## (83) Systemic relationship between scientific research and industry is reflected on the educational culture to build sustainable development in Saudi Arabia.

## Hassan A. H. Albar

King Abdulaziz University, Chem. Dept., POBOX 80203, Jeddah21589. Saudi Arabai, <u>Halbar@kau.edu.sa</u>, Kau.edu.sa/halbar

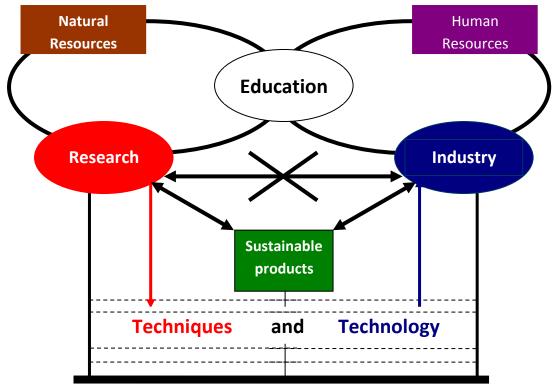
We must all work to improve strategies for scientific research to develop pluralistic sustainable industries and quality products. Where the principles of sustainable development preferably consistent with the systemic link between scientific research and industry, to promote educational culture that can: (1) produces specialized human resources scientifically and technically and technologically, (2) looking for the natural resources that serve the scientific research and industry alike.

We note that the path of scientific research is parallel to the path of the industry in two parallel lines do not meet. , But between the two paths several bridges because both depend on the other. These bridges include the following:

(1) how to transfer the achievements of scientific research to develop the industry.

- (2) Industry permanent requirement for scientific research.
- (3) the use of international expertise.
- (4) Facilities moral, administrative and financial.
- (5) educate the community sense of culture and the culture of industrial research.

To obtain the achievements of these bridges, when the system is strengthening bridges for the promotion of culture of education as the following:



(1) morality of society which is reflected on the outputs of ethics education.

(2) understand intellectually cosmic phenomena.

(3) introduce the concepts of perception and assimilation in the conservation and understanding and application.

(4) understand the concept of scientific research based on the skills of intellectual ability and capacity.

(5) continuous improvement of the technical aspects and technology in teaching and learning system.

(6) industrial applications based on local natural resources.

(7) introducing the concepts of globalization positive and total quality management and sustainable development in the systemic approach of learning and teaching [SALT].

A "systemic culture of education " without the ethics of the profession sporting the system will not get continuous improvement of the life sustainable. Finally, during the symposium will highlight the main entrance systemic concepts affecting both the "culture of globalized education" and "sustainable development" in view of the challenges of globalized and international changes.

## **References:**

[1] Performing laboratory experiments for the Curriculum of Principles of Organic Chemistry, using the technology of green microscale chemistry in the Kingdom of Saudi Arabia, Olaa Abu Ali1, Taghreed Al-Sufiany2, Hanadi Medras3, Hassan A. Albar4, Malaysia, 23-25 August 2007.

[2] "Green Technology for Collaboration Programs" First Phase Examination of Saudi Herbal Medicinal Formulation for Both Inflammatory (Acne and Abscesses), IBC's 12th Annual World Congress "Drug Discovery & Development of Innovative Therapeutics World Congress", World Trade Center / Seaport Hotel, 6-9 July 2007

[3] "Green Technology for Collaboration Programs" Strategy of Industry Collaboration between Saudi Arabia and Chinese Companies in producing drug, Cosmetic & Cleaners in Kingdom of Saudi Arabia, IBC's 12th Annual World Congress "Drug Discovery & Development of Innovative Therapeutics", Grand Hyatt Hotel, Shanghai, China, June 04-06, 2007.

[4] "Green Research Programs" Phytochemical composition of Plectranthus tenuiflorus, Euryops arabicus and Clutia myricoide extracts and study some of its medical applications, Tagreed Alsufyani1, Faten Korshid3, Asif fatani2, Suad Shaker3, Hassan albar1, 3rd International Conference of Pharmaceutical and Drug Industries Division, Cairo, Egypt, March 8-6, 2007.

[5] EXTENSIVE ASSESSMENT OF INDIVIDUAL EXPERIMENTS IN A SYSTEMIC APPLICATION OF GREEN CHEMISTRY VERSUS THEORETICAL SYSTEMS IN SAUDI ARABIA, Hassan A. H. Al Bar, Amirah S. Al-Attas, Maisaa M. Al-Rawi and Ali M. Hadi, 19th International conference on Chemical Education 'Chemistry Education for Modern World', (The foundations of Chemistry), Sookmyung University in Seoul, Korea August 12-17 (2006).

[6] THE SYSTEMATIC RELATIONSHIP PRACTICE (1) MEMORIZATION (2) UNDERST-ANDING AND (3) BOTH MEMORIZATION AND UNDERSTANDING, ONE OF THE SUSTAINABLE BASES OF NATIONAL DEVELOPMENT, Maisaa Mohmed Al-Rawi and Hassan Abdulkader Al Bar, 19th International conference on Chemical Education 'Chemistry Education for Modern World', (The foundations of Chemistry), Sookmyung University in Seoul, Korea August 12-17 (2006).

[7] SYSTEMIC STRATEGY OF DEVELOPING THE SKILLS OF STUDENT IS REFLECTED ON THE SUSTAINABLE DEVELOPMENT OF LEARNING OUTPUTS, Hassan Abdulkader H. Al Bar and Maisaa Mohmed Al-Rawi, 19th International conference on Chemical Education 'Chemistry Education for Modern World', (The foundations of Chemistry), Sookmyung University in Seoul, Korea August 12-17 (2006).

[8] "Systemic approach in Teaching and learning General Chemistry (SATLC) in First Year of Secondary Schools", Albar H.A. and Fahmy A.F.M., (The foundations of Chemistry), 18th International conference on Chemical Education 'Chemistry Education for Modern World', August 3-8, 2004 Istanbul, Turkey, Organized by Turkish Chemical Soc., and IUPAC.

[9] "systemic Approach in Organic Chemistry" Part One. Albar H.A., Khalaf A.A. and Fahmy A.F.M.; Frontiers of chemical Sciences: Research and Education in the Middle East, Organized by RS.C and IUPAC Program, Malta, 2003.