

## Methodology

Since the study covers all health specialties and programs, the representation of all specialties of those with expertise, competency and high qualifications was considered in choosing the members of the steering study team. The steering team set the study plan and the timetable for its completion. Due to the branching of the study, 6 subsidiary teams were formed, where one distinct function representing one of the study tracks was assigned to each of these teams. It was also considered in forming each subsidiary team the representation of various health specialties<sup>1</sup>. The following is an account of the subsidiary teams:

1. A team for collecting data, needed statistics and retrieval of literature and scientific journal articles related to health education.
2. A team for formulating the vision, mission statement, values and the general goals of undergraduate health education in the Kingdom of Saudi Arabia.
3. A team for studying the appropriateness of undergraduate health education outcomes in terms of numbers and specialties to job market demands and development plans.
4. A team for suggesting general frameworks for study plans in accordance with job market demands and development plans.
5. A team for reviewing health education trends in developed countries and consequently, determining special trends for the Kingdom of Saudi Arabia in accordance with job market and developmental inclinations and demands.

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<sup>1</sup> To see the names and specialties of the **Steering Study Team** and the **Subsidiary Teams**, refer to the "Study Team" section at the end of this report.

6. A team for the preparation of final report, extraction of results and practical recommendations, and underlining the possible strategic choices for major issues related to health education.

The study teams has adopted a multitude of methodologies which were chosen based on the theme of the study. The ability of these methodologies to achieve the set objectives and arriving at sound and applicable conclusions was considered. Also, more than one research methodology was utilized for each track trying to obtain more reliable information and accurate conclusions. The utilized methodologies are summarized as follows:

### **1. Retrieval of literature, journal articles, data and official statistics:**

The subsidiary team assigned to this task retrieved the scientific articles published in refereed local and international journals between 1990 and 2006 with the exception of few and rare articles published prior to these dates which were considered important to be added to serve the objectives of the study. A number of used keywords and search are shown in table (I-1).

Table (I-1): Some Keywords and Search Terms used in Literature Retrieval.

Strategic Planning of Health Profession Education	Successful professional health Education
Healthcare Planning	Feasibility Study of Health Education
Values; vision, missions, objectives and goals of health profession education	Future Health Education
Standards	Future or New Trends
Health Administration	E-learning
Problem Solving	Problem Based Learning PBL
Profession Continuing Education	Evidence Based Education
Good Medical Education Practice	Good pharmacy education practice
Good Dental Education Practice	Good Education Practice
Outcomes	Curriculum
Evidence-Based Medicine	Accessibility
Mobile Technologies	Barriers
Online Learning	Distance Learning
Teaching	Continuous Education Programs

Videoconferencing and Chat	Interdisciplinary Education
Interprofessional Education	Ethics of Health Professional Education
Skills of Health Professional Educator	National Standards for Health Professions
Educational Accreditation	Policies of Health Professional Education
Information Technology and Informatics	Multidisciplinary Health Professional Education
Commissions, Committees, Task force Reports	Innovations
New Technologies	Database (To include invisible web )
Cost Containment	Enrollment and Admission
Future Health Professions Educational Modules	Sustainable Development
Restructuring and Reform	Projection of health professional education
Curriculum Transformation	Experiential Education
Assessment, Evaluation and Testing	Basic Science Years
Accountability	Best Evidence-based Assessment (BEBA).
Bedside Teaching	Case Management
Best Evidence Medical Education (BEME).	Chart Stimulated Recall Oral Examination (CSR).
Cost Containment	Certification

The use of many of the search engines and educational sites was extensively expanded including the web sites of colleges of medicine, pharmacy, dentistry, nursing and all the specialties of applied medical sciences in the United States, Europe, Asia, and the Middle East. In addition, the web sites of scientific societies and medical and pharmaceutical professional associations were also searched. The subscription databases in Prince Salman Library at King Saud University, some newspapers, magazines, books and governmental publications were also utilized in literature retrieval efforts. Table (I-2) shows some of these resources.

