for educational outcomes (Al-Tuwaijri, 2021).

As asserted by Uzunboylu (2019), the Department of Fundamentals of Education within Saudi universities is deemed paramount, with a primary objective of cultivating educators equipped with both academic knowledge and professional acumen. Their objectives are aligned with the imperative of advancing educational research in accordance with societal needs and the aspirations articulated in Saudi Arabia's Vision 2030, underscoring the pivotal role of universities in fostering scientific inquiry.

Abdel-Aal (2016) observes that much of educational research is driven by societal aspirations, with a focus on addressing issues aligned with sustainable development. Bouzidi (2018) underscores the critical importance of fostering scientific research in education and advocates for creative programs and strategic plans to enhance research endeavours regionally and globally.

Al-Saeed (2019) highlights the significance of implementing a strategic vision to establish esteemed global partnerships and alliances in education. She also emphasizes the necessity of revising legislation that impedes such agreements and expanding the scope of scientific missions undertaken by prestigious universities and research centres.

The study by Abu Al-Saud (2020) emphasizes the importance of providing both financial and moral support to researchers, ensuring adequate funding for educational research, and streamlining research procedures.

Abdullah (2020) emphasizes the importance of university education leaders having confidence in progress and implementing efficient approaches to enhance outcomes.

In his 2020 study, Al-Awaid underscores the importance of recognizing faculty members' needs in contemporary educational practices and establishing precise benchmarks for expected educational competencies. Furthermore, Al-Awaid (2020) highlights the necessity for further research to evaluate and enhance the teaching abilities of faculty members across various disciplines.

Al-Hawsawi's (2016) investigation aimed to delineate a prospective trajectory for forthcoming research endeavours concerning educational communication within the pedagogical landscape of Saudi universities. Employing a descriptive survey methodology in conjunction with a prospective future methodology, the study scrutinized 435 scholarly theses from master's and doctoral programs across four universities. Through this comprehensive analysis, the research identified significant lacunae in the existing body of literature and presented an exhaustive research blueprint pertaining to instructional communication within the realm of Saudi university pedagogy.

Bayoumi and Abdul Wahab (2018) endeavoured to enhance the Graduate Studies System within the Department of Fundamentals of Education at the Faculty of Education, Benha University. Their focus centred on comprehending the factors contributing to academic excellence, conducting a thorough assessment of the department's current status, identifying its strengths and weaknesses, and proposing a structured improvement plan. Employing a descriptive analytical method alongside personal interviews, the study strived to provide a robust framework for enhancing the Graduate Studies System.

Al-Luhaidan's (2018) inquiry delved into the identification of pivotal educational themes and research methodologies within the domain of educational principles. Analysing 31 research papers sourced from the King Saud University Journal, the study primarily scrutinized the nexus between education and development. Employing descriptive and analytical methods, supplemented by a questionnaire as a primary instrument, the research aimed to offer insights into the foundational aspects of educational research.

Al-Jabri (2019) embarked on a study to foster interdepartmental collaboration among education departments within Saudi institutions. Utilizing a descriptive methodology and surveying 81 faculty members, the research unearthed a consensus on collaborative strategies, particularly in publications such as encyclopaedias and scientific journals, among educational foundations within Saudi universities.

Al-Mousa's (2019) investigation sought to identify qualitative research within the domain of educational foundations in Saudi universities. Employing a descriptive survey methodology, the study shed light on the prevalence of quantitative methodologies in research papers pertaining to educational foundations.

Abdel Hasib (2020) conducted a study aimed at advancing the field of educational principles by integrating contemporary developments. Employing a descriptive methodology inclusive of a comprehensive literature review, analysis of contemporary trends in educational principles,

focus group discussions, open interviews, and consultations with esteemed professors specializing in educational foundations across various Egyptian universities, the research delineated a forward-looking vision for the evolution of educational principles encompassing teaching, research, and service domains.

Al-Warthan (2020) conducted an inquiry to identify essential prerequisites for the development of the "Fundamentals of Education" Master of Arts program at Shaqra University's Colleges of Education. Employing a descriptive methodology and utilizing a questionnaire as the primary data collection instrument among a selected sample of 43 Shaqra University faculty members, the study revealed a consensus among respondents regarding suggested needs, encompassing administrative, organizational, physical, financial, technical, and educational aspects.

Al-Tuwaijri (2021) aimed to address challenges encountered by male and female PhD candidates specializing in educational principles. Employing descriptive survey and documentary methods, including the utilization of a questionnaire tool and the Delphi procedure, the study identified and diagnosed obstacles faced by doctoral students and proposed a developmental approach based on insights drawn from the American experience.

In contrast, Khalaf (2022) undertook a study to refine the fundamental principles of the educational foundations sector based on the ideas espoused by Saeed Ismail Ali. Utilizing a descriptive analytical method, Khalaf conducted a comprehensive examination of pertinent issues, conducting content analysis on a random sample of Ali's studies, writings, and research. The study uncovered several challenges confronting the field, including the lack of clarity in defining educational foundations, the inadequacy of its fundamental role, and the disproportionate emphasis on certain fields over others.

Al-Shuwaier (2022) conducted a study to evaluate proficiency in scientific research skills and ethics among master's students specializing in educational foundations at Imam Muhammad bin Saud Islamic University. Employing a longitudinal approach and employing descriptive and sequential methods, the study administered a test longitudinally to two groups of students. The findings indicated an equivalent degree of proficiency in scientific research skills and ethics among both groups, with statistically significant disparities observed in certain variables such as gender and specialization.

Acknowledging the paramount importance of the Department of Fundamentals of Education within the spectrum of educational specializations offered by colleges of education in Saudi universities, the researcher, an adept in this domain and serving as a faculty member at a Saudi university, discerned the imperative for undertaking this research endeavour.

Study Problem

The objective of Saudi Arabia's Vision 2030 is to elevate the Kingdom's global standing, aiming to position it among the top 10 countries in the Global Competitiveness Index by 2030, with a target of having at least five Saudi universities ranked among the top 200 globally. The competitiveness index is closely linked to the level of investment in research and development, and the international ranking of universities is contingent upon the quality and quantity of their published scientific research (Al-Shuwaier, 2022).

The field of Fundamentals of Education holds significant importance within the

education sector, serving as the foundational framework upon which educational systems are built. It encompasses the principles that guide educational practices, reflects societal philosophy and objectives, influences the formulation of educational policies, addresses challenges within the field, and contributes to societal advancement across various dimensions (Abdel Hasib, 2020).

However, various studies have identified several challenges and deficiencies within the realm of scientific research in Saudi universities. These include the lack of a clear strategy to guide research activities, a disconnect between research and broader development plans, weak partnerships between universities and community institutions, and deficiencies in the qualification of human resources across sectors (Al Khalifa, 2014).

