A study on measuring the factors affecting on Employability Skills Among the Arts and Science Students and Industry Expectations in Selected Areas of Tamilnadu

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Abstract: The study of employability skills among science and art students explores various abilities of people including fundamental skills, technical skills, interpersonal skills and critical thinking skills. This study identifies that there is a gap between the skills expected by the industry and actual skills possessed by the candidates. Employability skills should be well equipped or developed among the engineering students, so that they can get the job easily. The research design used for this study is descriptive study. Sampling technique adopted for the study is convenient sampling, non-probability sampling. Data collection is made with both primary and secondary data in this study. The primary data were collected through questionnaire by means of mailing system and direct contact with the employer and engineering students to collect the questionnaire. The source for secondary data’s is journals, thesis and research papers. The tools used to analyze and interpret the employability skills among engineering students and employer’s expectation from engineering students are percentage analysis.

KEYWORDS – Employability, Employability skill gap, Higher education.

INTRODUCTION

Employees have a responsibility to achieve company's sustainable goals. In order to achieve the company's objectives, the capabilities of the employee need to be developed. Employability skill in higher education is becoming more and more vital so that universities and institutions also prepare graduates for the world of work. The development of soft skills often becomes as important as the technical skills and knowledge acquired during a degree. Thus, skills and competencies play an important role in individual's life. The main objective of the study is about the employability skill gap. The paper deals with the issues which lead to the employability skill gap. The paper also provides the information about ways to bridge the employability gap. The paper has gathered information from the secondary sources e.g. different published papers, newspapers and other internet sources. Employability is the set of skills, knowledge and understanding which concerns in growing more day by day with the advancement in educational sectors.

Dacre Pool & Sewell (2007), states that employability is the group of knowledge, skills, understanding and personal attributes that helps a person to choose their occupation that makes them satisfied and successful. The study has suggested the Career EDGE model which has included essential components of employability and direction of interaction between the various
elements. The purpose of the study is to introduce the practical model of employability that can be used as a framework for the students to develop their employability. Employability skills are often otherwise termed as generic skills, transferable skill, core skill etc. that indicate the knowledge, skills, and attitudes required by the 21st century workplace. It is necessary for career success at all levels of employment and for all levels of education. Various terms have been used to describe generic skills: key skills, core skills, transferable skills, soft skills and employability skills. The list of skills defined by whatever term is being used varies across countries; however, most list include communication skills, interpersonal skills and social skills, organization and planning skills, problem solving skills, creative thinking, literacy and technology skills, there is no one definitive list of generic skills; instead, there are a number of lists.

In today’s technology driven world, professionals need to be adequately prepared. Their profiles may be conveniently sketched in terms of three components: (1) their knowledge—the core subject facts they know and concepts they understand; (2) the skills they use in managing and applying their knowledge, such as computation, experimentation, analysis, synthesis/design, evaluation, communication, leadership, and teamwork; (3) the attitudes that dictate the goals toward which their skills and knowledge will be directed—personal values, concerns, preferences and biases. Knowledge is the data base of a professional engineer; skills are the tools used to manipulate the knowledge in order to meet a goal dictated or strongly influenced by the attitudes. With increased employment opportunity and with the increasing number of graduates it is indeed important to prepare students for relevant job opportunities. In the current scenario most colleges and institutions offered training just a week or 22 ten days before companies visit for placements. This does not help students in developing the required skill set in such a short span of time.

REVIEW OF LITERATURE

Jain, P. (2013) makes an attempt to study the background of Skill development in India, to study the National Policy on Skill Development and Government’s Action Plan on Skill Development (APSD), to study the challenges before the government in carrying out the APSD, The study conclude that, the urgent need of Partnership between the Government and University departments of Life Long Learning and Extension to achieve the goal of National Policy of Skill Development.

Lavy and Yadin (2013) through the study revealed that the IT graduates' soft skills profile as represented by the industry requirements has gone through a big change. Initially, during the hiring process, only technological skills were important and currently the soft skills are equally important in assessing the future employee success. These results demonstrate the conceptual shift that occurred in the last decade regarding the relative importance of the soft skills for IT professionals.

