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CURRENT PRACTICES IN HIGHER EDUCATION INSTITUTES PAKISTAN AND GAP REDUCTION BETWEEN INDUSTRY AND ACADEMIA: A SYSTEMATIC LITERATURE REVIEW APPROACH

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ABSTRACT

This study investigates the current practices in higher education institutes and gap reduction between Industry and Academia. This study is based on literature review its objective is to review the current practices in higher education institutes and points out gaps. This reduced gap will balance demand and supply of graduates to industry and it has been practically observed that industry always complains for qualified graduates according to their expectations. Current practices in higher education institutes such as Internships, University based Incubation (UBI), Case study teaching and field trips. In this research paper systematic review approach of literature has been adopted for the conclusion of this study. All relevant studies published on this topic current practices and industry-academia from 1970 to 2014 was identified from database such as Google, Scopus and Web of science in various forms such as book, research articles, reports and websites. Based on results through literature review, current all studied practices can help to reduce gap between Industry and Academia. In previous studies researchers explored current studied practices individually. This research paper will help a triangle such as higher education institutes, industries and graduates for better mutual based relationship in future. This study can be extended in comparative analysis between developed and less developed countries.

Contribution/ Originality: This study is based on literature review its objective is to review the current practices in higher education institutes and points out gaps.

1. INTRODUCTION

1.1. Industry-University Partnership and Collaboration

Nowadays higher education is considering Industry-University linkage very important and significant of both levels institutional level as well national level. According to Esham (2008) such linkage cannot be ignored and that not only confirmed to the human development but also research and development, innovation and technology transfer also possible to great extent. Hill claims that past practices are not enough in today's competitive environment and major changes are required at university level (Hill, 2006). Another study (Schartinger, 2002) they also enforced that higher institutes must change basic academic structure in order to produce competitive graduates as per industry requirement. There are many ways to achieve this objective but industry-university

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collaboration can bring fruitful results in future. Bramwell and Wolfe (2008) they indicated that the universities are central actors in the knowledge based economy and this driver can leads to innovation and this only possible via industry-university long run partnership. The Industry-University partnership will enhanced the ability to ensure quality and most relevant research for competing globally (Liyanage and Mitchell, 1994).

In this partnership, universities can play two important roles. First, they produce knowledge which is directly can be applied to industrial production processes such as prototypes and new processes. Secondly, universities can input innovation in terms of human capital through teaching graduates who become the researcher or mobility of graduates to firms (Schartinger, 2002) etc. This Industry-University collaboration is important for many reasons such as shorter product life cycle, unexpected economic conditions, technological innovation and global competition.

Based on the above previous studies on importance of Industry-University partnership for long run cannot be underestimated. The academia and industry has producer-consumer relationship that has existed for long run between both sides. This type of relationship supposed to ensure producer satisfies the needs of consumer to a large extent in terms of better output (graduates). Furthermore, in this form of collaboration, a feedback loop is very important in which industry provide inputs to academia in regarding their perception and evaluation of their products. Both sides industry-academia are unable to develop a strong mutual relationship from past to till date due to lack of proper and suitable forums and platforms to facilitated each other.

In last two decades' business school have been growing rapidly than requirement of industry. There is huge list of universities and institutes which are engage producing graduate for the industry. One of success of these business institutes is demand of its graduates among industry. Therefore, for the sake of one best business school they should have to produce quality of MBA graduates for a dynamic industry.

1.2. Concept of Graduate Employability

Many scholars are agreed on that there is no one definition of employability. However, the definition of employability has been change with passage of time. Harvey (2003) he said that employability is more than developing attributes, experience and techniques which enable students to get a job and help them in their current career. He enforced less on employ and more on the ability.

Furthermore, the term key skills have been replaced with another term that is core skill in 1980s. Almost in the similar way (Jensen, 2008) criticized the concept of employability that it is matter of producing list of required skills which keenly needed by employer in the industry, particularly youth has been facing the problem of employment after having degree or formal education from higher institutes or universities due lack of job search experience, lack of mobility among students and a mismatch between education and employers' requirement.