Despite efforts by education departments in Saudi universities to enhance research quality and efficiency, challenges persist. These include the discontinuation of education programs in university colleges and various deficiencies in research methodology and implementation (Al-Mousa, 2019; Al-Rehaili & Abu Auf, 2017; Alqahtany, 2020).

The primary inquiry of the present study is focused on addressing these challenges and deficiencies by formulating a strategic plan to implement innovative pedagogy research in alignment with the objectives of Saudi Arabia's Vision 2030.

Study Objectives

1. Understand administrative and financial prerequisites for educational research innovation aligned with Saudi Arabia's Vision 2030.
2. Identify academic criteria for fostering research innovation in educational principles in line with Vision 2030.
3. Analyse procedural prerequisites for educational research and innovation under Vision 2030.
4. Develop a strategy to stimulate research and innovation in educational concepts aligned with Vision 2030.

Study Questions

1. What are the requisite administrative and financial circumstances essential for stimulating innovation in scientific research within the realm of educational principles, as evaluated by specialists, consonant with the aspirations delineated in Saudi Arabia's Vision 2030?
2. What precise academic benchmarks should be implemented to propel innovation in scientific research concerning educational principles, as assessed by experts, congruent with the objectives articulated in Saudi Arabia's Vision 2030?
3. What procedural prerequisites are indispensable for cultivating innovation in scientific research within the sphere of educational principles, as perceived by specialists, in alignment with the directives outlined in Saudi Arabia's Vision 2030?
4. What strategic approach is recommended for fostering innovation in scientific research pertaining to educational principles in accordance with the objectives delineated in Saudi Arabia's Vision 2030?

Theoretical Importance

1. It highlights the field of educational foundations by identifying avenues for progression that resonate with the objectives delineated in Saudi Arabia's Vision 2030.
2. The research sets forth a forward-looking vision for the departments of educational foundations within colleges of education at Saudi universities, aligning with the principles of Vision 2030 and contemporary global trends.
3. The investigation responds to suggestions from prior studies, underlining the imperative to explore strategies for enhancing and advancing scientific inquiry in educational foundations within Saudi university settings.
4. The study offers valuable insights for faculty members engaged in programs related to educational foundations, aiding their comprehension of both theoretical and practical domains of specialization while delineating research priorities to guide postgraduate scholars.

Practical Importance

1. The research presents recommendations for officials within education colleges at Saudi universities to refine the curricula of education and educational foundations courses, incorporating insights gleaned from the study to update course outlines.
2. The study serves as a roadmap for postgraduate researchers specializing in educational foundations, elucidating interconnected research domains to inform their scholarly inquiries.
3. The investigation provides faculty members and postgraduate researchers specializing in educational foundations with a suggested framework delineating innovative research objectives to steer their academic endeavours.

Concepts and Terminologies

1. Prerequisites: Within this study, the term "requirements" encapsulates the fundamental administrative, financial, academic, and procedural conditions indispensable for fostering innovation in scientific research, particularly within the domain of educational principles within Saudi academic institutions.
2. Innovation: "Innovation" denotes the pivotal catalysts driving advancements in educational principles within Saudi universities. It encompasses excellence in teaching, research, and community engagement, aligning with the objectives delineated in Saudi Arabia's Vision 2030. Innovation further signifies the capability to compete on scientific, research, and service fronts both domestically and internationally.
3. Scientific Inquiry: "Scientific research" delineates a methodical intellectual pursuit undertaken by individuals to explore specific issues utilizing structured scientific methodologies. The objective is to derive viable solutions or outcomes applicable to similar dilemmas (Saudi & Mujahid, 2019). It adheres rigorously to established scientific tenets to generate specialized knowledge addressing inquiries or societal concerns (Abdel Moati, 2017).
4. Procedural Framework: Within this investigation, "procedural framework" pertains to the scientific protocols and guidelines governing innovation in scientific research. These are established by the departments of educational foundations within colleges of education at Saudi universities. Faculty members and postgraduate scholars conducting research in this domain formulate these protocols and guidelines.
5. Educational Fundamentals: "Educational fundamentals" encompass the fundamental principles and essential components serving as the bedrock for various dimensions within the field. These fundamentals are inherently evident and provide the foundational underpinnings for subsequent concepts. They encompass a repertoire of

knowledge, educational principles, and core values that shape the educational process and influence values, traditions, customs, and social policies within it (Luhaidan, 2018).

6. Foundations of Education: The "foundations of education" encapsulate the regulations, principles, theories, postulations, assumptions, and factual bases constituting the cornerstone of any educational system. They serve as the origins and fountains from which educational concepts, theories, and practices emanate (Al-Hayari, 2015). Moreover, as elucidated by Al-Warthan (2020), they comprise foundational concepts rooted in educational philosophy, guiding and nurturing individuals while endowing them with the knowledge to navigate their surroundings.

Study Methodology and Procedures

The study adopted a prospective methodology, focusing on future-oriented research, and employed the Delphi Technique to establish consensus among experts (study participants) regarding fundamental principles for promoting innovation in scientific research within the domain of educational foundations, in accordance with the objectives outlined in Saudi Arabia's Vision 2030. The methodological framework of the study unfolded in the following sequence:

1. **Instrument Development:** Initially, the researcher utilized the Delphi technique to construct and refine the research instrument. This instrument comprised an open-ended questionnaire covering diverse dimensions, including administrative and financial prerequisites, academic criteria, and procedural requirements.
2. **Feedback Analysis:** In the subsequent phase, the researcher analysed the outcomes of the preceding round, evaluating the degree of agreement among the experts. These findings were synthesized into statements, forming the basis for a standardized questionnaire.
3. **Questionnaire Administration:** The third stage involved disseminating the standardized questionnaire. Statements that garnered unanimous agreement among the experts in the preceding round were scrutinized closely. Subsequent revisions to these statements were presented to the experts for their assessment and feedback, leading to either acceptance or rejection.
4. **Proposal Development and Evaluation:** The final step encompassed the formulation of a proposal for innovative scientific research within the realm of educational foundations, aligned with Saudi Arabia's Vision 2030. This proposal underwent scrutiny by a panel comprising ten faculty members from Saudi universities, distinct from the cohort of experts participating in this study.

These methodological procedures facilitated a thorough exploration of experts' perspectives and culminated in the development of a forward-looking framework for promoting research innovation in educational foundations in consonance with Saudi Arabia's Vision 2030.

Sources for Building the Tool

1. Make references to existing literature and prior scholarly investigations.
2. Utilize the knowledge and proficiency offered by faculty members serving as authorities and adjudicators.

Study Population

All faculty members specializing in educational foundations within colleges of education at Saudi universities.

Study Sample

A purposive, homogeneous sample was drawn from the cohort of faculty members specializing in educational foundations at Saudi universities. This sample comprised 46 faculty members who hold doctoral degrees.

