A Study on Academic Output vs. Industrial Requirement

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Abstract

This paper studies the gap between academic output and industrial requirement in current scenario. It seeked to find out the relevancy of academic output (from higher academic institutions, named as Recent College Graduates-RCGs) to the industry and its underlying determinants. Reliability test and factor analysis was done with the help of SPSS 16.0 version. In the study 12 determinants were emerged (namely-soft skills, leadership qualities, suitability, analytical power, ethical component, dressing sense, language, appearance, manageability, training needs, industry's view and professional commitment) The results indicate the findings of the study.

Introduction

In context of the changing global economic environment there is a need to assess the relevancy of academic output from higher academic institutions to the industry specially the country like India. Every year approx 2.5 million graduates are being produced by the academic institutions and most of them are being absorbed by the industries at various cadres as rungs to channelize the wheel of our economy. These Recent College Graduates (RCGs) are provided basic training to tune up with the industrial climate.

The main purpose of this study is to analyse the be-fittingness of these RCGs to the industries and to assess the gap, if any and this gap can be filled by adopting the suitable measures by academics and industry both. How the academia should design its syllabi and pedagogy so that it can match with the current industrial requirements of this globe. To attain this target, a close collaboration between institutions and industry is very essential in order to minimize the obsolescence of academic output from the institutions.

Review of Literature

Rajsekaran and Rajasingh (2009) has concluded that the perception gap between industry and faculty must be bridged to improve the employability of students and enhance the quality of higher

education. Industry leaders presume that only 15% of people coming out of Indian colleges are employable.

Green defined the quality of higher education as "producing graduates to meet the human resources needs of an organization in the business, industrial and service sectors."

Winbladh (2004) has focussed on the requirement engineering that involves capturing, structuring, and accurately representing the client's requirements in a manner that can be effectively implemented in a system that will conform to the client's specifications. He also suggested project based & collaborative learning to upgrade the students. He concluded that new graduates are ill equipped to enter and survive a market with recessions because they do not exhibit the qualities the qualities that the industry treasures.

Hamatteh and Jufout (2003) concluded that a national level committee, comprising members from educational and industrial sectors be formed to match the demands and needs required by the labour market with the educational portfolio. This must be implemented by regular analysis, skill level determination, revision of the curriculums and finally to follow up and control, on the basis of individual specialization. This model may reduce the expenses of pre-employment training, which financially overburden the industrial sector & increases the proficiency level of graduates, leading to trust in the educational sector and enhance the economic growth.

Burell & Grizzell (2008) concluded that institutions must be responsive to demographic shifts that have occurred in higher education by engaging in ongoing strategic planning similar to that which is done in the business world.

Smith and Tamer (1984) said the historically, colleges and universities have been extremely slow in adopting to social change.

Montgomery and Porter (1991) found that academia traditionally has trailed business in its grasp of trends. It must be and remain aware of trends-not fads-in business so that it continues to be relevant in its "production" of graduates who will be seeking employment after finishing their degrees & leaving the institution.

McCroskey (2008) developed Leadership Practices Inventory (LPI) that resulted in a framework of five leadership practices: modelling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart.

Ghosh et al (2007) found that at present, there are several mechanisms operational in India, with 'Academia-Industry interaction,' as a fulcrum of technical education. He focussed that by involving the industries right from the stage of drafting syllabi to absorbing the trained students, they are allowed to shape the CORE into a highly productive Human Resource Centre. This also enables them to reduce the time required to orient a fresh graduate before s/he could be inducted into shop floor and to upgrade/ re-skill their existing employees at a very competitive cost.

Zahid (2008) concluded that higher education and industry linkages should remain alive for constant updating of courses. By creating the partnership between universities and industry, both can benefit from resources of each other.

Modi (2009) concluded that fresh graduates who join the industries, require six months to 2 years as gestation period to show their contribution and, many a time, they leave the organisation before they start showing results. This is due to the gap between theory and practice. The industry, R&D labs should become partners with the centres of higher learning.

