Universal Journal of Educational Research 4(7): 1629-1643, 2016 http://www.hrpub.org
DOI: 10.13189/ujer.2016.040715

Research Map of Research Priorities in HE Studies in the Kingdom of Saudi Arabia

A. M. AlSumih

King Saud Chair for Higher Education Studies, Al-Imam Muhammad Ibn Saud Islamic University, KSA

Abstract This study presents a research map for the key research priorities of higher education (HE) in the Kingdom of Saudi Arabia. The study diagnoses and analyzes the research reality in HE studies in KSA in terms of strength points and improvement opportunities. It also explores the research map fields of current and prospective research priorities in HE in KSA. Moreover, it applies a descriptive and forward-looking approach. "Delphi technique" to determine the research priorities of HE studies and foresee them at present and in the future in KSA. The study population was composed of 83 HE experts. The current study has reached several conclusions, most importantly: The experts strongly agreed on the research reality in KSA HE studies in terms of points of strength; the average of all points of strength was (2.3) out of (3). The experts strongly agreed on the research reality in KSA HE studies in terms of development opportunities; the average of all points of strength was (2.65) out of (3). The experts strongly agreed on 216 priorities in 13 HE study fields, thus forming a map of research priorities for current and upcoming HE studies in KSA.

Keywords Research Map, Research Priorities, HE in KSA

1. Introduction

Scientific research is no longer an academic luxury practiced by a group of scientists living in ivory towers, but rather a life necessity for progress in different fields through which the development path continues with steady footsteps (Bakr, 1996) [9]. KSA has realized the importance of scientific research and hence expenditure on research has been steadily increasing year after year. In 2010, total expenditure on scientific research in KSA exceeded 17 billion Riyals, while in 2013, it reached 24.4 billion Riyals. Thus, total spending on scientific research out of gross domestic product reached 1.07% in 2010, and 0.87% in 2013 (Ministry of HE, 2013) [15]. A number of initiatives have been implemented to further advance scientific research and bridge the gap between public and private sectors throughout various research institutes. For instance, plans have been set to transform Saudi universities into world-class research facilities and, as a solid starting point, the King Abdullah University of Science and Technology was established in 2009, paving the way for goal-oriented research. A number of research partnership agreements have been initiated with international universities and research facilities and major focus will be on the dissemination of knowledge and the encouragement of creativity and patents in both science and technology.

The plan for HE in KSA (AFAQ) outlined four strategic goals related to research and innovations. These goals are: providing sufficient numbers of researchers in line with global rates; increasing spending on scientific research in line with the overall global best practices rate; raising research and innovations productive capacity and enhancing its quality; strengthening the management methodology of scientific research while ensuring its consistency and providing a motivating environment. AFAQ also specified the executive programs for these goals, which included HE Scientific Research Management, and the Specialized Research University (AFAQ, 2016) [2].

The third goal of the tenth five-year development plan for the years 2016-2020, in KSA, focused on supporting applied research and studies; investment of scientific research conclusions in tackling economic and social issues; motivating universities and institutions to invest in the research fields; and development and innovation, and stressing on the application of protection systems for intellectual property rights. The tenth objective of the same plan focused on optimal investment in the population resource by raising living standards and improving the quality of life for all society classes. This would be achieved by strengthening Saudi family bonds, protecting its values, and promoting researches and studies related to demographic variables and social phenomena. The 11 objective focused on the development of human resources and raising productivity, with special regards to HE. Emphasis has been placed on expanding HE programs and establishing specialized scientific universities, as well as activating and developing the research role of universities and linking it to the society's future needs.

Future studies have a highly important role as they shorten many cognitive cycles through developing societies, improving nations, and advancing strategic thinking methods. They limit the losses incurred in the countries' resources through outlining the path to be followed by nations to employ their future in the best possible way while utilizing minimum capabilities. Thus, it is important for all countries to provide a vast space for those studies and support them by opening specialized research centers and increasing projects based on scientific cognitive foundations that deal with the past and future with the aim of harnessing the diverse phases of the future. Along these lines, future studies are highly important as they grant countries, societies, and people the ability to achieve development and progress through the optimal employment of available resources, and foreseeing the future in clear scientific ways (Aghwan, 2011) [3].

The term research map is procedurally defined in this study as a list of research fields and priorities with research priorities being the precedence and urgent importance that should be given to issues studied in the field of open education (Mortaja, 2013) [16]. Concerning the term, HE studies, they are the specialized scientific studies and intra-theoretical and applied researches conducted in various HE fields.

Mustafa and Mahjoub (2015) [17] emphasized the importance of using research maps for determining priorities and organizing the efforts exerted in a specific research field. Thus, planning a research map and foreseeing the future of HE studies using a prospective scientific methodology is a step in the right direction towards defining research priorities in HE in KSA. This step would help researchers in different HE fields and allow the advancement of scientific research while refining its path and scientific levels. Moreover, exploring the future of HE studies has a significant role in supporting the role of scientific research in achieving sustainable development, advancement, and elevation of different HE institutions.

The study conducted by the Higher Council for Science and Technology (2010) [13] in Jordan confirmed that "Delphi technique" has been proven on a global scale by experts and specialists to be successful in assisting policy-making and priority-setting.

Two decades ago, Sultan (1995) [19] pointed out that the most obvious problem faced by scientific research was the selection of the research itself. There is no general scientific research plan developed by a specialized entity to guide researchers. Each researcher has to select his/her own research on an individual basis. Hence, the study conducted by Hadad (1998) [12] recommended that it is important to determine the priorities of any scientific, educational research in light of the society's needs and the educational problems facing each Arab country. The need for preparing a research map for research priorities of several fields has been established by the conclusions and recommendations of several previous studies (Abdullah & Al-Aidarus, 2001 [1]; Hadad, 1998 [12]; Higher Council for Science and Technology, 2010) [13].

Based on this, presenting a research map for research priorities in HE studies is completely in line with AFAQ plan, especially when it comes to the third and fourth strategic objectives; raising the productive capacity of research and innovation, and enhancing its quality; and strengthening the management methodology of scientific research, while ensuring its consistency and providing a motivating environment. All these objectives may be achieved via several paths, most importantly by directing researchers towards research priorities of HE studies and providing them with a research map.

Therefore, it is considered an urgent matter to plan a research map in the present time, based on future methodological scientific foundations that link different disciplines, while supporting and exploring HE studies at all levels.