Table 1

Distribution of Study Sample Participants by University

No.	University	Number of Faculty Members	The Ratio
1	King Saud University	7	15.2
2	King Khalid University	5	10.9
3	Imam Muhammad Bin Saud Islamic University	5	10.9
4	Imam Abdul-Rahman bin Faisal University	4	8.7
5	Prince Sattam bin Abdulaziz University	4	8.7
6	Princess Nora bint Abdul-Rahman University	4	8.7
7	Taibah University	3	6.5
8	Tabouk university	2	4.3
9	University of Jeddah	2	4.3
10	Al Qussaim university	3	6.5
11	Majmaah University	3	6.5
12	Shaqra University	2	4.3
13	Northern Border University	2	4.3
	Total	**46**	**100%**

Table 1 illustrates that within the study sample, 7 individuals, comprising 15.2% of the total, are affiliated with King Saud University, representing the largest contingent in the sample. Conversely, only 2 participants, each accounting for 4.3%, are affiliated with both Shaqra University and Northern Border University, indicating them as the smallest segments within the sample.

Table 2

Distribution of Study Sample Participants by Gender

Sex	Number	The Ratio
Male	32	69.6%
Female	14	30.4%
Total	46	100%

Table 2 demonstrates that within the study sample, 32 individuals, comprising 15.2% of the total, are males, constituting the largest cohort. Conversely, there are 14 individuals (30.4% of the total) who are females, also forming the largest group in the study sample and representing the smallest proportion.

Table 3

Distribution of Study Sample Participants by Academic Rank

Academic Rank	Number	The Ratio
Professor	9	19.6%
Associate professor	14	30.4%
Assistant professor	23	50.0%
Total	46	100%

Table 3 emphasizes that among the study sample, 23 individuals, constituting 50% of the total, represent the largest contingent among assistant professors. Conversely, 9 individuals from the study sample, comprising 19.6% of the total, constitute the smallest category among professors.

Table 4

Distribution of Study Sample Members According to Years of Experience

Years of Experiences	Number	The Ratio
Less than 5 years	9	19.6
From 5 to 10 years	10	21.7
From 10 to 20 years	19	41.3
More than 20 years	8	17.4
Total	46	100%

Table 4, as depicted, clearly delineates that among the study sample, 19 individuals, amounting to 41.3% of the total, have experience ranging from 10 to 20 years, constituting the largest segment. Conversely, only 8 individuals, accounting for 17.4% of the total, possess more than 20 years of experience, and they are associated with Northern Border University, forming the smallest subset of the study sample.

Table 5

Distribution of Study Sample Participants by Scientific Publication and Authorship

Research and Literature	Number	The Ratio
Less than 3 (Research or literature)	13	28.3
From 3 to 5 (Research or literature)	12	26.1
From 5 – 10 (Research or literature)	14	30.4
More than 10 (Research or literature)	7	15.2
Total	46	100%

Table 5 offers a detailed analysis of the distribution within the study sample. It delineates that 14 individuals, comprising 30.4% of the faculty members, have authored 5-10 research papers or books, emerging as the most prevalent group within the study sample. Additionally, 7 individuals within the study sample, representing 15.2% of the faculty members, have authored more than 10 research papers or books, constituting the least represented category.

The study sample sizes for each of the three rounds are as follows:

1. In the initial round, all 46 experts from the study sample participated.
2. In the second round, 9 experts withdrew after participating in the first round, leaving

37 experts remaining.
3. In the third round, the remaining 37 experts from the second round continued their participation.

Validity and Reliability Tests

The validity of the questionnaire tool was established using the "honesty of the arbitrators" method. Before presenting the questions to experts, eight arbitrators, all faculty members specializing in various educational fields from different Saudi universities, meticulously reviewed and evaluated the open-ended questions. They collaborated on organizing the topics, making necessary adjustments, and structuring the questions. Subsequently, the internal consistency and validity of the questionnaire were assessed by examining the alignment of each paragraph with its respective dimension in the second and third rounds. The Pearson correlation coefficient, ranging from 0.5 to 0.9, was employed to gauge this alignment.

To assess reliability, the half-splitting method was utilized. This method involved dividing the questionnaire items from the second and third rounds into even and odd statements. The Pearson correlation coefficient was then computed independently for the odd-numbered and even-numbered statements within each questionnaire paragraph. The reliability of the items was evaluated by calculating the Cronbach's alpha coefficient, which also fell within the range of 0.5 to 0.9. For data analysis, frequencies, percentages, and averages were employed.

Results and Discussion

First Round Analysis

To conduct this phase, a meticulously crafted questionnaire was developed, consisting of three open-ended questions posed to the experts during the initial round:

1. What administrative and financial prerequisites are essential for fostering innovation in scientific research within the realm of educational principles, aligned with the vision of the Kingdom of Saudi Arabia?
2. What academic prerequisites are necessary to promote innovation in scientific research within the domain of educational principles, in accordance with the Kingdom of Saudi Arabia's vision?
3. What procedural prerequisites must be in place to encourage innovation in scientific research within the field of educational principles, in light of the Kingdom of Saudi Arabia's vision?

After collecting expert responses, the data were carefully organized and classified. Some responses were revised based on expert suggestions, and redundant or similar responses were merged. This iterative refinement process resulted in a set of 30 statements assessing the requirements for administration, finance, academia, and procedures to foster research innovation.

Second Round Analysis

Following the distribution of the second-round questionnaire to the study participants,

a total of 37 faculty members responded. The objective was to evaluate their agreement with the 40 statements from the first round, encompassing administrative and financial requirements, academic prerequisites, and procedural necessities. The subsequent analysis of these statements is delineated below:

1. A total of 21 statements received an agreement rate of 90% or higher, requiring no further assessment.
2. Four statements, with an agreement rate below 80%, were excluded from the analysis.
   Five statements fall within the acceptance rating range of 80 to 90 % and require further evaluation.

The subsequent text delves into the interrogative expressions related to each of the three dimensions of the study. The primary focus of the inquiry revolves around the administrative and financial prerequisites crucial for promoting innovation in scientific research within the field of educational principles, aligned with the vision of the Kingdom of Saudi Arabia.

This question included 11 statements, and the results were as follows:

Table 6

Approval Ratios for Educational Innovation Initiatives in Academic Institutions

No.	Statement	Degree of Approval				Mean	The Ratio
		Approved		Not Approved			
		T	%	T	%		
1	Increasing awareness among educators responsible for pedagogy programs in colleges of education regarding the significance of formulating educational policies that promote innovation in scientific research.	28	75.7	9	24.3	0.76	75.7 %
2	Establishing a dedicated committee within the Foundations of Education departments to provide consultation and guidance to researchers aiming to innovate in their research endeavors.	27	73.0	10	27.0	0.73	73.0 %

The statements excluded from consideration in the third round exhibited agreement rates ranging from 73% to 75.7% among the experts. These statements, comprising 18% of the total phrases associated with administrative and financial prerequisites for fostering scientific research innovation, were deemed

unnecessary for further evaluation by the experts. The table presented below delineates these statements, their frequencies, and their arithmetic averages.