Shamsuri, S. et al (2013) conducted a survey of employers having University Teknikal Malaysia Melaka (UTeM) engineering and ICT students undergoing industrial training at their organizations. The study seeks to explore the employers” perceptions of the employability skills that technical students need to possess, as well as assessing the employers” level of satisfaction with the students” employability skills. The findings revealed that problem-solving, tool
handling competency and presentation skills feature highly amongst the skills demanded of students by employers. The findings are useful for the University to understand how to equip its students and graduates according to the requirements of industry and to ensure they are highly employable after graduating from the University.

Vani and Pal (2013) throw the light on the employability skills required for management graduates and to assess the employability skills of MBA students in particular in the National Capital Region of Delhi. The purpose of the study as author mentioned is to assess the employability skills of MBA students of the selected management institutions operating at NCR. The research design used for this study is a descriptive-correlational research design. The study concluded that, the institutions can do updating the curriculum or course content, enhancing their intellectual capital, Adopting optimal HR policies.

Varwandkar, A. (2013) explores the factors impacting the employability of engineering graduates in the state of Chhattisgarh. The study states that, the means of the variable’s domain knowledge, empathy, communication skills & managerial ability have significant impact on the employability of engineering graduates. However, the independent variable „Motivation“ has not been observed to have made any significant impact on the employability of engineering graduates. Reddy and Sunethri (2013) highlight the importance of soft skills in making students employable. As the researcher mentioned that the educational trends and courses has undergone drastic changes. As the changing trends in professional world of education, there are drastic changes in the requirements of job market. Somalingam and Shanthakumari (2013) make an attempt to examine employability skills and competencies of graduate engineers in Indian organizational context. The very purpose of graduate education is not just gaining the knowledge and skill but also to acquire employment fit to the qualification.

Vyas and Chauhan (2013) makes an attempt to research and identify skill sets and their right mix needed for sustainable employability of engineering graduates as the technical institutional also have to play a key role in promoting national well-being and socio-economic prosperity of the country. Sanyal, S. (2013) makes a survey of the importance of soft skills in students” lives both at the college and after college. The researcher discusses how soft skills complement hard skills which are the technical requirements of a job the student is trained to do to put him to drivers” seat during and even after the interview. 25.Chadha, R. and Mishra, A.(2014) suggested that , the offer more practical training, develop their conversational skills, outsource to professional organizations specializing in improving employability skills , send their students to visit industries periodically , invite experts from industries to interact with students - take steps to train their teachers to orient them on the skills demanded by the industry , take measures to enhance students, confidence level , organize frequent personality development workshops and encourage institute-industry interaction.

Esa, P. et al (2014) identified the level of communication skills, lifelong learning, entrepreneurship skills and moral and professional ethics that has been applied by engineering students and lecturers at the polytechnics. The results showed that no statistically significant differences were found between students and lecturers in the application of soft skills. In conclusion, this study suggests that lecturers use a variety of approaches to improve the level of
soft skills among students in civil engineering. It is indirectly helpful to lecturers to improve the application of soft skills among students. It is hoped that this study can provide an insight into the polytechnic view to develop an appropriate curriculum in improving the soft skills of students in the polytechnics. Hari, P. and Parasuraman, J. (2014) stated that, Peer Group Impact and Personal experiences plays key role in developing skills. Focus group discussions and professional networking can help to attain quick employment. Continuous interview attempts and answering updated questioners related to technical aspect helps to attain and sustain corporate employment.

Parvu, Mihai and Cornelia (2014) in the study revealed that the significant proportion is held by policies that are related to involvement of higher education institutions in increasing the employability of the future graduates by developing academic programs based on the development of competencies and skills necessary for the labor market. The study suggests that, the Global and National studies on transversal skills expected by employers of university graduates in economics too.

Shamsuri, M., Saad, M. & Majid, I. (2014) revealed that problem-solving, tool handling competency, presentation skills and team working skills feature highly amongst the employers as important skills demanded from the students. Students are also required to be competent in their use of techniques, skills and modern tools in their area of expertise, as well as having the drive to acquire and apply knowledge in these areas. These findings are useful for improving Malaysian universities’ understanding of the employability skills perceived as being the most important and allowing them to better equip their graduates according to industry requirements.