To address the employability, gap the industry-academia partnership can play an important role which is based on learning. It has been practically observed that the students at institutes and universities are memorizing and reproducing knowledge rather than demonstrating in terms of applications what they have learned throughout the semester. As a results, many graduates lack market oriented skills which are related to practical work. This gap is more in various fields especially in Business, Commerce and Economics. For addressing the employability gap institutes and universities should have to revise their current practices with collaboration to industry.

2. METHODOLOGY

A systematic literature review enables answering based on objective of this study link between industry and academia through finding all published studies on related topic within specific boundaries. In this type of literature review secondary data has been collected and critical evaluated. Systematic literature review is different from traditional that it doesn't generalize the studied concepts. Therefore, it was necessary to evaluate current knowledge and collect that scattered studies for insights and guidance to policy makers. All relevant studies

published on this topic current practices and industry-academia from 1970 to 2015 was identified in various forms such as book, research articles, periodical reports and websites.

3. DISCUSSION

3.1. Internship Practice

The internship concept was started from US in the early 1900s century (Driscoll, 2006). According to Littke (2004) internships an "It is an integration between real work and world of the school". Research has shown a positive correlation relationship between an internship and career path in future.

3.1.1. Internship Proposal GAP

The number of students doesn't take keen interest in internships and they complete it with lower-quality learning (Bellotti, 2001). In the foreign country students develop an internship proposal in that proposal they will define entire planning of internship day wise and outcomes of it as well. But, in Pakistan this practice is hardly followed in Academia-Industry and internship proposal are not demanded by firms before final decision of candidate selection for internship.

3.1.2. Summers Internship Only GAP

It is a normal practice in higher education of Pakistan that the duration of internship is usually not more than one month and only final year students are encouraged in summers for it. According to Stasz and Brewer (1998) for students internship should be in the end of each year because in this way they will try to link school learning with work situation in better manner. In an internship of month student is not able to learn many things this time will be spent only in understanding the work.

3.1.3. Post-Internship GAP

The female students are taking more interest than male students in the internship programs (Haimson, 2001). Most of students after completion of internship, they don't write a proper report and no exit interview is being conducted by companies. Students face a lot of problems in searching for internships.

3.1.4. Higher Education Curriculum GAP

According to Birch (2010); Hurst and Good (2010); Gault et al. (2010) Companies always expect that students should learn practical knowledge, special skills for performance of job in effective manner but recently an expectation mismatch are reported. This gap has been highlighted by companies that there is gap between real work situation and curriculum followed by universities and colleges. There is huge communication gap between industry and universities.

3.1.5. Communication between Academia-Industry GAP

According to research conducted by Narayanan et al. (2010) the quality of internship is only possible when both the academia and industry ensure effective feedback per-internship and post-internship. But, in Pakistan less or no such practice has been developed in higher education institutes of Pakistan.

3.1.6. Students-Universities-Companies Objectives GAP

There are three groups involved in internship program such as students, universities/colleges and companies but it seems from last couple of years all three stakeholders have quite different objectives from internship and role is not well defined among all stakeholders. Author has not addressed any structure which may clear the goals and objectives of internship for all the stakeholders

3.1.7. Social Constructivist Theory GAP

According to social constructivist theory, it involves relationship between social interaction and active learning through practical experience (Vygotsky, 1978). Internship offers social learning environment to students during their internship but the language used in work situation is specific to industry and students unable to understanding that language. This is an obvious in classrooms we cannot teach our students industry language through recommended books for specific subjects.

3.1.8. Skill Acquisition Model GAP

According to research conducted (Dreyfus and Dreyfus, 2005) during the internship students move from beginner level to advance level in terms of both soft and hard skills. Students engage in practices during an internship which develop expertise among students and as a result skill formation. Another study conducted by (Hannon, 2000) the skill acquisition requires time, reflection and practice. There is gap in higher education institutes current practice an internship time is too short not more than 4 weeks to 6 weeks and students are not encouraged and support for practice into industry. Internship of four weeks is not sufficient for students for students to teach each everything.