Among the 11 statements evaluated, 9 statements achieved approval rates of 90% or higher. These statements, which pertain to administrative and financial prerequisites, do not require further evaluation by experts in the third round. This accounts for 82% of the total statements associated with this question. The table below presents a detailed breakdown of these statements, including their frequencies and arithmetic averages, serving as indicators of innovation in scientific research.

Table 7

Strategic Approaches for Advancing Educational Research Innovation in Alignment with Vision 2030

No.	Statement	Degree of Approval				Mean	The Ratio
		Approved		Not Approved			
		T	%	T	%		
1	Enhancing Specialized Programs to Align with Vision 2030	37	100.0	0	0.0	1.00	100.0%
2	Simplifying Research Project Processes for University Researchers.	35	94.6	2	5.4	0.95	94.6%
3	Facilitating Participation of Educational Principles Researchers in Conferences and Scientific Forums	36	97.3	1	2.7	0.97	97.3%
4	Boosting Research Innovation in Educational Foundations through Competitions and Interdisciplinary Studies	37	100.0	0	0.0	1.00	100.0%
5	Revamping Research Supervision for Innovation Inclusion	37	100.0	0	0.0	1.00	100.0%
6	University Policies for Incentivizing Innovative Educational Research	37	100.0	0	0.0	1.00	100.0%
7	Enhancing Research Tasks with Technology Resources	37	100.0	0	0.0	1.00	100.0%
8	Incentivizing Vision 2030-Related Groundbreaking Research with Monetary Rewards	37	100.0	0	0.0	1.00	100.0%
9	Leaders in schools of education embrace a culture of innovation in scientific research.	37	100.0	0	0.0	1.00	100.0%

In alignment with Saudi Arabia's Vision 2030, the importance of administrative and financial prerequisites for fostering innovation in scientific research within the field of education is evident. Over 90% of experts concur on this significance, with 82% of all statements supporting these prerequisites. The assessment of administrative and financial requirements for innovation in scientific research in the field of Fundamentals of Education, in line with the Kingdom's Vision 2030, was narrowed down to 9 key statements. Certain phrases related to this axis were omitted in the third round of the Delphi method.

A critical statement, labeled (1), emphasizes the necessity to restructure specialization programs to foster innovation and align with the goals of Saudi Arabia's Vision 2030. This statement is consistent with findings from a study conducted by Saudi and Mujahid (2019), which identified the absence of an effective organizational plan for scientific research in Arab universities and underscored the need for greater originality and creativity in Arab scientific research.

Saudi universities are actively engaged in pedagogical research, particularly in graduate programs, focusing on course development, faculty discussions, and research direction exploration. They also collaborate with the Education Evaluation Commission to enhance programs and curricula.

Statement (4) advocates for the promotion of research innovations in educational fundamentals by organizing scientific competitions and encouraging interdisciplinary studies that integrate various aspects of the specialization and related fields. Despite some resistance, Saudi universities are already promoting such studies. To overcome this resistance, it is essential to implement programs and training workshops to motivate individuals to embrace these studies.

Statement (5) proposes modifying the research supervision process to incorporate research innovation. Statement (6) suggests developing university regulations that foster innovation in educational research. These proposals align with Al-Hawsawi's (2016) study, which identified research gaps needing attention through scientific research. Furthermore, Al-Mousa's (2019) study highlighted the predominance of quantitative approaches in pedagogy dissertations, the lack of qualitative approaches in scientific theses, and the insufficient training of graduate students in qualitative research. This deficiency is attributed to the inadequacy of the courses offered in their specialization. Al-Warthan's (2020) study underscored the importance of addressing administrative and organizational requirements, as well as material, financial, technical, and educational aspects, to enhance educational foundation programs. Similarly, Al-Tuwaijri's (2021) study emphasized various developmental factors contributing to the specialization of educational concepts, including the review and evaluation of unified regulations for postgraduate courses relevant to comprehensive testing.

Phrase No. (7), which suggests providing technological resources to streamline researchers' tasks of communication, publication, and research submission, is in accordance with the findings of Al-Saeed's (2019) study. This study emphasizes the significance of adopting a strategic vision to establish valuable global partnerships and alliances. Such initiatives involve revising legislation that hinders the implementation of these agreements and expanding the scientific missions of universities and research centres.

Phrases No. (8), which suggests granting financial rewards to individuals and researchers contributing innovative research aligned with the goals of Saudi Arabia's Vision 2030, and No. (9), which proposes promoting a culture of innovation in scientific research by appointing leaders in colleges of education, are consistent with the findings of Abu Al-Saud (2020). Their research emphasizes the importance of providing both financial and moral support to researchers, allocating sufficient budgets for educational research, and streamlining bureaucratic procedures. Additionally, Abdullah's (2020) study highlights the significance of religious beliefs among educational leaders. The University

Study aims to assess the feasibility and importance of development and implementing effective methods to enhance results.

The Second Question: What are the academic requirements for innovation in scientific research in the field of educational principles considering the vision of the Kingdom of Saudi Arabia?

This question consisted of (10) statements, and the results were as follows:

1. The phrases excluded in the third round were those with agreement rates among experts ranging from 75.7% to 78.4%. These phrases were not included in the evaluation during the third round. In total, these phrases accounted for 20% of all the phrases related to the academic prerequisites for innovation in scientific research. The table below displays these expressions alongside their frequencies and arithmetic means.
2. Out of the 10 statements regarding academic prerequisites for research innovation, 6 statements (60%) attained approval rates of 90% or higher, thereby excluding them from evaluation in the third round. The table presented below delineates these statements, along with their frequencies and arithmetic means.

Table 8

Assessing Educational Challenges and Research Innovation in Higher Education Programs: A Vision 2030 Perspective

No.	Statement	Degree of Approval				Mean	The Ratio
		Approved		Not Approved			
		T	%	T	%		
1	Incorporating Vision 2030 Educational Issues in Graduate Programs	28	75.7	9	24.3	0.76	75.7 %
2	Examining Costs and Benefits of Innovative Research in Education	29	78.4	8	21.6	0.78	78.4 %

Two out of ten statements, constituting 20% of the total, garnered approval rates ranging from 80% to 90%. These statements are slated for review by specialists in the third round, focusing on academic prerequisites for innovation. The table below provides an overview of the expressions commonly employed in scientific studies, along with their frequencies and arithmetic means.