Study Problem

There is an urgent need for diagnosing the research reality of HE studies in KSA and analyzing it in terms of strength points and improvement opportunities, as well as determining both present and potential research fields and priorities in HE studies. Hence, the proposition of a research map for research priorities in HE studies is a serious issue that reflects development, genuineness, and innovation. It urges the introduction of a list of research priorities in different fields of HE studies for researchers, specialists, and educational institutions that will constitute a tremendous cognitive addition.

Thus, the current study attempted to answer three main questions:

1) What is the research reality of HE studies in KSA in terms of strength points and improvement?
2) What are the research map fields for current and prospective research priorities in KSA?
3) What are the current and prospective research priorities in HE studies in KSA?

Study Limits

The objective limits of this study focused on research priorities in HE studies. The human limits were represented by HE experts in KSA. As for the time limits, this study was applied during the first semester of the university year (2016).

Conceptual Framework

The conceptual framework of the study depended on the importance of scientific research in the HE environment in KSA. It also highlighted the importance, essence, and types of future studies. Furthermore, it addressed the research map and research priorities, as well as the objective and most important characteristics of the research map.

Many researchers emphasized the numerous fields of research maps according to many considerations highly related to the subject and specialization. For that reason, many previous studies were devoted to specific specialized research maps, while a few were interested in presenting research maps that were comprehensive, rich, and deep at the

same time. Since this current study aims at establishing a research map for these specialized scientific studies and intra-theoretical and applied research in various HE fields, the suggested map fields should include all or most fields related to HE studies. The most important fields include educational, managerial, social, cultural, economic, political, security, sharia, juristic, legal, media, touristic, linguistic, technical, agricultural, environmental, health and applied sciences fields.

The current study has relied on specific sources for establishing the research map. It included cognitive, scientific and research perspectives related to scientific research visions in HE studies. The most important resources are: Goals of HE future plan in KSA and its objectives (AFAQ), visions and expectations of some Saudi universities about transforming into research universities, tenth five-year development plan for the years 2016-2020, indicators of measuring and evaluating scientific research at the Research Excellence Centers Secretariat at the Ministry of HE, and dealing with scientific research challenges of present and future HE studies.

Study Methodology

This study uses the descriptive approach that focuses on studying the abstract reality, describing it accurately, and expressing it qualitatively or quantitatively (Obeidat et al., 1993) [18]. It also uses a forward-looking approach by applying a future predictive method, the "Delphi technique".

The researcher prepared a tool to examine the research reality in HE studies in KSA in terms of strength points and improvement opportunities, identify research priorities in HE studies at present and in the future, and establish a research map for research priorities in HE studies in KSA.

The tool was presented to a group of experts to know the degree of their approval of the strength points and improvement opportunities, and their relationship with the allocated dimension, as well as the obviousness of these points or opportunities. Likewise, 12 HE study fields were presented to ensure the obviousness, appropriateness, and linguistic accuracy of each priority or field. Twenty experts demanded to amend or omit some phrases and suggested some simple amendments and the separation of some fields. These amendments and suggestions were taken into consideration. Hence, the strength points of the research reality of HE studies in KSA reached 12 points, as well as 12 opportunities to improve the research reality of HE studies in KSA. The number of fields became 13 fields instead of 12.

Study Population and Sample

The population of this study was composed of experts in HE studies, hence making it difficult to specify the population number. Thus, selecting an intentional sample was appropriate for choosing the participating experts in this study. The study tool was arbitrated by 20 experts; 65 experts participated in the first round; 62experts participated in the second round. It is worth noting that the total number of experts who participated in arbitration and in the first and second rounds reached 83 experts.

Statistical Analysis

The obtained data was analyzed through the Statistical Package for Social Sciences (SPSS) software, using some statistical methods: repetitions, percentages, and averages.

To determine experts' approval of strength and improvement opportunities, the researcher relied on a 3-point scale; strongly agree, moderately agree, and slightly agree. As for the priorities, appropriate, need amendment, or to be omitted were used. Since the range equals 2, which is the difference between the highest degree (3) and the lowest degree (1), hence by dividing the range by the number of categories the length of the category becomes 0.66. The following table (Table 1) demonstrates the 3-point scale and the weighted value of experts' opinion on strength points and improvement opportunities for the research reality of HE studies in KSA, as well as the research map fields for research priorities in HE studies at present and in the future in KSA.

Table 1. Three-point scale and weighted value of the degree of agreement

Degree of agreement		Point	Weighted Value
High	Appropriate	Three points	From 2.3 to 3
Moderate	Needs amendment	Two points	From 1.6 to less than 2.3
Low	To be omitted	One point	From 1 to less than 1.6

Presentation and Discussion of the Study Conclusions

Below, the researcher presents and discusses the study conclusions, starting by the illustration of primary data of experts participating in the arbitration of the tool and the first and second rounds; in terms of gender, academic rank, and expert's employing institution; followed by illustration of the results of the questions related to the study problem.

Experts' Primary Data

The gender of the experts who participated in arbitration and the first and second rounds are illustrated in Table 2. Male experts represented the highest percentage in all three categories ranging from 70-83%.

Table 2. Experts' Gender

Gender	Number					
	Arbitration	Percentage	First Round	Percentage	Second Round	Percentage
Male	**14**	70%	**54**	83%	**51**	82%
Female	**6**	30%	**11**	17%	**11**	18%
Total	**20**	100%	**65**	100%	**62**	100%

Table 3. Academic Ranks of Participating Experts

Academic Rank	Number					
	Arbitration	Percentage	First Round	Percentage	Second Round	Percentage
Professor	**9**	45%	**22**	34%	**28**	45%
Associate Professor	**10**	50%	**22**	34%	**18**	29%
Assistant Professor	**1**	5%	**17**	26%	**16**	26%
Ph.D.	**0**	**0**	**4**	6%	**0**	**0**
Total	**20**	100%	**65**	100%	**62**	100%

Table 4. Experts' Employing Institutions

Employing Institution	Number					
	Arbitration	Percentage	First Round	Percentage	Second Round	Percentage
Universities	**7**	100%	**13**	68.5%	**14**	93%
Other Institutions	**0**	**0**	**6**	31.5%	**1**	7%
Total	**7**	100%	**19**	100%	**15**	100%

Table 3 shows the academic rank of the experts who participated in arbitration and in both rounds. It is clear that the number of professors and associate professors participating in all three stages constituted the bulk number of participants, which stresses the importance of experts' opinions and their highly distinguished academic ranks.

Table 4 shows the employing institutions of experts participating in arbitration and both rounds. In arbitration, the participating experts were university staff from 7 different universities. None of the experts participating in the arbitration worked outside universities. As for the first round, experts from 13 universities and 6 other institutions participated. In the second round, experts from 14 universities and one other institution participated.

