

Industry-Institute views on collaboration and its effect on performance of Professional Education in the Kingdom of Saudi Arabia

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Abstract

It is evident that the value of professional education to individuals, organizations and society is enormous. Professional education directly influences the effectiveness of organizations in ways beyond the critical role which graduates play by leading and participating in organizations. In Saudi Arabia, education sector is at boom. According to 2013 budget report (SAMA), 33% revenue has been spent on education sector and it is growing every year. However (according to IMF) it is really shocking to know that the unemployment rate in Saudi Arabia is still around 10%.

In the recent past, Industry-Institute collaboration has become important enablers of economic development. Unfortunately, in Saudi Arabia, there are hardly any structured collaborative programs. Though the end products of the institutions are absorbed by the industries by way of on-campus or off-campus placements, the necessary support schemes to the institutions are not being extended by the industry. The result is poor performance of students in their placement efforts and in industries.

The objective of this research is to determine the opportunity and challenges for industry-institute collaboration for better performance of professional education in Saudi Arabia. The research will involve a literature review and an empirical study. A quantitative approach with regard to the method of research shall be applied. An ex-post facto (non-experimental) research shall be undertaken by using a questionnaire as research instrument to collect the data from different company managers in industry and professional teachers from academia in Saudi Arabia. The research shall help to determine the views of industry- institute professionals on collaboration. The research shall also suggest some guidelines for better industry-institute collaboration in Saudi Arabia, especially in curricula design, implementation and evaluation.

Keywords: *Industry-Institute collaboration, professional education, collaborative education, curriculum, curriculum development, etc.*

1. Introduction

It is essential to understand the basic link between business, the environment and society in the present competitive world. The roles and responsibilities of business as a global force are becoming more urgent and complex. Globalization has given professional education an increasingly important role in the success of individuals and organizations. Professional education has spread in the last ten years in Saudi Arabia. For the year 2012, total expenditure is budgeted at SR690 billion. As in previous years, education and training have received the largest share, at 24 percent of total spending or \$44.1 billion (SR165 billion). We all know Saudi economy is an oil based economy. But, for last few years, the contribution of oil export in total revenue is reducing and the contribution of other industries is increasing. The other industries include hotels, communication, infrastructure, healthcare, transport, etc. As it is a developing economy, many such industries are attracted towards it and are doing exceptionally good. These industries demand highly skilled professionals in diversified fields.

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According to the available literature, it is observed that there is a mismatch in the expectations of labor

market and the outcome of professional education. It is the responsibility of educational institution to ensure that the student graduating must possess the employability skills as required by the labor market. For this, there is a need to encourage industry-institute collaboration and to make them equally accountable for the performance of professional education in Saudi Arabia.

2. Literature Review

Education is normally the acquiring of knowledge as well as the skills that are accepted by a given society. On the other hand, nation-building is the implementation of processes that are geared towards recomposing the nation's institutions so that they can reflect the wishes, needs and aspirations of the wider society.

A nation cannot be built without education. With education, professionals are nurtured that will enhance nation-building. In the same way, education leads to efficient usage of a nation's resources which in turn is very crucial to nation-building because without efficient usage of a nation's resources, nation-building will not be successful. This is evident in the developed nations. To continue to build their nations, they educate their citizens, because education shapes the attitudes and behaviors and values of citizens. These are qualities that are needed for nation-building and it is only education that will bring those mechanics.[1]

Professional courses are the education or curriculum designed, keeping in mind the need of a particular industry, courses like this are very focused and future oriented. Professional courses have gained importance in the recent years, with the graph going high for job opportunities in the respective sectors. A professional course helps students to get trained and aware of the latest trends in the market and the respective work environments. These courses can be in the form of degree or diploma certificates depending upon their curriculum and the time period.[6]

A 2005 report by Access Economics on the study of "The Economic Benefit of Increased Participation in Education and Training" in Australia concluded that

increasing the participation rate in education increased productivity, wage rates and rate of participation in better paid jobs. The result being an increase in GDP by 1.1% in a generation by increasing participation by about ten percent.[8]

In a speech in 2004, Alan Greenspan, Chairman of the Federal Reserve Board of the USA, commented on the impact of the state of knowledge and skill of a population as an important factor in determining the level of economic growth. "Generic capabilities in mathematics, writing, and verbal skills are key to the ability to learn and to apply new skills and thus to earn higher real wages over time, he said.[9]

Education clearly is a driver of better productivity giving rise to a higher competitive ability and hence more jobs and higher economic growth rates which enables more money to be invested in, for instance, better education. It is a virtuous circle.

The success of Higher Technical Education in developed countries like the US, Canada, UK and others can be attributed to the close collaboration between citadels of learning and industry. This opens up many avenues and it is a win, win situation for the good of both and the country too.