Table 9

High Approval Rates for Academic Requirements in Educational Research Innovation

No.	Statement	Degree of Approval				Mean	The Ratio
		Approved		Not Approved			
		T	%	T	%		
1	Faculty Collaboration for Interdisciplinary Humanities Research in Education	36	97.3	1	2.7	0.97	97.3%
2	Developing Innovative Research Strategies in Pedagogy Departments for Graduate Studies	37	100.0	0	0.0	1.00	100.0%
3	Drawing upon the experiences of various countries worldwide and current innovative models in educational research.	37	100.0	0	0.0	1.00	100.0%
4	Boosting Future Competencies of Educational Principles Researchers for Innovation and Scientific Advancement.	37	100.0	0	0.0	1.00	100.0%
5	Regular Seminars to Enhance Scientific Research in the Field and Bridge Knowledge Gaps	37	100.0	0	0.0	1.00	100.0%
6	Attracting Specialized Human Sciences Research Innovation Experts	36	97.3	1	2.7	0.97	97.3%

Statements that received unanimous approval from experts include:
Statement No. 2: "Develop comprehensive strategies within pedagogy departments to promote innovative research in graduate studies".
Statement No. 3: "Draw on the experiences of various countries and current innovative models in educational research for contemporary innovation in pedagogy research."
Statement No. 4: "Enhance the future competencies of researchers in educational principles, fostering innovation and advancing scientific research."
Statement No. 5: "Conduct regular seminars to enhance the scientific research system in the field, aiming to bridge existing knowledge gaps."

These results are consistent with Al-Shuwaier's (2022) findings, which corroborated the proficiency in scientific research skills and ethics among master's students specializing in educational foundations. However, they are at odds with Khalaf's (2022) observations, which identified a deficiency in the awareness among educational foundations researchers regarding the challenges within the educational landscape and the dearth of innovative educational approaches. Moreover, there appears to be a disconnect between fundamentalist research and the practical issues encountered in education, with a prevailing inclination towards traditionalism. This contrasts with Al-Khalifa's (2014) findings, which emphasized the absence of a coherent strategy

guiding scientific research, the lack of alignment between scientific research and overarching development plans, and the deficiency of a clear promotional strategy.

Scientific research in Saudi universities currently faces numerous challenges, such as insufficient collaboration between universities and community institutions to support research endeavours and inadequate qualifications among personnel in university research sectors. Additionally, there is a lack of confidence among community institutions in the outcomes of scientific research conducted within Saudi universities.

Table 10

Assessment of Approval Rates of Supporting for Researchers

No.	Statement	Degree of Approval				Mean	The Ratio
		Approved		Not Approved			
		T	%	T	%		
1	Providing full support for researchers, fostering progress, motivation, and an ideal work environment.	32	86.5	5	13.5	0.86	86.5%
2	Incorporating Suggestions for Scientific Research Breakthroughs into Research Methodology Courses	31	83.8	6	16.2	0.84	83.8%

Third Round Results

During the third round, the researcher presented two statements to the experts, both of which garnered agreement rates ranging from 97.3% to 100%. This increased the total number of statements falling within this category to 8.

Inquiries regarding academic prerequisites aimed at fostering innovation in educational research, in alignment with Saudi Arabia's vision, achieved a 90% consensus in the third round. Particularly noteworthy is that 80% of the statements supported this aspect, underscoring the pivotal role of academic prerequisites in advancing innovative scientific research. Our expertise is rooted in the application of educational concepts that correspond to the vision outlined by Saudi Arabia.

Table 11

Assessment of Approval Rates for Innovative Strategies in Education and Research

No.	Statement	Degree of Approval				Mean	The Ratio
		Approved		Not Approved			
		T	%	T	%		
1	Faculty Collaboration for Interdisciplinary Humanities Research in Education	36	97.3	1	2.7	0.97	97.3%
2	Developing Comprehensive Strategies in Pedagogy Departments to Promote Innovative Graduate Research.	37	100.0	0	0.0	1.00	100.0%
3	Utilizing global experiences and contemporary educational research models.	37	100.0	0	0.0	1.00	100.0%
4	Enhancing Competencies of Educational Principles Researchers for Innovation and Research Advancement.	37	100.0	0	0.0	1.00	100.0%
5	Organizing Regular Seminars to Improve the Scientific Research System and Bridge Knowledge Gaps in the Field	37	100.0	0	0.0	1.00	100.0%
6	Attracting Specialists in Research Innovation within Human Sciences	36	97.3	1	2.7	0.97	97.3%
7	Supporting and nurturing esteemed researchers in their specialized fields.	37	100.0	0	0.0	1.00	100.0%
8	Incorporating Suggestions for Breakthroughs in Scientific Research into Research Methodology Courses	36	97.3	1	2.7	0.97	97.3%

Several phrases received unanimous (100%) approval, including:

1. **Phrase No. (2):** "Developing comprehensive strategies within pedagogy departments to facilitate innovative research in graduate studies". This concept echoes the findings of Al-Nouh (2012), which underscore the importance of establishing a research framework to assist researchers in identifying topics that address societal needs.
2. **Phrase No. (3):** "Drawing on the experiences of various countries and contemporary innovative models in educational research." In educational research, various studies explore specialized topics by analysing global experiences and contemporary models. These investigations are undertaken by faculty members as well as master's and doctoral students in educational foundations. This approach is highly favoured by graduate study committees for its innovative contributions to relevant scientific domains.

3. **Phrase No. (4):** "Enhancing the future competencies of researchers in educational principles to foster innovation and advance scientific research."
4. **Phrase No. (5):** "Conducting regular seminars to enhance the scientific research system in the field, with the goal of bridging existing knowledge gaps."

This commitment is further highlighted by the initiatives and programs launched by departments, colleges, and universities to strengthen the scientific research environment across various fields, particularly in education and pedagogy. Each year, strategic plans are developed to enhance the scientific research capabilities of both faculty members and students in this domain. These efforts foster a symbiotic relationship between educational foundation departments in Saudi universities and contribute significantly to the enrichment of knowledge in this area.

Phrase No. 7, emphasizing comprehensive support for researchers, aligns with the established practices of Saudi university research departments. These departments play a pivotal role in supporting graduate students, financing publications, and fostering an enriched academic environment. They provide access to specialized libraries, equip students with essential research skills, and actively promote collaboration among universities. This stands in contrast to the findings of Al-Rehaili & Abu Auf's (2017) study, which underscored challenges related to faculty conference attendance and inter-institutional research collaboration.

The Third Question: What are the procedural requirements for innovation in scientific research in the field of educational principles considering the vision of the Kingdom of Saudi Arabia?

Of the 9 statements addressing procedural prerequisites for research innovation, 6 statements, constituting 67%, garnered agreement rates exceeding 90% and were deemed satisfactory without further evaluation in the third round. Below is a table presenting these scientific expressions, along with their frequencies and arithmetic means.