3.2. University Based Incubators (UBIs)

According to LaFollette and Kuratko (1987) incubator can be defined as "a link for capital formation, technology transfer and technical know-how to enhance the development of new firms. University based incubator (UBIs), is also a type of incubator that are located at universities/institutes. There are two main objectives of UBIs first, to provide training to graduates for developing entrepreneur skills and meet with industry skills requirement and second, to create an opportunity for faculty members for conducting research and commercialize that research.

3.2.1. Lack of Government Support GAP

Universities are under pressure from government for economic development through transferring knowledge into ideas or practices. In for the success of UBIs government should have lent resources and support to universities for economic development (Grimaldi and Grandi, 2005). In Pakistan you hardly would find support from government in terms of resources for establishing UBIs centre in both public and private universities and that is the main reason UBIs number is very small. Very few universities/institutes have UBIs in their respective universities/institutes on self-support basis in Pakistan. Author has only emphasized on scarcity of resources it's not only about resource allocation it's about how money is utilised.

3.2.2. UBIs are Expensive for Small Firms & Individuals GAP

University based incubators are not affordable for both small businesses and individuals (Allen and McCluskey, 1990). As mentioned earlier, due to lack of funding to universities for UBI's universities establish UBIs on self-basis with higher education institutes charging heavy amount from small businesses and individuals, who wish to avail services of UBIs. University based incubators, usually provide two types of services to end-clients, university related services and incubation related services (Mian, 1996). University related services such as faculty consultation, students' employment, and workshop and equipment are provided with reasonable charges. In this way a strong link can be created between academia-industry. Author has only emphasized on lack of funding but funds can be generated through different means by providing services such as consultation and arranging workshops.

3.2.3. Faculty Perception GAP

According to Mian (1996) there are two main challenges have been observed in UBIs that first, most of faculty members are concerned on intellectual property rights on resources of UBIs and second, conflict of interest in terms of impact on tenure, teaching workload and work life balance. Top management of higher education institutes take corrective action to resolve these two concerns of faculty members through effective communication and offers of monetary benefits to faculty members for running UBIs. Faculty can be motivated by offering honorarium for research work and their teaching work load can be reduced by wavering of subjects.

3.2.4. Public-Private Universities Partnership GAP

In higher education institutes of Pakistan, there is lack of public-private universities/institutes partnership and Higher Education of Pakistan (HEC) is also not playing fair role in case of public universities and private universities. Private universities are not funded from HEC so, private university due to lack of sufficient resources are unable to develop & implement UBIs centre in their respective universities/institutes. Private universities earn a lot by charging high fees from students and they can generate revenue by their own.

3.3. Case Study Teaching in Higher Education Institutes

According to study conducted by Bromley (1990) a systemic investigation of real events measure that are relevance to real situation. The case study teaching is the one of method that create practical environment in the classrooms that helps to students to imagine the situation and to resolve this situation through provided piece of information.

3.3.1. Writing up Case Study Gap

Most of faculty members in higher education are limited with case studies which are present in recommended course textbooks (Denzin, 2000). Students usually are asked to read these case studies that textbooks and explain the possible solutions of assigned case studies in the classroom. But, it is an important to engage students in case writing skills, this will not only help them to improve their writing skills and conceptual skills but also local industry based situation can be understood. Case study based learning /approach provides experimental learning but the problem arises in validation of solutions as the solutions are ambiguous, the author has not addressed validation criterion.

3.3.2. Case Study Based Course in the Curriculum GAP

The curriculum committee encourage the induction of case study based course. In this course case studies should be taught to especially final year students in higher education (Scott, 2005). In higher education institutes there is a common practice detailed analysis and practical based courses such as strategic marketing, strategic management and strategic finance etc are taught to final year students of both programs Bachelor program and Master program. Author has emphasized the discourse analysis while discussing about the composition of case reports. Discourse analysis can be used to analyse different situations and subjects and can uncover the hidden details but it takes large amount of time and efforts secondly it focuses on language so it rarely revealed the whole story.