2. Findings

2.1. Research Reality of HE Studies in KSA in Terms of Strength Points and Improvement Opportunities

Experts were asked about their opinion regarding the strength points and improvement opportunities regarding research in HE studies in KSA. This question was presented to experts only during the arbitration phase and in the first round; this means that 20 arbitrators viewed this question and amended it, as deemed appropriate, and then it was presented to 65 experts during the first round. The experts answered it according to a 3-point scale to express the strength points and improvement opportunities for research reality in HE studies in KSA. The researcher prepared these points and opportunities, arbitrated them, and then presented them to the experts to answer them.

The points of strength recorded high results, where the overall average for all points was 2.3/3 (Table 5). This means that the experts' agreement on these points was high, as the scale specifies a high agreement score range from 2.3 to 3. The points of strength included 12 points; six of which scored high degrees, and the remaining six scored medium degrees. It is worth noting that none of the points of strength scored a low degree, according to the experts.

The agreement on the following point of strength: "Multiple and diverse institutions responsible for scientific research in KSA (cities, universities, and centers)" scored an average of 2.67 making it the highest point of strength in the research reality in HE studies in KSA. In contrast, the point of strength: "Availability of appropriate financial support for scientific research in KSA" scored an average of 1.92 making it the least point of strength in the scientific research reality in HE studies. This confirms experts' point of view regarding the importance of increasing financial support for scientific research, despite the fact that spending is increasing steadily. Total spending on scientific research in 2010 in KSA reached more than 17 billion Riyals while in 2013, it reached 24.4 billion Riyals (Ministry of HE, 2013) [15].

Table 5. Strength Points of Research Reality in HE Studies in KSA

Strength Points of Research Reality in HE Studies in KSA	Degree of Agreement				Average
		High	Medium	Low	
Multiplicity and diversity of institutions responsible for scientific research in KSA (cities, universities, and centers).	K	43	20	2	2.67
	%	67.2	31.3	3.1	
Qualitative development associated with HE during the past ten years.	K	37	27	1	2.59
	%	57.8	42.2	1.6	
Development of current research capabilities of HE studies in comparison with the past.	K	35	28	2	2.55
	%	54.7	43.8	3.1	
The diversity of research subjects and issues of HE studies.	K	40	16	9	2.52
	%	62.5	25.0	14.1	
The presence of regulations, laws, and policies regulating scientific research in KSA.	K	30	28	7	2.39
	%	46.9	43.8	10.9	
Respect for the freedom of scientific research in HE studies.	K	27	34	4	2.39
	%	42.2	53.1	6.3	
Freedom of setting research policies and priorities in HE studies.	K	24	30	11	2.23
	%	37.5	46.9	17.2	
Availability of financial and human resources to appoint and train research personnel.	K	26	20	19	2.14
	%	40.6	31.3	29.7	
Research issues in HE institutions are in line with the needs of the developmental plans and the job market.	K	23	24	18	2.11
	%	35.9	37.5	28.1	
The presence of motivating research environments for conducting HE studies.	K	23	24	18	2.11
	%	35.9	37.5	28.1	
Development of investment fields in HE studies.	K	21	25	19	2.06
	%	32.8	39.1	29.7	
Availability of appropriate financial support for scientific research in KSA.	K	15	28	22	1.92
	%	23.4	43.8	34.4	
Overall average					2.30

Table 6. Improvement Opportunities of Research Reality in HE Studies in KSA

Strength Points of Research Reality in HE Studies in KSA	Degree of Agreement				Average
		High	Medium	Low	
Diagnosing research reality in HE studies in light of regulated scientific criteria.	K	50	13	2	2.78
	%	77	20	3	
Developing a vision of scientific research philosophy in HE studies.	K	48	15	2	2.75
	%	74	23	3	
Directing scientific research towards the issues that serve the society.	K	50	11	4	2.75
	%	77	17	6	
Determining research fields in HE studies in light of new developments.	K	47	15	3	2.72
	%	72	23	5	
Determining major goals of scientific research in HE and common philosophical framework between them.	K	47	13	5	2.69
	%	72	20	8	
Establishing a legal and legislative structure in HE to protect intellectual property.	K	48	9	8	2.64
	%	74	14	12	
Directing scientific research towards issues and problems related to HE.	K	43	17	5	2.63
	%	66	26	8	
Determining mechanisms of decision making in scientific research in HE studies.	K	43	16	6	2.61
	%	66	25	9	
Increasing financial support provided to researchers.	K	45	14	6	2.59
	%	70	21	9	
Unifying scattered research objectives to achieve harmony and integration towards the major scientific goal.	ك	40	21	4	2.59
	%	62	32	6	
The possibility of expanding scientific integration to form joint international research teams.	K	41	16	8	2.55
	%	63	25	12	
Filling the research gaps in different HE paths by determining what has been researched and what needs further research, based on scientific methodological foundations.	K	41	16	8	2.55
	%	63	25.0	12	
Overall average					2.65

Table 6 shows the improvement opportunities in research reality in HE studies in KSA. The results were high, where the average of all improvement opportunities scored 2.65. This result is considered a high one and shows experts' agreement on the necessity of focusing on improvement opportunities in scientific research in KSA. Improvement opportunities included 12 opportunities and none of these opportunities received a moderate or low score. The improvement opportunity "Diagnosing research reality in HE studies in light of regulated scientific criteria" scored highest with an average of 2.78 while the improvement opportunities that scored lowest (2.55) were: "Possibility of expanding scientific integration to form joint international research teams" and "Filling the research gaps in different HE paths by determining what has been researched and what needs further research according to scientific methodological foundations". This asserts the necessity of building bridges of communication and scientific integration to form joint international research teams, in addition to the need to fill research gaps in different HE paths by determining what has been researched and what needs further research.

Compared to previous studies, the current study is distinguished by diagnosing research reality in HE studies in KSA, in terms of determining strength points and opportunities for improvement. Nevertheless, it is difficult to discuss the results of this question along with the results of previous studies.

2.2. Research Map Fields for Current and Prospective Research Priorities in HE Studies in KSA

During the arbitration phase, experts were asked to express their opinions about 12 fields. Experts agreed on the suggested fields and 25%of them requested that the media and tourism fields be separated to be independent of each other. Thus, the suggested fields became 13 fields. The fields and priorities were then presented to experts during the first and second rounds where they unanimously agreed on them.