Of the 9 statements pertaining to procedural requirements for innovation, approximately 33%, or 3 statements, received approval rates ranging between 80% and 90%. These statements will undergo evaluation by experts in the third round. The Table 13 presents these scientific expressions, along with their frequencies and arithmetic means

Table 12
Promoting Innovation in Educational Research: Approvals and Strategies

No.	Statement	Degree of Approval				Mean	The Ratio
		Approved		Not Approved			
		T	%	T	%		
1	Promoting Interdisciplinary Collaboration in Saudi University Education Departments for Innovative Research Publication in Local Journals.	37	100.0	0	0.0	1.00	100.0%
2	Determining the precedence of publishing innovative scientific research in scientific journals published by Saudi universities	37	100.0	0	0.0	1.00	100.0%
3	Training Graduate Researchers and Faculty in Scientific Research Innovation.	37	100.0	0	0.0	1.00	100.0%
4	Hosting Conferences, Workshops, and Panels on Innovative Educational Research.	37	100.0	0	0.0	1.00	100.0%
5	Establishing Global Partnerships to Drive Scientific Research Innovation.	36	97.3	1	2.7	0.97	97.3%
6	We are organizing conferences with a specific focus on innovation in educational research, especially in pedagogical research.	37	100.0	0	0.0	1.00	100.0%

Table 13
Strategies for Advancing Scientific Research in Education

No.	Statement	Degree of Approval				Mean	The ratio
		Approved		Not Approved			
		T	%	T	%		
1	Creating innovation and scientific research hubs within educational institutions.	33	89.2	4	10.8	0.89	89.2%
2	Directing research in the specialty to address current problems in the scientific research at hand	31	83.8	6	16.2	0.84	83.8%
3	Establishing partnerships with specialized scientific societies in Saudi universities and abroad.	32	86.5	5	13.5	0.86	86.5%

Results of the Third Assessment Round

In the third round, the researcher presented two statements to the experts, with agreement rates ranging from 97.3% to 100%. This brings the total number of statements in that category to 9.

Table 14

Strategies for Promoting Innovation and Research in Education

No.	Statement	Degree of Approval				Mean	The Ratio
		Approved		Not Approved			
		T	%	T	%		
1	Facilitating Cross-Departmental Collaborations in Saudi University Foundations of Education to Enhance Scientific Research.	37	100.0	0	0.0	1.00	100.0%
2	Establishing Priority for Publishing Innovative Scientific Research in Saudi University Journals	37	100.0	0	0.0	1.00	100.0%
3	Training Graduate Researchers and Faculty in the Process of Scientific Research Innovation.	37	100.0	0	0.0	1.00	100.0%
4	Hosting Conferences, Workshops, and Panels to Explore Innovative Educational Research	37	100.0	0	0.0	1.00	100.0%
5	Establishing International Alliances to Drive Scientific Research Innovation with Global Expertise	36	97.3	1	2.7	0.97	97.3%
6	We are organizing conferences centered on innovation in educational research, with a strong emphasis on pedagogical research.	37	100.0	0	0.0	1.00	100.0%
7	Creating innovation and scientific research hubs within educational institutions.	37	100.0	0	0.0	1.00	100.0%
8	Directing research in the specialty to address current problems in the scientific research at hand	36	97.3	1	2.7	0.97	97.3%
9	Establishing partnerships with specialized scientific societies in Saudi universities and abroad.	37	100.0	0	0.0	1.00	100.0%

In the third round, experts reached a consensus of 90% or higher, with unanimous agreement (100%) on the importance of procedural prerequisites for fostering innovation in educational research aligned with Saudi Arabia's vision. Our expertise lies in aligning educational concepts with the Kingdom's vision.

The phrases that received 100% approval are as follows:

1. **Phrase No. (1):** "Facilitating collaborations among departments and specializations within the foundations of education at Saudi universities and exploring strategies for enhancing scientific research within this field".
2. **Phrase No. (2):** "Determining the precedence of publishing innovative scientific research in scientific journals published by Saudi universities".

These affirmations find support in the collaborative initiatives undertaken within Saudi universities and education colleges. These institutions have actively forged partnership programs between various departments, including educational foundations, and those accredited by the Education and Training Evaluation Commission. Such accreditation mandates the development of customized plans for respective programs.

1. **Phrase No. (3):** "Conducting training sessions for graduate researchers and faculty members on the process of innovation in scientific research".
2. **Phrase No. (4):** "Organizing conferences, workshops, and discussion panels to explore innovative scientific research in the realm of educational concepts".
3. **Phrase No. (6):** "Organizing conferences focusing on innovation in educational research, with a particular emphasis on pedagogical research".
4. **Phrase No. (9):** "Establishing partnerships with specialized scientific societies in Saudi universities and abroad".

"These efforts align with the Education and Training Evaluation Commission's accreditation programs in Saudi Arabia, which stress the significance of partnerships between graduate programs and relevant institutions." This encouragement has motivated the departments of educational foundations to engage actively in such collaborative ventures.

Subsequent to the research rounds and the Delphi method, a proposed scenario addressing the sixth question was formulated and presented to the panel of experts.

Response to the Sixth Question: "'What is the proposed vision for promoting innovation in scientific research in the field of educational principles within the framework of Vision 2030 in the Kingdom of Saudi Arabia?'"

The Philosophy Behind the Proposed Vision

The underlying philosophy of the proposed vision underscores the indispensable role of innovation in shaping educational societies and realizing objectives. Scientific research stands as a cornerstone for universities worldwide, facilitating advancement and the fulfilment of their missions. It also equips researchers, irrespective of gender, with the tools for both academic and practical pursuits. As individuals acquire knowledge, skills, and convictions, they become empowered to contribute to scientific endeavours and society, thereby elevating the quality of research.

Engagement in scientific research promotes continual learning and fosters professional development, thereby enriching future specializations and scientific departments. It is imperative for this endeavour to align with developmental objectives and national aspirations.

The philosophy behind the proposed vision is grounded in the recognition that

nurturing innovation in scientific research necessitates the implementation of educational policies and regulations within Saudi universities. These measures are crucial for universities to synchronize with the state's objectives and Vision 2030. Additionally, they facilitate adaptability to rapid changes and the resolution of regional and global challenges, consequently bolstering Saudi Arabia's stature in scientific domains.

Vision and Message of the Proposed Vision

The proposed vision aims to enhance scientific research within Saudi universities, particularly in innovative topics aligned with national and international standards. It seeks to identify and address barriers to innovation in scientific research in educational principles, aiming to modernize research in line with Vision 2030 and global trends.

Objectives of the Proposed Vision

The proposed vision aims to foster innovation in scientific research within Saudi universities' educational foundation specialization, aligning with Vision 2030. Key objectives include:

1. Advancing scientific research in educational concepts at Saudi universities, aligning with Vision 2030 goals.
2. Developing comprehensive procedural policies within educational principles to nurture research innovation, meeting Vision 2030 objectives and educational community needs.
3. Enhancing research productivity and equipping educational principles researchers with skills for future opportunities.
4. Aligning research with global trends and fostering skill development for societal growth.
5. Introducing new research subjects and addressing challenges to boost productivity in pedagogical departments.
6. Enhancing research capabilities of pedagogy faculty to support Vision 2030 goals.
7. Keeping abreast of advancements and methodologies to actively contribute to national development.