Every year millions of technical and professional graduate and Post graduate students are coming out of the portals of learning. On every such student, parents, governments, institutions are investing huge amount in terms of fees, books, transport, food, lodging, maintenance, coaching etc. The parents have a lot of expectations from their wards. The companies that give jobs to the graduate and Post graduate technical and professional students grumble about the quality and standards of these job seekers. They feel that they are not useful to the industry and cannot be put to a job immediately. Such selected graduates are subjected to in-house training as the industry feels that these fresher are not properly equipped necessary skills during their years of study.

The industries absorbing these graduates should extend a helping hand to these institutions to upgrade the quality of education. There is a feeling that industries are doing very little to these institutions in this direction. They can help the institutions in

updating the syllabi, providing practical experience to final year students by way of mini and major projects, industrial visits, giving guest lectures, providing an insight on the latest trends and their expectations, instituting Endowment chairs / awards / rewards in the institutions.[13]

2.1 Industry-Institute Collaboration

Cooperative education has existed in the US for most of the 20th century as a method of combining academic education with practical work experience. While at Lehigh University, Dr. Herman Schneider an engineer, architect, and educator, concluded that the traditional classroom was insufficient for technical students. Schneider observed that several of the more successful Lehigh graduates had worked to earn money prior to graduation. Gathering data through interviews of employers and graduates, he devised the framework for cooperative education in 1901. In 1903 he began working at the University of Cincinnati and in 1906 was allowed to implement his plan for one year. Following that experimental year, the University of Cincinnati 16 gave him full permission for the cooperative program. In 1911 an experimental high school program was established in York, Pennsylvania. Boston High School in 1912 established the first retail cooperative training program. Cooperative education programs were established in ten New York City schools in 1915, and cooperative instruction was established in Dayton Cooperative High School in 1949.[10]

Definition

A number of definitions have been suggested in the literature for the term ‘cooperative education’. The Canadian Association for Cooperative Education defines cooperative education as “*a program that formally integrates a student’s academic studies with work experience with participating employers*”. This definition is further elaborated to include programs which are based on either work experience alternating with academic studies or internship programs which are based on a single work experience.

The National Commission for Cooperative Education defines cooperative education as “*a structured*

educational strategy integrating classroom studies with learning through productive work experiences in a field related to a student’s academic or career goals.”[5]

Considering the above mentioned literature following **research objectives** were set:

1. To find out the views of industry-institute on current professional education system in Saudi Arabia
2. To define the role and responsibilities of industry-institute collaboration in professional curriculum development
3. To find out the challenges in such industry-institute collaboration in Saudi Arabia

3. Research Methodology

A comprehensive literature study was performed to find the relevance of the stated research questions. The literature study was performed to identify areas to be investigated in the target and study populations. An ex-post-facto (non-experimental) research was undertaken in the field of professional education.

3.1 Data Collection Tool: Questionnaire Method, Interview Techniques and document analysis were used.

The questionnaire consisted of Section A (Role of Industry-Institute in Curriculum Design), Section B (Barriers for Industry-Institute Collaboration) and Section C (Respondent Profile). The questionnaire was piloted and corrected, after which the questionnaires were distributed to and collected from respondents, mostly by email.

3.2 Survey Location: Kingdom of Saudi Arabia – divided into four provinces Riyadh, Dammam, Jeddha and the Rest as most of the universities and industries are located here.

3.3 Sample Size: 300 (Industry + Institute)

Summary: Out of 300 respondents, 188 filled it completely and send it back resulting in 63% response rate.

3.4 Statistical Analysis and Interpretation

Data collected from questionnaires was analyzed according to descriptive analytical statistics. Frequency analysis of biographical data was conducted. Tests on reliability (Cronbach Alpha) and validity (factor analysis) were done using STATA software and Ms-Excel 2010. D-values of Cohen [4] were used to indicate whether there were any significant differences between the responses of the study populations. The results were found to be within the range and were considered satisfactory.

3.4.1 Section D: Respondent Profile Analysis

Respondents profile was collected from industry experts and heads of academic departments of professional education institutions with regard to their job profile, gender, education level, experience and type of organization.

The majorities of the respondents were either from government or public sector, predominantly male, held the position at middle level manager and had ten or more years of work experience. The majority of the respondents were from industry having degree or

Analysis & Interpretation:

master and from institute having doctorate or master as their highest qualification.

The similarity of the profiles of the two groups is noted with interest. Males dominate industry and institutions in the posts described. This was because females were not very keen to work outside in Saudi Arabia. The level of qualifications in higher education institutions is much higher than those in industry, probably since it is a requirement in institutions as compared to industry.

3.4.2 Aim: To define the role and responsibilities of industry-institute in professional curriculum development

Tool for Data Collection: Questionnaire Technique & Interview Technique.

Respondents were asked to reflect on their views on a 5-point Likert scale, with the range 1: Not at All; 2: No; 3: Can't Say 4: Yes; and 5: Definitely Yes. Respondents were asked questions to collect their viewpoint on their role in curriculum design to improve the performance of professional education.