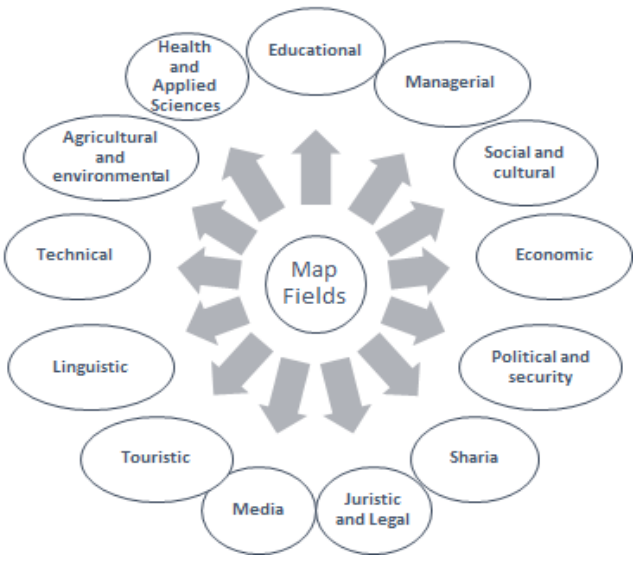

Figure 1. Research Map Fields

The researcher worked hard to propose the fields. Many previous studies and publications that dealt with research maps were referred to, taking into consideration the uniqueness and multiplicity of these specialized scientific studies, and the theoretical and applied researches in various HE fields and the intra-fields which serve HE. The research fields of the map in the current study are presented in Fig. 1.

Most previous studies focused on one field such as scientific, educational, or academic research; while others focused on a specific discipline such as psychology, health, pedagogy, open education, or adults' education. Few studies focused on the comprehensive national map of several fields such as the study conducted by the Higher Council of Science and Technology in 2010 [13]. However, comparing the results of this study with the results of previous studies would be difficult. All previous studies aimed at suggesting or determining research priorities. They varied between specialized studies serving a specific discipline such as pedagogy, psychology, health, open education, education technology …etc., or other studies with a more comprehensive objective related to scientific, educational, or academic research. The current study is characterized from the previous ones in terms of its national level and future as well as predictive and forward-looking methodology using "Delphi technique". Additionally, it is distinguished by the participation of experts from a variety of disciplines and research references to serving these specialized scientific studies, and the theoretical and applied researches in various HE studies and intra-fields that serve HE in KSA.

Table 7. Order of fields according to the final number of priorities

Field	Final Number of Priorities	Fields' Order
Managerial	**31**	**1**
Educational	**27**	**2**
Social and cultural	**25**	**3**
Economic	**17**	**4**
Juristic and legal	**17**	**4**
Sharia	**14**	**5**
Linguistic	**14**	**5**
Technical	**14**	**5**
Political and security	**12**	**6**
Media	**12**	**6**
Health and applied sciences	**12**	**6**
Agricultural and environmental	**11**	**7**
Touristic	**10**	**8**

Table 7 shows how experts organized the fields according to the final number of priorities in each field. Experts agreed on placing the managerial field on top with 31 priorities, then the educational field with 27 priorities, followed by the social and cultural field with 25 priorities, followed by the economic field, and the juristic and legal field in the fourth

rank with 17 priorities in each field. Sharia, linguistic, and technical fields came in the fifth rank with 14 priorities in each field, and then the political, security, media, and health and applied sciences fields ranked number six with 12 priorities in each field. The agricultural and environmental field ranked the seventh with 11 priorities, and finally the touristic field with ten priorities.

2.3. Current and Prospective Research Priorities in HE Studies in KSA

The last question presented to experts was during the first and second rounds. They were asked to identify the current and prospective research priorities in HE studies in KSA. Tables 8-20 show the percentage of experts' agreement during each round, and the average percentage of agreement about research priorities in 13 areas. It is worth noting that 65 experts participated in the first round while 62 experts participated in the second round. The percentage of experts' agreement during both rounds was added, after calculating the number of experts who believed the priority was appropriate, needed amendment, or should be omitted. Then, the average agreement percentage among experts in both rounds was calculated as regards to each research priority.

The first round included 150 priorities presented by the researcher to the experts to determine if they were appropriate for the field or required amendment or deletion. The standard criteria, upon which the priority was accepted or omitted, were determined to be 75% of experts' agreement in the first round as well as the second.

In the first round, experts agreed on 147 priorities, while 3 priorities were excluded because they did not get 75% of experts' agreement. They suggested new priorities in each field and demanded amendment of some priorities. In the second round, the researcher presented 195 priorities to the experts. The researcher also provided the experts with the agreement percentage for each priority, so that each expert would be fully aware of other experts' view on each priority. Experts expressed their opinion for each priority, determined its appropriateness, provided an appropriate amendment, or demanded its omission. Moreover, experts added 21 new priorities so the total research priorities in the current study became 216 priorities for 13 fields in HE studies. All the priorities in each field were above the standard criteria which was set at 75%; which is the lowest percentage of approval of appropriateness of the priority.

The researcher provided the experts with a detailed letter about the objectives of the study and the structure of the sources of the research map of research priorities in HE studies, and determined what was requested from them. Moreover, in the second round, the experts were provided with more details related to the results of the first round. It is worth noting that all experts interacted with the tool, whether during arbitration or during the first or second round. They provided answers and suggestions, despite their scientific and practical engagements. Their efforts and positive participation were greatly appreciated.

Experts were presented with 27 research priorities in the educational field. The researcher initially presented 14 priorities during the first round, where the experts approved their appropriateness with a percentage ranging from 78% to 94% (Table 8). In the second round, the percentage ranged between 76% and 100%. The average percentage of approval in both rounds ranged from 81.5% to 95%. It should be noted that the experts' approval percentage was high during the second round (13 priorities got 90% or more of the experts' approval).

Table 8. Research Priorities in the Educational Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
The reality of academic guidance and ways of developing it.	90%	100%	95%
Professional development of faculty members.	92%	96%	94%
The Scientific identity of universities and methods of maintaining it.	90%	98%	94%
Mechanisms of maintaining quality in HE programs in light of global excellence models.	94%	93%	93.5%
Standards of preparing and training university professors.	90%	96%	93%
Competitive characteristics of HE programs outputs.	89%	96%	92%
Developing HE programs in light of global standards and local needs of the society.	87%	96%	91%
Effective teaching strategies in HE programs.	84%	**96**%	90%
Developing HE programs in light of academic evaluation and accreditation standards.	84%	94%	88%
Future trends in the development of talents and creativity in HE plans and programs.	84%	91%	87.5%
Islamic rooting of educational theories and its applications in HE.	82%	92%	87%
Future trends in the universities' third mission.	86%	87%	86.5%
Employing learning and education theories in university education.	81%	87%	84%
Paying attention to the physically challenged individuals in HE programs.	78%	85%	81.5%

The current study proposed 31 research priorities in the managerial field. In the first round, the researcher presented to the experts' 19 priorities shown in Table 9. They approved their appropriateness at a rate ranging between 84% and 90%. In the second round, the rate ranged between 77% and 100%. It is clear that the average agreement rate during both rounds was between 86.5% and 98%. It should be noted that seven priorities got 98% of experts' agreement during the second round. Additionally, experts' average agreement rate was high in both rounds; the least priority got 86.5% of experts' opinion, which is a high average.