The Underpinnings of the Proposed Vision

This study endeavours to delineate a vision for enhancing scientific research innovation within Saudi educational institutions' pedagogy departments, aligning with the goals of Saudi Arabia's Vision 2030. Several factors underscore the importance of this objective:

1. The imperative of integrating innovation into higher education scientific research in Saudi Arabia to effectively address rapid changes and global concerns.
2. The need for innovative changes in scientific research regulations within Saudi universities to incorporate new methodologies and address issues in line with the Kingdom's vision, while staying abreast of scientific advancements.
3. The swift advancements mandated by Vision 2030, which necessitate new skills and expertise in higher education to meet emerging requirements.
4. Saudi Arabia's significant strides in the digital domain, highlighting the necessity of scientific research innovation to adapt to technological progress.
5. Discrepancies between scientific research achievements and job market demands in

Saudi Arabia, particularly within the education sector.

6. Recommendations from local and international studies and reports, pinpointing weaknesses in current scientific research practices, challenges in the research system, and the need to showcase innovative efforts across various fields. These reports also underscore the importance of knowledge and skill sharing, essential for future researchers regardless of gender.

Foundations of the Proposed Vision

The foundational elements of the proposed vision can be succinctly summarized as follows:

1. **General Education Policy Document:** Serving as a fundamental guideline for Saudi Arabia's public education system, this document guides efforts to enhance scientific research within Saudi universities, with significant involvement from the Ministry of Education.
2. **Vision 2030:** This comprehensive vision aims to drive substantial national transformation and invest in Saudi citizens to shape the nation's future. The Ministry of Education actively participates in six key programs under Vision 2030, focusing on areas such as Human Capacity Development and Strategic Partnerships.
3. **Strategic Objectives of the Ministry of Education:** Aligned with the goal of delivering exceptional education and producing high-quality outcomes, the Ministry has set strategic objectives for university education. These objectives prioritize distinguished scientific research to develop globally competitive Saudi citizens while maintaining national values.
4. **Human Capacity Development Program:** This program aims to equip Saudi citizens with skills for global competitiveness, emphasizing the role of scientific research in university education. Such research enhances values, skills, and knowledge for both male and female researchers, aligning human capacities with future job market demands.
5. **Scientific Study Findings:** Scientific studies underpinning this research have clarified the research problem, set objectives, and shaped the proposed vision. These studies assess the current research landscape in Saudi universities, identify obstacles, and offer recommendations aimed at fostering innovation in scientific research within pedagogy disciplines and departments of Saudi universities.

Components of the Proposed Vision

1. Establishing objectives aimed at enhancing the competencies of researchers in pedagogical scientific research, facilitating their competitiveness at local and global levels for both male and female researchers.
2. Aligning university education policies with contemporary research areas to support the goals of Vision 2030.
3. Enhancing the pedagogical expertise of faculty members and providing them with advanced capabilities to foster innovation in scientific research.
4. Ensuring university regulations are adaptable to the demands of innovative scientific research, particularly in pedagogical research.
5. Prioritizing the development of advanced technological competencies among male and female researchers in pedagogical scientific research for effective participation in international research settings.

6. Utilizing artificial intelligence methodologies to transform scientific research in teaching and engaging all stakeholders in developing research plans, strategies, and objectives.
7. Integrating research concerns in pedagogy with contemporary university education strategies to align educational outcomes with the current job market demands.
8. Leveraging global experiences and knowledge to drive innovation in scientific research, aligning with the objectives of Vision 2030.
9. Ensuring that the scientific research curriculum in educational principles is aligned with the objectives of Vision 2030.
10. Establishing local and international collaborations to foster advancements in specialized scientific research focused on educational principles.
11. Formulating registration and admission policies for graduate programs in education to attract eminent individuals in research, thereby enhancing the quality of scientific investigations.
12. Implementing training programs to enhance researchers' knowledge of modern educational principles, including emerging technologies such as artificial intelligence, augmented reality, robotics, and big data, while keeping abreast of the latest global expertise and research experiences.

Entities Responsible for Implementing the Proposed Vision

1. **Ministry of Education:** Tasked with formulating strategic plans to enhance scientific research in Saudi universities, the Ministry of Education prioritizes contemporary research and translates it into programs and projects. The Education Research Policy Centre within the Ministry facilitates this process.
2. **Saudi Universities:** Contributing significantly to advancing scientific research, Saudi universities align their efforts with Vision 2030 and evolving job market needs. Collaborating with the Ministry of Education, they promote scientific research in modern disciplines through training programs and workshops, vital for staying updated. Empowering university deanships of scientific research and graduate studies is crucial for implementing these initiatives and effectively serving the community.
3. **Private Sector and Companies**: Playing a significant role in fostering innovative scientific research, the private sector and various companies offer crucial financial support for a wide range of research initiatives benefiting Saudi society. Furthermore, they encourage collaboration among different departments and specializations within Saudi universities, following the principles of community partnership.

Parties Benefiting From the Proposed Concept

1. **Ministry of Education:** Embracing this vision as a guiding framework, the Ministry of Education should foster research innovation in Saudi universities, aligning educational research with the broad objectives of Vision 2030.
2. **Saudi Universities:** Saudi universities should utilize this vision to promote innovation in their research endeavours, thereby enhancing research quality and contributing to the overall development of the education sector.
3. **Faculty Members, Researchers, and Postgraduate Students:** Particularly those affiliated with pedagogy departments and specializations, can elevate their research innovation within the field, leading to more impactful outcomes.

4. **Local Communities and Individuals:** Involving local communities and individuals interested in research is crucial. Encouraging the use of visualization techniques can help individuals develop their skills and stay informed about the latest research advancements, fostering a culture of research and innovation.
5. **Private Sector and Entrepreneurs**: Collaboration between the private sector, entrepreneurs, and pedagogy departments in Saudi universities is essential. Supporting research projects aligned with Vision 2030 can lead to mutually beneficial partnerships and contribute to the growth of the education sector.
6. **Colleges of Education in Saudi Universities**: Collaboration between colleges of education and their academic departments is vital. By embracing this vision and promoting research innovation, these institutions can play a pivotal role in driving positive change within the education sector.