Table (I-2): Some of the search engines and information resources used in literature retrieval.

Cochrane Library	Professional Societies and Associations (National and International)
MEDLINE	NIH
WHO	CDC
World Federation for Medical Education	World Bank
ACPE (American Council of Pharmacy Education)	American Association of Colleges of Pharmacy
Professional Councils	American Health Information Management Association
Blackwell	OVID database
Science Direct	Ovid Collection
Alkhazindar	Journal of Medical Education

Journal of Pharmacy Education	Journal of Dental Education
Gallelio	Answers.com
Pubmed	PubMed Central
Google	

A considerable number of local and international official data and statistics were collected for the last five years through the information provided by the authorities related to health education such as Ministry of Higher Education, Ministry of health, Ministry of Economy and Planning, the Saudi Council of Health Specialties and other governmental agencies. Many of the related institutions were contacted to update the published information or to get the unpublished information.

Following the completion of collecting the relevant literature, careful selection of the eligible literature for inclusion in the study was made based on specified criteria. The literature were classified according to various health specialties which added up to 981 reference, where 905 were in electronic format and 76 in hardcopy format. These were classified as 36 reference related to admission, 130 for dentistry, 252 for medicine, 282 for pharmacy, 150 for nursing and 299 for applied medical sciences.

The subsidiary teams were periodically supplied with the collected literature and references depending on the track each team is researching. Due to the ease of use of electronic format, most of the selected references were converted to the portable data format (pdf), individually archived and compiled in one menu-driven compact disk (CD) that can be read using any available browsing software. Each file can be opened in a new window to facilitate returning to the main menu, and these menus were hierarchically arranged and the pages were logically linked.

## **2. Seeking the help of Experts:**

Since the tasks pertaining to the study are vitally important, the study team sought the help of a group of local experts and consultants who represent various institutions and governmental and public sectors related to health education. The way in which these experts and consultants contributed to the study varied depending on the theme of the study, where some experts have participated in symposia and workshops. Also, some of them were contracted to research certain subjects within the area of their expertise, whereas others were recruited to review the draft of this report<sup>2</sup>.

## **3. Symposia and Workshops:**

Flexibility was entertained by the study team during the conduction of symposia and workshops, and consequently, they were able to probe the dimensions of the subject under study and benefit from the expertise and candid opinions of specialists and interested parties. Furthermore, the geographical distribution inside the kingdom and guaranteeing the greatest share of participation by the target audience were considered. One of the most important workshops held was a workshop to discuss the preliminary results of the subsidiary teams, in the presence of members of all teams, and the main workshop of the current situation and future of health education in the kingdom was held under the auspices of His Excellency the Minister of Higher Education. It was also attended by a number of deans of health colleges and elite of experts and consultants relevant to the study.

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<sup>2</sup> To see a list of experts and consultants whom their help was sought in this project, refer to "Study Team" section at the end of this report.

#### **4. Brainstorming Sessions:**

These sessions constituted a source of intellectual enrichment for the study through the invitation of interested audience and benefiting from their raw ideas and thoughts. The brainstorming sessions laid the foundation toward a more specific and accurate methodology in dealing with certain some parts of the study tracks that arose during these sessions. The choice of appropriate time and location for these sessions was carefully considered for a productive outcome. The sessions were professionally moderated through the effective contribution of all invitees, in addition to the objective and accurate documentation of these sessions to benefit from all shared thoughts.

#### **5. Visits and Interviews:**

The study teams conducted field visits and face-to-face interviews with individuals or groups to reach certain audience in the health sector in order to envisage a more accurate perspective of all project aspects. The most important visits were visits to King Abdulaziz University in Jeddah, King Faisal University in Dammam and King Khalid University in Abha for meeting with focus groups of staff and students of health colleges.

#### **6. Field Studies:**

The team dubbed "Suggestion of General Frameworks for Study Plans" conducted two survey studies, namely, the study of educational environment of health colleges at King Saud University, and the study of patients' opinions about the performance and characteristics of the health practitioners.