Section A: Role of Industry-Institute in Curriculum design

Questions	Industry Response		Academia Response		D Value
	Mean(X)	Standard Deviation	Mean(Y)	Standard Deviation	
Industry should support the faculties for research & development and help them in technology deployment.	4.375	0.744023809	4.416667	0.668557923	0.06
The existing teaching methodology is sufficient to train quality graduates.	3	0.9258201	3.166667	0.937436867	0.18
There is a gap in requirement definition and requirement mapping in curriculum design.	3.875	0.353553391	4	0.603022689	0.21
Industry experts can help bringing creativity and innovation in teaching.	4.125	0.353553391	4.333333	0.887625365	0.23
Cooperative education can help to enforce the required skills among the students.	4.25	0.46291005	4.083333	0.514928651	0.32
Industries can help institutes in infrastructure improvement.	3.75	0.46291005	4	0.738548946	0.34

Industry can play an important role in need assessment.	4.125	0.83452296	3.666667	0.492365964	0.55
Industry-institute experts should work together in curriculum designing.	4.75	0.46291005	4.333333	0.651338947	0.64
Cooperative education will be beneficial to my organization.	4.25	0.707106781	3.666667	0.778498944	0.75
Institute gives due importance to the needs of industry while planning a curriculum.	3.25	0.88640526	4	0.852802865	0.85

(Note: $d < 0.8$)

Conclusion

1. Both industry-institute either agrees or strongly agrees that collaboration can play a vital role in improving curriculum design
2. However, industry experts were not very clear that how they can get benefit from it.
3. They agree that there is a gap in the curriculum planning and deployment.
4. Both the stakeholders agree or strongly agree that the collaboration will help to bring innovation and creativity in curriculum and

5. Can help to improve the R&D work in institute.

3.4.3 Aim: To define the challenges in industry-institute collaboration

Tool for Data Collection: Questionnaire Technique & Interview Technique.

Respondents were asked to reflect on their views on a 5-point Likert scale, with the range 1: *Strongly Disagree*; 2: *Disagree*; 3: *Neutral* 4: *Agree*; and 5: *Strongly Agree*. The questions were focusing on the barriers for the industry-institute collaboration.

Section B: Barriers for Industry-Institute Collaboration

Questions	Industry		Academia		D Value
	Mean(X)	Standard Deviation	Mean(Y)	Standard Deviation	
The selection of representatives is based only on experience, most of the representatives are either retired or on the verge of retirement.	3.375	0.744023809	3.5	0.904534034	0.14
There is a lack of trust between industry and institute.	3.75	0.707106781	3.583333	0.99620492	0.17
There is no direct monetary benefit to the industry, so they don't take it seriously.	3.125	0.991031209	3.583333	0.792961461	0.46
The work approach of the curriculum design committee is unprofessional and lacks commitment.	3.375	0.744023809	3.75	0.753778361	0.50

There is a lack of balance in the number of industry-institute representatives.	3.25	0.88640526	3.833333	0.577350269	0.66
The institute representatives normally oppose any major change in the curriculum as that will force them to upgrade themselves.	3.625	0.916125381	4.25	0.621581561	0.68
In most of the institutes, curriculum design and implementation takes lot of time.	3.625	0.51754917	4.083333	0.514928651	0.89

($d < 0.8$)

Conclusion:

1. The mean score of both the group in response to most of the questions were around 3-4 which implies that some respondent were not sure about it and the rest agrees to it.
2. While observing the responses for reluctance of faculty members for any major change, both groups agree to it.
3. Both the group agrees that curriculum design takes lot of time for implementation.

4. Findings and Conclusion

The performance of professional education plays an important role in the economy of any developing country. As discussed in literature review, one of the major reasons for unemployment in Saudi Arabia is the poor performance of education system. The researcher successfully proposed industry-institute collaboration as a tool to improve the performance of professional education in Saudi Arabia. Both the groups- industry-institute agrees that collaboration will help to design such a curriculum which will help to generate industry ready professionals. Surprisingly, the institute professionals having more than ten years of experience and doctorate degree also agrees to the need of industry-institute collaboration.

It is observed that industry-institute collaboration is quite an old concept. But the implementation in Saudi Arabia is still not so encouraging. The researcher successfully finds out the different barriers for its

implementation. A further detailed research is required to address the benefits of industry and institute and it should be properly communicated to them. A guideline is proposed to have an effective curriculum for increasing employability:

- While designing curriculum, due important should be given on integrating employability skills.
- Curriculum design should be carried out in consultation with the industry experts.
- In the present era of globalization, periodic course verification must be done to ensure efficient integration of employability skills.
- Employability skills audit can be used to establish baseline criteria against which the inclusion of skills within curriculum areas can be assessed.
- Ensure efficient mapping of employability skills in the curriculum.

Professional Institutions need to take note of these findings, as they indicate how highly both industry and academics value cooperative education as a teaching methodology. They should use collaboration as a strategy to tackle the global problems of present and future.

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