In the social and cultural field, 25 research priorities were selected. In the first round, the researcher presented 16 priorities to the experts who approved their appropriateness with a percentage ranging between 77% and 94% (Table 10). In the second round, the percentage was between 75% and 96%. The average agreement percentage in both rounds was between 83% and 95%. It should be noted that the experts' agreement percentage was high during the second round; 14 priorities got 90% or more of the experts' opinions.

Table 9. Research Priorities in Managerial Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
Standards of preparing and training medium and senior management in universities.	**90%**	**100%**	**98%**
Partnership areas between HE and job market.	**93%**	**98%**	**95.5%**
International indicators for measuring local universities' performance.	**90%**	**98%**	**94%**
Measuring the efficiency of HE institutions quantitatively and qualitatively.	**90%**	**98%**	**94%**
Evaluating deanships' supporting roles and exploring their future.	**90%**	**98%**	**94%**
Developing administrative reform policies and programs in universities.	**89%**	**98%**	**93.5%**
Governance standards in universities.	**89%**	**98%**	**93.5%**
Institutional performance evaluation systems in universities.	**88%**	**98%**	**93%**
The role of incentives in raising performance and productivity among employees in universities.	**88%**	**95%**	**91.5%**
Integrative reference for scientific research management in HE.	**88%**	**95%**	**91.5%**
The role of universities in achieving transparency and integrity.	**89%**	**92%**	**90.5%**
Universities' academic accreditation standards in light of global rankings.	**89%**	**92%**	**90.5%**
HE policies and systems.	**86%**	**95%**	**90.5%**
Future trends for internationalizing of HE programs regionally and globally.	**86%**	**95%**	**90.5%**
Evaluating the performance of HE programs in light of international rating standards.	**88%**	**91%**	**89.5%**
Designing, describing and evaluating human resources functions in universities.	**88%**	**91%**	**89.5%**
Monitoring and accounting the boards of the universities.	**86%**	**93%**	**89.5%**
Organizational structure of HE.	**81%**	**93%**	**87%**
Planning and developing the human resources career path in universities.	**84%**	**89%**	**86.5%**

Table 10. Research Priorities in Social and Cultural Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
Family problems of university students and ways of treatment.	**94%**	**96%**	**95%**
The contribution of the University and HE in combating crime and poverty.	**92%**	**98%**	**95%**
Effects of using means of social media on university students.	**92%**	**96%**	**94%**
Social effects of unemployment on university graduates.	**92%**	**96%**	**94%**
Moral education and its relationship with students' social and cultural future.	**89%**	**96%**	**92.5%**
The role of educational and social institutions in developing a national identity.	**90%**	**94%**	**92%**
Violence among university youth and ways of treatment.	**83%**	**93%**	**88%**
The reality and ways of protecting university youth from illegal drugs.	**83%**	**93%**	**88%**
The contribution of social justice in developing a sense of belonging among university youth.	**81%**	**95%**	**88%**
National contents in HE programs.	**81%**	**95%**	**88%**
Cultural dimensions included in HE programs.	**84%**	**91%**	**87.5%**
The role of Cultural Missions in the social and psychological care for the scholarship students.	**81%**	**93%**	**87%**
The role of scholarship students in spreading the Arab and Islamic culture.	**81%**	**91%**	**86%**
Students' moral problems: reality, reasons and treatment.	**80%**	**91%**	**85.5%**
Development of traffic cultures among university students.	**81%**	**89%**	**85%**
Social pressures on university students.	**77%**	**89%**	**83%**

Table 11 shows experts' opinion on research priorities in the economic field. In the first round, the researcher presented 11 priorities to the experts who agreed on their appropriateness with a percentage ranging from 83% to 94%. In the second round, the percentage was between 84% and 100%. The average agreement rate in both rounds was between 87% and 97%. It should be noted that experts' agreement rate was high in the second round; four priorities got 100%, and five priorities got 98% of experts' opinions.

Table 12 shows experts' opinion on research priorities in the political and security field. In the first round, the researcher presented nine priorities to experts who agreed on their appropriateness with a percentage ranging from 81% to 97%. In the second round, the percentage was between 82% and 100%. The average agreement rate in both rounds was between 82.5% and 98.5%. It should be noted that experts' agreement rate was high in the second round; three priorities got 100% of the experts' opinions.

Table 11. Research Priorities in Economic Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
Modern alternatives for diversifying sources of HE financing.	**94**%	**100**%	**97**%
The effectiveness of investment in human capital on the outputs of the university and HE and their efficiency.	**94**%	**100**%	**97**%
Diversifying investment fields in universities.	**95**%	**98**%	**96.5**%
Measuring the efficiency of government spending on scientific research in universities.	**92**%	**98**%	**95**%
Economic awareness among university students.	**92**%	**98**%	**95**%
Future trends for investing the money of the HE fund.	**92**%	**98**%	**95**%
Measuring economic return and cost of HE programs.	**89**%	**100**%	**94.5**%
Efficiency and effectiveness of expenditure sections in HE.	**89**%	**100**%	**94.5**%
Marketing HE programs in universities, locally and internationally.	**92**%	**96**%	**94**%
Integrated future trends of the private sector role in financing universities or HE programs.	**89**%	**98**%	**93.5**%
The future vision of students' rewards and scholarships.	**83**%	**91**%	**87**%

Table 12. Research Priorities in Political and Security Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
The role of universities in maintaining intellectual security.	**97**%	**100**%	**98.5**%
Educational strategy for facing national security challenges.	**95**%	**100**%	**97.5**%
The comprehensive role of HE institutions and security institutions in maintaining national identity.	**92**%	**100**%	**96**%
Complementary role of security institutions and universities in crisis management.	**92**%	**98**%	**95**%
The role of Saudi embassies in providing the necessary care for Saudi students.	**89**%	**96**%	**92.5**%
The contribution of security authorities in developing the roles of university education and HE.	**92**%	**91**%	**91.5**%
Political and security dimensions included in the academic plans of the university education and HE.	**86**%	**96**%	**91**%
Manifestations of the political regime trend on university and HE systems.	**81**%	**89**%	**85**%
The role of universities in achieving international peace.	**81**%	**84**%	**82.5**%

Table 13 shows experts' opinion on research priorities in the Sharia field. In the first round, the researcher presented 12 priorities to the experts who agreed on their appropriateness with a percentage ranging from 88% to 94%. In the second round, the percentage was between 88% and 98%. The average agreement rate in both rounds was between 88% and 96%.