Mechanisms for Implementing the Proposed Vision

1. **Assessing Current Research Outcomes:** Conducting an analysis of the prevailing results emanating from scientific research within the foundational education departments of Saudi institutions, discerning the existing landscape, and identifying obstacles impeding innovative strides.
2. **Conforming to Vision 2030**: Advancing scientific research endeavours in alignment with the strategic objectives outlined in Saudi Arabia's Vision 2030, leveraging insights gleaned from the research initiatives.
3. **Translating Findings into Strategic Blueprints:** Transmuting the conclusions derived from educational principles studies into methodical strategic frameworks under the purview of the Ministry of Education and pertinent regulatory bodies.
4. **Translating Research into Tangible Endeavours:** Converting scholarly investigations in educational principles into tangible ventures, programs, and undertakings that substantiate the objectives of Vision 2030.
5. **Clarifying Organizational Roles:** Establishing precise delineations of responsibilities for stakeholders involved in amplifying innovation within the scientific research realm of educational principles.
6. **Instituting Advisory Panels and Task Forces:** Assembling cohorts of faculty members and educational principles researchers to deliberate on and implement innovative research methodologies.
7. **Cross-Sector Collaborations:** Pioneering collaborations between the Ministry of Education and other governmental entities to enhance the efficacy of scientific research endeavours in educational principles.
8. **Engaging Local and Global Scholars:** Garnering the expertise of domestic and international luminaries to fortify innovation in scientific research pertinent to educational principles.
9. **Partnering with Governmental and Corporate Entities:** Forging alliances to identify research requisites aligned with prospective job market competencies and knowledge domains.
10. **Harnessing International Proficiency:** Integrating foreign proficiencies into the development of scientific research endeavours in educational principles, resonating with the Kingdom's Vision 2030 aspirations.
11. **Designing Capacitation Programs:** Devising instructional schemes aimed at augmenting contemporary scientific research proficiencies, seamlessly integrating them into ongoing research pursuits, and linking them to professional performance and career progression.

12. **Equipping University Departments:** Endowing educational departments within Saudi universities with the requisite acumen and skill sets to champion research innovation in educational principles.
13. **Augmenting Curricula with Technological Aids:** Furnishing pedagogy scholars with cutting-edge technological educational resources, encompassing electronic gadgets, educational software, digital platforms, and instructional content.
14. **Capitalizing on Global Research Trajectories:** Embracing prevailing global trends in scientific research, discerning successful paradigm instances, and imbuing specialized educational research with these illuminative insights.

Obstacles to Implementing the Proposed Vision

1. **Endorsement Obstacles:** The realization of the vision may encounter impediments in securing requisite approval and backing from key stakeholders and decision-makers within the Ministry of Education, essential for accomplishing desired objectives.
2. **Resource Constraints:** The enactment of the vision is hampered by constraints in financial allocations and workforce availability. This encompasses the necessity for additional contemporary technologies and researcher training, alongside the demand for proficient supervisors and mentors to effectively actualize the vision.
3. **Regulatory Challenges:** Prevailing statutes, directives, and procedural frameworks governing scientific research in Saudi university education pose significant hindrances. These regulatory frameworks necessitate revision or reform to streamline the implementation of the proposed vision.
4. **Cultural Barriers to Innovation:** Faculty members across Saudi universities, irrespective of gender, operate within entrenched traditional research paradigms. Overcoming these cultural norms to foster innovation in scientific research demands substantial effort and change management initiatives.
5. **Alignment with Labor Market Dynamics:** Ensuring harmonization between the innovation process and the proposed concept's alignment with the dynamic requirements of the labor market presents a formidable challenge.
6. **Department-Specific Hurdles:** Certain pedagogy departments within Saudi universities grapple with distinctive obstacles. These encompass challenges in furnishing adequate support and resources to researchers, both male and female, to incentivize research innovation and adapt to emerging methodologies

Overcoming Challenges in Implementing the Envisioned Plan

1. **Establishment of a Collaborative Committee:** Formulate a joint committee aimed at fostering collaborative research endeavours between the Ministry of Education and Saudi universities. This committee's mandate would involve scrutinizing and amending existing regulations and procedures to facilitate innovation in scientific research.
2. **Vision Advocacy**: Advocate for the endorsement and active participation of decision-makers within the Ministry of Education by presenting the vision and highlighting its significance in propelling scientific research innovation forward.
3. **Faculty Involvement:** Engage faculty members and subject matter experts in educational foundations in dialogues to underscore the vision's potential impact on research outcomes.

4. **Targeted Innovation:** Identify focal areas for innovative advancements in educational research, mobilize resources, and cultivate partnerships with the private sector to encourage community engagement.
5. **Collaborative Workshops:** Organize workshops tailored for male and female scholars specializing in educational principles, with a focus on contemporary research themes aligned with the objectives of Vision 2030.
6. **Faculty Development Initiatives:** Implement training programs and workshops for faculty members within education departments, concentrating on research topics pertinent to Vision 2030 objectives.
7. **Resource Provision:** Ensure the availability of financial and human resources to support innovation in scientific research, including the procurement of modern educational technologies.

Suggestions for Future Research Directions

1. Assess the efficacy of the proposed vision through the implementation of small-scale initiatives and conducting impact assessments.
2. Investigate the feasibility of the vision from the viewpoints of faculty members and researchers using qualitative research methods.
3. Explore the leadership attributes correlated with enhanced research innovation and productivity.
4. Investigate online platforms that enable and support national and international research collaborations.
5. Examine policies and strategies fostering innovation in educational research implemented in various countries.

Key Implications

1. It is imperative to enact reforms in policies, regulations, and procedural frameworks governing scientific research within Saudi universities to facilitate innovation in alignment with Vision 2030. This challenge emerged as a significant impediment.
2. Substantial investment is required to develop essential infrastructure, technological advancements, and human capabilities necessary to propel research innovation in educational principles. Financial constraints and skill deficiencies were identified as key hurdles.
3. Establishing robust national and international research partnerships and collaborations will be crucial in fostering innovation. The study underscores the importance of harnessing global expertise and trends.
4. A cultural shift fostering innovation must permeate all levels of universities through engagement initiatives, incentives for researchers, and visionary leadership within education faculties. Overcoming cultural impediments was highlighted as essential.
5. Curricular enhancements are imperative across graduate programs in educational principles, integrating emerging technologies and research methodologies tailored to the direction of Vision 2030. This initiative can empower faculty members and future researchers.

Study Limitations

1. Although the purposive sampling method initially provided valuable insights from experts, future studies may benefit from incorporating larger and more diverse samples to improve generalizability.
2. The utilization of questionnaires and the Delphi technique was suitable for the exploratory and forward-looking nature of the research. However, employing mixed methods in subsequent investigations could offer additional depth and insight.
3. While the attrition of experts between rounds may have impacted continuity, efforts were made to maintain a substantial and qualified panel throughout the study.
4. Given the pioneering nature of the conceptual investigation, baseline metrics were not included. However, future endeavours aimed at testing and implementing the vision could integrate metrics to quantify markers of innovation.
5. Although the proposed vision is informed by specialized expertise and underwent initial evaluation, further refinement could be achieved through follow-up prototyping and impact analyses conducted from multiple perspectives.

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