Paliwal (2009) has focussed on coordination among the efforts of academia, industry and the government. He emphasized on instilling the traits which are expected by the prospective employers. Hannan (2003) recommended that faculty-student ratio should be close to 1:10, frequent revision of syllabus in consultation with the industry and institutions should create the professionals with global mind set so that they can adjust in different cultural & social settings.

Patel and Popker (1998) has emphasized on ensuring a common platform for industry and education institutions to work out value-based curriculum taking into consideration the needs of industry.

Kaur and Bhalla (2009) concluded that colleges ranked higher for three factors, such as teaching environment, research environment and educational material.

Podonly (2009) stated that the time has also come for business schools to develop codes of conduct for MBAs and to withdraw the degrees of those who break the manager's code.

SIEMEMSMA (1998) concluded that there is a great deal of conflict between what is being taught to the students and what they are going to do when they move outside.

Ramachandran et al (June 2009) stated that how can we expect the most poorly equipped teacher to deal with the most challenging of situations.

Objectives:

- To Design, develop and standardize a questionnaire to measure the gap between academic output and industrial requirement.
- To identify the underlying factors for gap between academic output and industrial requirement.
- To open new vistas for further research.

Research Methodology:

A sample of 100 persons from Indian Industries and academic institutions was chosen for study. Convenience sampling technique was used to complete the study. A self designed questionnaire with 5 point Likert scale was used, where '1' represents strongly disagree and '5' represents strongly agree to collect the data.

Upon contacting 100 persons via mail and personally, only 70 have responded with filled questionnaire. 09 questionnaires were rejected on technical ground and finally response of 61 respondents was subjected to analysis. Out of these 61 respondents, 31 were from academic institutions and 30 were from various domains of industries.

Tools for data analysis

- Reliability through Cronbach Alpha
- Factor Analysis using SPSS 16.0 version

Results & Discussions

Reliability:

For checking the reliability of questionnaire, cronbach Alpha was calculated. The reliability value was found to be 0.748 and we have deleted item number 04 then the value of Cronbach Alpha was 0.750. The reliability of more than 0.7 was considered good. The reliability of the questionnaire was found good.

Table: 1 **Reliability Statistics**

Cronbach's Alpha	N of Items
.750	31

Description of Factors

1. **Soft Skills**: This factor has emerged as a Ist important determinant of the research with total variance of 2.235 Major elements consisting this factor includes- RCGs possess good communication skills (0.726), RCGs are meeting with the soft skill criteria of the industry (0.684), industry correlate the soft skills of a new entrant with its performance (-0.665), and RCGs possess better soft skills (0.534).

2. **Leadership Qualities**: This factor has emerged as one of the most important factor contributing towards the study with total variance of 2.168. It is composed of several items such as industry is satisfied with the leadership qualities of RCGs (0.856), RCGs are able to coordinate with artificial and real brain (0.676) and RCGs possess effective leadership qualities (0.569)

3. **Suitability**: This factor has emerged as one of the most important factor contributing towards the study with total variance of 2.161. Major elements consisting this factor includes- Recent College Graduates (R.C.G.s) fulfils the industry Requirement (0.725), RCGs are suitable for the industry (0.682), RCGs possess high professional standards (0.568), Current academic output is technically competent (0.528) & RCGs are adaptable to the changing conditions of the Industry (0.463)

4. **Analytical Power**: This factor has emerged as one of the important factor contributing towards the study with total variance of 2.517. Major elements consisting this factor includes- RCGs take lesser time in analyzing the critical condition (0.847), RCGs possess strong analytical power (0.744) etc.

5. **Ethical Component**: This factor has emerged as one of the important factor contributing towards the study with total variance of 2.057. Key elements consisting this factor includes- Industry expects high ethical norms in the profession by RCGs (0.786) etc.

6. **Dressing Sense**: This factor has emerged as one of the important factor contributing towards the study with total variance of 1.970. The main elements consisting this factor includes RCGs possess better dressing sense (0.851) etc.