Table 14 shows experts' opinion on research priorities in the juristic and legal field. In the first round, the researcher presented 11 priorities to the experts who agreed on their appropriateness with a percentage ranging from 77% to 94%. In the second round, the percentage was between 80% and 98%. The average agreement percentage in both rounds was between 80% and 98%. It should be noted that the experts' agreement percentage was high in the second round compared to the first.

Table 13. Research Priorities in Sharia Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
The role of Sharia faculties and preaching institutes in renewing the Daawa speech.	**94%**	**98%**	**96%**
The role of Sharia scientific associations in clearing Fiqh chaos.	**94%**	**98%**	**96%**
Goals and objectives of Sharia internalization in HE studies.	**94%**	96%	**95%**
Sharia internalization in HE studies and its relationship to citizenship development.	**92%**	**96%**	**94%**
The role of Sharia faculties in reinforcing moderation of thought, the practice of worship, and the behaviors; according to Sharia principles.	**92%**	**96%**	**94%**
The role of Sharia departments in strengthening behavioral education among university students.	**90%**	**96%**	**93%**
The role of universities in consolidating dialogue between different religions' followers and civilizations.	**90%**	**95%**	**92.5%**
Controls and effects of collective endeavor, and the role of Sharia scientific universities and associations in achieving them.	**90%**	**95%**	**92.5%**
The role of Sharia faculties in drying up the sources of exaggeration and extremism among university students.	**90%**	**95%**	**92.5%**
Sharia foundations and perspectives for building HE programs.	**89%**	**96%**	**92.5%**
The role of Sharia faculties in the internationalization of Islamic banking.	**88%**	**96%**	**92%**
The role of universities in reinforcing coexistence and common denominators between different religions' followers and civilizations.	**88%**	**88%**	**88%**

Table 14. Research Priorities in the Juristic and Legal Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
The role of HE studies in the development of the judiciary body.	**%94**	**%98**	**%96**
The role of universities in preparing and training judges and public notaries.	**%91**	**%98**	**%94.5**
Legal responsibility of universities towards beneficiaries.	**91%**	**98%**	**94.5%**
Review and assessment of international educational and research agreements between local and international universities.	**91%**	**96%**	**93.5%**
Educational rights in contemporary societies.	**91%**	**93%**	**92%**
Legal mechanisms for implementation of judicial rulings in HE.	**89%**	**95%**	**92%**
Establishing legal and ethical rules for granting electronic university degrees.	**88%**	**95%**	**91.5%**
Enacting laws and regulations to regulate the relationship between the outputs of HE programs and the job market.	**86%**	**92%**	**89%**
Integrative role of the Shura Council and universities in the preparation of legislations.	**89%**	**88%**	**88.5%**
The role of faculties and higher institutes in establishing social awareness and systematic framing of independent judiciary parameters.	**88%**	**89%**	**88.5%**
The legal position of the participation of university students in terrorist acts.	**77%**	**77%**	**77%**

Table 15 shows experts' opinion on research priorities in the media field. In the first round, the researcher presented 12 priorities to the experts who agreed on their appropriateness with a percentage ranging from 86% to 99%. In the second round, the percentage ranged between 93% and 98%. The average agreement rate in both rounds was between 91% and 98.5%. It should be noted that experts' agreement rate was high in the first and second rounds.

Table 16 shows experts' opinion on ten research priorities in the touristic field. In the first round, the researcher presented ten priorities to the experts who agreed on their appropriateness with a percentage ranging from 84% to 95%. In the second round, the percentage was between 84% and 100%. The average agreement percentage in both rounds was between 87% and 97.5%. It should be noted that experts' agreement percentage was high in the second round; three priorities got 100% of experts' opinions.

Table 15. Research Priorities in the Media Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
Dimensions of the complementary relationship between media and HE.	**99%**	**98%**	**98.5%**
The role of media in addressing HE issues.	**95%**	**98%**	**96.5%**
The role of media and cultural institutions in reinforcing values among university students.	**95%**	**98%**	**96.5%**
The role of media and cultural institutions in spreading the culture of dialogue.	**95%**	**96%**	**95.5%**
The effectiveness of media and cultural institutions in protecting intellectual property rights in universities.	**92%**	**98%**	**95%**
The contribution of educational media and cultural channels in reinforcing national identity.	**92%**	**96%**	**94%**
The role of media in raising awareness among university students about heritage and local tourism.	**92%**	**96%**	**94%**
The relationship between active media channels and HE programs.	**92%**	**94%**	**93%**
Analyzing the local media discourse directed to university students.	**91%**	**95%**	**93%**
Academics stereotypes in various media.	**86%**	**96%**	**91%**

Table 16. Research Priorities in the Touristic Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
Developing the role, programs, and plans of the faculties of Tourism and Hotel Management.	**95%**	**100%**	**97.5%**
The role of HE in maintaining the identity of urban cities.	**92%**	**100%**	**96%**
The role of universities in spreading the culture of internal tourism.	**92%**	**100%**	**96%**
Trends among university students towards working in the fields of heritage and tourism.	**92%**	**98%**	**95%**
The role of faculties of Architecture and Planning in the rooting of national heritage.	**92%**	**96%**	**94%**
The role of educational tourism in internationalizing HE programs.	**91%**	**95%**	**93%**
The role of universities in the activation of personal museums.	**84%**	**89%**	**87%**
The role of faculties of Tourism and Archeology in highlighting and preserving monuments.		**88%**	
The role of universities in suggesting touristic programs in light of the society's needs.		**86%**	
The role of universities in the touristic planning of touristic cities.		**84%**	

Table 17 shows experts' opinion on research priorities in the linguistic field. In the first round, the researcher presented ten priorities to the experts who agreed on their appropriateness with a percentage ranging from 91% to 97%. In the second round, the percentage was between 89% and 100%. It should be noted that experts' agreement rate was high in the second round.