3.3.3. Critical Thinking Skills among Students GAP

The case-based learning (CBL) has one of prior requirement that students should have critical thinking skills for understanding and solving real case studies. Many students in higher education Institutes lacking the required critical thinking skills for visualize the case study situation and suggest possible solutions of studied case study

through conceptual skills. This behavior exists due to many reasons such as students' attitude towards learning, intensive use of social media and students' approach curriculum-real situation in industry gap (Kaddoura, 2011).

3.4. Field Trips in Higher Education Institutes

The field trip is the best way to enhance students learning experience that not only students develop certain concepts but also they connect these concepts in real work situation (Aggarwal, 2003). Field trips are planned in the higher education institutes in order to give a chance to students get out of classroom environment and relate the concepts with actual workplace situations. As a result, this will help to students to understand real work experience and this experience will be supportive in future for better performance of job.

3.4.1. Specific Educational Objectives of Field Trips GAP

It has been practically observed that most of time specific educational objectives are not designed by both students and concerned faculty in order to assess the outcomes of field trips in higher education institutes (Myers, 2009). Students think that field trips are designed for only social gathering and for enjoyment that is no concern with educational point of view, this approach lead them in difficulty to understand real work situation during their visits to industries.

Author has not discussed budget constraints in his model as these are the most important aspects while arranging field trips. Author has not discussed that how field trips can be made more effective and relevant to current industry needs.

3.4.2. Field Trip Budget and Resource Constraints GAP

Many students do not get a chance for field trips due to lack of sufficient budget and resources at higher education institutes especially when there is long distance between universities and industry (Higgins et al., 2012). In case of Pakistan higher education institutes both private universities and public universities are not allocating specific funds for this practice due to budget & resource constraints. Author has discussed the empirical evidence on the benefits of field trips, also analyze the current research on field trips. The study highlights the effectiveness of trips incurred from the experiments conducted.

4. CONCLUSION AND RECOMMENDATION

The main purpose of this study was to identify gaps in current practices of higher education institutes with help of existing literature reviews and suggests possible solution of identified gaps. Authors of this study have study the four current practices such as Internship, University based incubation (UBI), case study teaching in the classrooms and field trips. In internship authors have identified gaps such as Internship proposal, summer internship only, post-internship, and Higher education curriculum, Communication between Academia-Industry, students-university-companies' objectives, and social constructivist theory and skill acquisition model.

4.1. Recommendation for Internship GAP

- Internship proposal should be asked to students before final selection of candidate for internship.
- Only summer internships are not encouraged for better learning and linking theory with practical.
- Post-internship report should be demanded from internees.
- Through use of advance technology communication gap between Academia-Industry can be reduced.
- Common objectives of all stakeholders' students, universities and companies should be developed through a formal meeting.
- Workplace terms or language should be taught to students for better understanding during internship.
- Internship duration should be enhanced and its limitation for 4 months should be restricted.

In university based incubation (UBI's), authors have identified gaps such as lack of government support in terms of funds, UBI's are expensive for small firms and individual, faculty perception and public-private institutions partnership.

4.2. Recommendation for University Based Incubation (UBI's) GAP

- Government of Pakistan should allocate funds for higher education institutes for developing UBI's.
- Reasonable charges should be taken from small firms and individuals.
- Monitory benefits should be offered to faculty for sense of ownership of UBI's.
- Public-Private universities should be funded by HEC for this practice in higher education institutes

In case studies teaching in higher education institutes, authors have identified gaps such as writing a case study, case study based course in the curriculum and critical thinking skills among students.

4.3. Recommendation for Case Study Teaching GAP

- In the course as an assignment should be given to students for writing a case study based on real local industry situations.
- A case study based course should be designed for final year students.
- Students should be engaged in problem solving assignments and situation based questions should be provided in midterm and final exams for developing critical skills among students.

Authors have identified gaps in case of field trips such as lack of specific educational objectives and field trip budget and resource constraints.

4.4. Recommendation for Field Trips GAP

- The pre-internship and post-internship objectives should be developed for better results from formal educational field trips.
- Government of Pakistan and HEC can play an important role in terms of funds support.

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