7. **Language**: This factor has emerged as one of the important factor contributing towards the study with total variance of 1.932. Major elements consisting this factor includes -Industry expects English as basic communication language from RCGs (0.822) etc

8. **Appearance**: This factor has emerged as one of the important factor contributing towards the study with total variance of 1.822. The main elements consisting this factor includes- Appearance of RCGs is affected by the locality of office premises (0.737)

9. **Manageability**: This factor has emerged as one of the important factor contributing towards the study with total variance of 1.814. The key elements consisting this factor includes- RCGs are easy to manage (767) and Industry expects docility in the RCGs (0.543)

10. **Training Needs**: This factor has emerged as one of the important factor contributing towards the study with total variance of 1.742. The major elements consisting this factor includes- RCGs are pre-nurtured with professional norms (0.405) etc.

11. **Industry's View**: This factor has emerged as one of the important factor contributing towards the study with total variance of 1.680. The key element consisting this factor includes- Industry is serious about appearance of RCGs (0.894)

12. **Professional Commitment**: This factor has emerged as one of the important factor contributing towards the study with total variance of 1.593. The major elements consisting this factor includes- RCGs are most likely to misuse the communication tools viz. cell phones, internet etc (0.861) and RCGs are committed to their profession (-0.505)

Table No. 02 : (attached as Annexure-A) P.T.O.

Conclusion:

Investigations revealed that there is ample gap between the academic output and industrial requirement. In the study, 12 factors (namely-soft skills, leadership qualities, suitability, analytical power, ethical component, dressing sense, language, appearance, manageability, training needs,

industry's view and professional commitment) have emerged. Out of the all factors, soft skills was found as the most important contributing factor.

The gap between academic output and industrial requirement must be bridged to improve the employability of the students and enhance the quality of higher education.

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ANNEXURE

Questionnaire

Sr. No. : _____ **Gender** : Male / Female **Name** : _____

Occupation/Address_____

PLEASE TICK (✓) THE FOLLOWING QUESTIONS USING GIVEN SCALE:			
(1)	SD	=	Strongly Disagree
(2)	D	=	Disagree
(3)	N	=	Neutral
(4)	A	=	Agree
(5)	SA	=	Strongly Agree

S. No.	Questions	1 SD	2 D	3 N	4 A	5 SA
1.	Recent College Graduates (R.C.G.s) fulfils the industry requirement					
2.	RCGs are adaptable to the changing conditions of the Industry					
3.	Current academic output is technically competent					
4.	New entrants in the industry needs lesser training					
5.	RCGs are suitable for the industry					
6.	RCGs are using ethics in their profession.					
7.	Industry expects high ethical norms in the profession by RCGs					
8.	RCGs are committed to their profession					
9.	RCGs possess high professional standards					
10.	RCGs are pre-nurtured with professional norms					
11.	RCGs possess strong analytical power					
12.	RCGs take lesser time in analyzing the critical condition					
S. No.	**Questions**	**1 SD**	**2 D**	**3 N**	**4 A**	**5 SA**
13.	RCGs are more dependent on the modern technology for analysis in their profession					
14.	RCGs are able to coordinate with artificial and real brain					
15.	RCGs needs lesser training for improving their soft skills					
16.	Industry correlate the soft skills of a new entrant with its performance					
17.	RCGs possess better soft skills					
18.	RCGs are meeting with the soft skill criteria of the Industry					
19.	RCGs possess effective leadership qualities					

20.	Industry is satisfied with the leadership qualities of RCGs					
21.	RCGs possess good communication skills					
22.	Industry expects English as basic communication language from RCGs					
23.	English communication skills of RCGs are affected with their regional language					
24.	RCGs are competent in handling the modern equipments for communication aid					
25.	RCGs are most likely to misuse the communication tools viz. cell phones, internet etc.					
26.	RCGs are easy to manage					
27.	Industry expects docility in the RCGs					
28.	RCGs possess better dressing sense					
29.	Industry is serious about appearance of RCGs					
30.	RCGs prefers trendy wears					
31.	Industry is satisfied with the appearance of RCGs					
32.	Appearance of RCGs is affected by the locality of office premises					

►◄►◄►◄