Table 18 shows the experts' opinion about research priorities in the technical field. In the first round, the researcher presented 11 priorities to the experts who agreed on their appropriateness with a percentage ranging from 91% to 95%. In the second round, the percentage was between 91% and 100%. The average agreement rate in both rounds was between 93.5% and 97.5%. It should be noted that experts' agreement rate was high in the first and second rounds.

Table 17. Research Priorities in the Linguistic Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
Problems of teaching foreign languages in HE programs.	**97%**	**100%**	**98.5%**
Problems of localization of foreign references related to HE programs.	**97%**	**98%**	**97.5%**
Developing Arabic language learning programs for foreigners.	**95%**	**100%**	**97.5%**
The role of language faculties in developing linguistic dictionaries in light of digital technology.	**95%**	**98%**	**96.5%**
Managing the development of Arabic content on the internet.	**94%**	**98%**	**96%**
The reality of employing foreign languages in HE programs.	**95%**	**96%**	**95.5%**
The role of Arabic Language faculties at the universities in contribution to civilization.	**91%**	**98%**	**94.5%**
The role of faculties of Languages in renewing the translations of the meanings of the Holy Quran.	**92%**	**95%**	**93.5%**
Practicing teaching and application of classical Arabic (Fus-ha) in universities.	**91%**	**96%**	**93.5%**
The role of reading in the scientific formation of HE program students.	**91%**	**96%**	**93.5%**
Translations of creative university staff – poetry and prose – and their biographies.	**91%**	**95%**	**93%**

Table 18. Research Priorities in the Technical Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
Technical competence of HE management systems.	**95%**	**100%**	**97.5%**
Applications of management information systems (MIS) in HE.	**95%**	**100%**	**97.5%**
Ways of activating virtual classrooms in HE programs.	**94%**	**100%**	**97%**
Electronic management of HE institutions.	**95%**	**98%**	**96.5%**
Technological innovation management in universities.	**95%**	**98%**	**96.5%**
Developing electronic portals in universities.	**94%**	**98%**	**96%**
Managing the electronic content for deanships of distance education and e-learning.	**94%**	**98%**	**96%**
Developing e-learning curriculums in HE programs.	**94%**	**98%**	**96%**
Employing technology in university education and training.	**94%**	**98%**	**96%**
Developing e-learning systems used in HE.	**93%**	**95%**	**94%**
Technical applications for university and HE programs.	**91%**	**96%**	**93.5%**

Table 19. Research Priorities in the Agricultural and Environmental Field

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
The role of universities in managing crises, and environmental and natural catastrophes.	**97%**	**100%**	**98%**
Innovative ways for improving agricultural investment in universities.	**94%**	**95%**	94.5%
Air pollution in university cities and its health and environmental risks.	**94%**	**93%**	**93.5%**
The role of universities in developing environmental awareness in the society.	**92%**	**100%**	**96%**
Environmental changes influencing the management of HE institutions.	**91%**	**98%**	**94.5%**
Environmental content in HE programs and ways of activating it.	**91%**	**98%**	**94.5%**
Developing irrigation management in university gardens.	**81%**	**91%**	**86%**

Table 20. Research Priorities in the Field of Health and Applied Sciences

Priorities	Experts' Agreement Rate in Both Rounds		Average Agreement Rate
	First	Second	
Development mechanisms of medical education in university education and HE.	**94**%	**100**%	**97**%
Health care for university and HE students.	**94**%	**100**%	**97**%
Competitive quality engineering standards related to university buildings.	**94**%	**100**%	**97**%
Psychological health and fitness of university staff.	**95**%	**98**%	**96.5**%
The inclusion of health education in academic plans of HE.	**94**%	**98**%	**96**%
Use of solar energy systems in university buildings.	**94**%	**98**%	**96**%
Mechanisms of developing university education and HE in applied sciences.	**95**%	**96**%	**95.5**%
Moral role of medical, scientific, and applied faculties.	**89**%	**96**%	**92.5**%

Table 19 shows experts' opinion on research priorities in the agricultural and environmental field. In the first round, the researcher presented seven priorities to the experts who agreed on their appropriateness with a percentage ranging from 81% to 97%. In the second round, the percentage was between 91% and 100%. The average agreement rate in both rounds was between 86% and 98%. It should be noted that experts' agreement rate was high in the first and second rounds.

Table 20 shows the experts' opinion about research priorities in the field of health and applied sciences. In the first round, the researcher presented eight priorities to the experts who agreed on their appropriateness with a percentage ranging from 89% to 94%. In the second round, the percentage was between 88% and 100%. The average agreement rate in both rounds was between 92.5% and 97%. It should be noted that experts' agreement rate was high in the first and second rounds.

3. Discussion

The findings of this study agree with some of the findings of previous studies, particularly Holbrook et al. (2000) [14], which concluded that research maps could be used in guiding educational researches in Australia. Al-Massouri et al. (2003) [6] presented a list of educational research priorities from the standpoint of leaders and educators in Yemen. They recommended the adoption of educational research as a fundamental element in all reformation, development, and modernization efforts, in addition to directing post-graduate study students to conduct research which is in accordance with the priorities revealed by this study.

The conclusions of the current study agree with the study conducted by Wright (2007) [20] which defined a list that included 19 research subjects in HE related to sustainable development in Canada. Moreover, it is accordance with the study conducted by Awad (2008) [8] which suggested a map for educational researches in the field of university education in Egypt until the year 2025 and with their search conducted by Ahmed (2009) [4] which concluded that there was no common policy between universities and their research centers to come up with comprehensive plans for educational research to serve its objectives and face its problems.

Al-Beheiry (2015) [5] proposed a research plan for educational research priorities in pedagogy, in light of the developmental requirements of Saudi HE issues. The conclusions and recommendations of Al-Beheiry's study emphasized the need for a specialized research map. Al-Nouh (2015) [7] also prepared a research map in pedagogy in Saudi universities and again highlighted the need for a specialized research map. The current study comes to reinforce these recommendations and to expand further on the research priorities and fields essential for the development of HE studies in KSA.

The Higher Council of Science and Technology (2010) [13] suggested planning a clear map for Jordanian researchers and exploring scientific researches and their future priorities in 14 scientific fields which coincides with the present research.

By comparing the current results with the modern trends in research priorities in foreign HE programs, it is clear that there is a great similarity between the suggested priorities in the current study and those modern trends. For example, Forbes stated that research priorities in HE studies in 2014 focus on cost, renewing and reforming HE laws, developing the workforce, HE efficiency, academic accreditation, performance evaluation, quality assurance, institutional performance evaluation systems, leadership, and HE economies (Ebersole, 2014) [10]. As for 2015, the priorities, according to Forbes, focused on the efficiency of HE systems, employment opportunities, skill measurement, the gap in the job market, technical efficiency of HE management systems, applications of management information systems in HE, and costs (Ebersole, 2015) [11].

4. Conclusions

The conclusions of this study are positive to a great extent with regards to strength points and improvement opportunities in the current and prospective research reality

of HE studies in KSA. The most important ones can be summarized as follows:

The experts highly agreed on the research reality in HE studies in KSA in terms of points of strength; the overall average of all strength points were 2.30 out of 3.

The experts highly agreed on the research reality in HE studies in KSA in terms of improvement opportunities; the overall average of all strength points was2.65 out of 3.

The results of the fields of the research map of current and prospective research priorities in HE studies in KSA were limited to 13 fields: educational, managerial, social, cultural, economic, political and security, Sharia, juristic and legal, media, touristic, linguistic, technical, agricultural and environmental, and health and applied sciences.

The experts strongly agreed that the organization of the fields should be in accordance with the final number of priorities as follows: first, the managerial field with 31 priorities, then the educational field with 27 priorities, followed by the social and cultural field with 25 priorities, then the economic field and the juristic and legal field in the fourth rank with 17 priorities in each field, followed by the Sharia, linguistic, and technical fields in the fifth rank with 14 priorities in each field, followed by the political and security, media, health and applied sciences fields in the sixth rank with 12 priorities in each field, then the agricultural and environmental field in the seventh rank with 11 priorities, and finally the touristic field with ten priorities.

The experts strongly agreed on 216 priorities in 13 fields of HE studies, thus forming a research map of present and future research priorities in HE studies in KSA.

5. Recommendations

Based on the above results and conclusions, the following recommendations can be given:

Adopting the research map of research priorities in HE studies in KSA by universities, research institutions and centers, scientific departments, researchers, and specialists, and making it a reference and starting point for their specialized researches and scientific theses.

Continuous diagnosis of the research reality in HE studies in light of regulated scientific criteria.

The importance of highlighting the vision of scientific research philosophy in HE studies in KSA.

The importance of directing scientific research towards issues that serve the society.

Continuous updating of the research fields in HE studies in light of various developments.

Establishing a legal and legislative structure in HE to protect intellectual property.

The necessity of developing investment fields in HE studies in KSA, and working on opening new research horizons for specialized researchers in this field.

Increasing the financial support provided to scientific research in KSA, though it received high agreement among the strength points of research reality in HE studies.

Acknowledgements

The author would like to thank all those who facilitated this research, in particular the King Saud Chair for Higher Studies, KSA for providing the funding necessary to carry out this study.

REFERENCES

[1] Abdullah, A. & Al-Aidrous, A. (2001*). Maximizing the Benefits of HE Studies' Outputs in Serving Cognitive Development Issues*. HD studies seminar in Saudi universities: Future Trends, King Abdulaziz University, Jeddah.

[2] AFAQ, Ministry of Education. (2016). http://aafaq.mohe.gov.sa

[3] Aghwan, A. (2011). *Future Studies: Urgent Need or Intellectual Luxury?* Nashiri Electronic Publishing House.

[4] Ahmed, W. (2009). *Designing an Educational Research Map to Face some of the Problems of the Educational Reality in Dakahlia Governorate* (Unpublished Master thesis). Mansoura University, Egypt.

[5] Al-Beheiry, M. (2015). *Research Priorities in Educational Pedagogy in Light of the Requirements of Development of HE Issues from the Perspective of Educational Specialists: presenting a proposal for a research map* (unpublished Master thesis). Al-Imam Muhammad Ibn Saud Islamic University, KSA.

[6] Al-Massouri, M. et al. (2003). *Educational Research Priorities from the Standpoint of Educational Leaders in the Republic of Yemen*. Center for Educational Research and Development, educational studies and research series. Sanaa, Yemen.

[7] Al-Nouh, M. (2015). *Proposed research map for Pedagogy researches in Saudi universities*. Modern Education Association Magazine, 7(22), 215-271.

[8] Awad, A. (2008). *Proposed map for pedagogic research in university education field until 2015* (unpublished Ph.D. thesis). Al-Azhar University, Cairo.

[9] Bakr, B. (1996). *Scientific Research and its Economic Returns*. Arab Gulf Mission, 59(7), 97-114.

[10] Ebersole, J. (2014, January 13). *Top Issues Facing Higher Education in 2014*. Retrieved December 16, 2015, from http://www.forbes.com/sites/johnebersole/2014/01/13/top-issues-facing-higher-education-in-2014/

[11] Ebersole, J. (2105, January 6). *Higher Education Issues: 15 for '15*. Retrieved December 15, 2015, from http://www.forbes.com/sites/johnebersole/2015/01/06/higher-education-issues-15-for-15/#106200ac6159

[12] Hadad, A. (1998). *Problems of Educational Research in some Arab Countries: Recommendations and Remedial Suggestions.* Conference: Educational Research in the Arab World, Where to, Oman.

[13] Higher Council of Science and Technology, (2010). *Scientific Research Priorities in the Hashemite Kingdom of Jordan for*

the years 2011 – 2020. Amman, Jordan.

[14] Holbrook, J. et al. (2000). *Mapping Educational Research and Exploring Research Impact*. A Holistic, Multi-Method Approach Presented at the Annual Conference of the American Educational Research Association, New Orleans.

[15] Ministry of HE. (2013). *The Reality of Expenditure on Scientific Research and Development in KSA for the fiscal year 2013*. Planning and Information Agency.

[16] Mortaja, Z. (2013). *Scientific Research priorities in Open Education from the Standpoint of Faculty Members at the Faculty of Education of Al-Quds Open University*. International Conference: Open HE in the Arab World: Challenges and Opportunities. Al-Quds Open University, Rammallah.

[17] Mustafa, J. & Mahjoub E. (2015). *Proposed research map for Human Rights researches.* A scientific research financed by Chair of Abdul-Rahman Al-Jeraisy for Human Rights Studies. Al-Imam Muhammad Ibn Saud Islamic University.

[18] Obeidat, Z. et al. (1993). *Scientific Research: Concept – Tools – Methods*. Dar Al-Fekr for Publishing and Distribution, Amman, Jordan.

[19] Sultan, M. (1995). *Scientific Research Trends in the Field of University Education*. Second National Conference: University Performance: Efficiency, Effectiveness, and Future.

[20] Wright, T. (2007). *Developing Research Priorities with a Cohort of HE for Sustainability Experts*. International Journal of Sustainability in HE. 8(1), 34-43.