Srivastava and Shah (2014) present a scenario of market expectations for management students and make an attempt to find the factors of employability for them. The statistical tools used were exploratory factor analysis and ANOVA. The findings revealed that major factors are analytical skills and self-understanding, general management and work culture, leadership and problem-solving ability and communication. The study suggests that, the management institutes should start continual training and workshop programs for familiarizing the students about the current need and market expectations by the different employers of different sectors. Wahab & Ismail (2014) stated that there is a need to reflect the curriculum standards involves the mixture of different faculties so students from various backgrounds can share their knowledge and how they’ve been taught in their respective subject. It would have been better if more of these programs put forward great attention or emphasis towards communication skills to improve the overall development of UKM students.

Lecturers too, will be mobilized from one faculty to another, as an effort to learn a new teaching-learning method so it can be introduced back to their faculty. The study has successfully identified the key soft skills that greatly affect student’s marketability in society which is communication skills. Communication skills are suggested to be more holistic compared to other skills and gives greater benefit. Aida, N. et al (2015) verified that the graduate’s employability program should emphasize on the contextual approach as academics alone is not the main factor of one to be employed. The lack of soft skills and durability besides the attitudinal selective jobs
tend to turn down employers of taking the graduates into their workplace. Thus, the graduate employability program has become an increasingly important platform to produce quality employees for the competitive labor market. The realm of emerging globalization urges the competitiveness in all aspects, including the education world. Whilst most universities focus on producing graduates to fill the labor market, a number of such graduates is equipping themselves with soft skills via employability program.

Esa, Padil, Selamat, Idris (2015) discovered that the use of teaching & learning methods for applying soft skills in engineering programs vary according to the elements of soft skills. The application of soft skills among engineering students is one of the important elements in producing quality graduates and meeting the needs of the industry. Soft skills in the process of teaching and learning in engineering program at the polytechnic curriculum will not succeed without the cooperation of lecturers and students. Studies indicate that lecturers need to maintain good relationships with the students so that students will not feel abandoned during the teaching & learning process.

P’Rayan and Shetty (2015) stated that only if effective measures are taken to help students overcome communication apprehension, it is possible to develop their communication skills in an effective manner. Students’ communication skills and prepare them for placement / campus recruitment as it was observed that many students have speech anxiety, at the start of the course and it was revealed that majority of the students have high communication apprehension and around 60 per cent of them lack communication skills.

Ramlan and Ngah (2015) make an attempt to discover student awareness and perception towards the importance of soft skills among engineering student. Lacking of soft skills are one of the factors contributing to unemployment amongst graduates in Malaysia. It is because subjects offered in non-technical study program mostly contain soft skill elements. Oppositely, the subjects offered in the program structure are mostly technical oriented which hard skills are the main focuses. Through problem-based learning approach and integration of entrepreneurial elements in technical subject it is hoped that student will obtain both hard and soft skills. Thus, making them more marketable in job employment because soft skills are value added for students when seeking job.

SwarnaLatha. T (2015) stated that Soft skills training is otherwise enabling and empowering the young graduates with proper etiquettes and skills to get good going in workplaces. Thus, all the language teachers should rise as phoenix from the ashes of traditional method of imparting learning and switch over to modernity with respect to change in mindset, material and methodology, which will transform the classroom from teacher-centered learning to learner-centered learning to enhance the skill sets to suit to Industry needs. For achieving this, a transition is very much required at the levels of framing syllabus, teaching methodology and teacher’s willingness to accept and implement change.

Raman and Koka (2015) stated the need to understand the importance of requirements of soft skills in the IT industry and also the causes behind the lack of soft skills in students. The researchers make an attempt to highlight the reasons for poor soft skills among students from the IT professionals’ perspectives.
Rudrama, D. (2016), states that there is a serious unemployment problem amongst graduates due to the lack of English skills and competency. English language is considered as a stepping stone along the pathway to securing employment. English is a means for the acquisition of employment, power and privilege in society. The author recommended that the teachers of English language should strive to contribute to transforming young graduates into English language proficient, confident, skilled, and competent professionals. One should recognize the constant change that the field is ever going through and embrace it, realizing that learning is ongoing life-long process.

Mansour and Dean (2016) focus on the types of employability skills which are common among the faculty of HRD programs and employers of HRD graduates both in the U.S. and internationally. To evaluate the interrelationships between the variables of interest among employees and faculty members, both in the U.S. and internationally, one-way analysis of variance (ANOVA) was utilized. Shradhanjali (2016) aims at exploring the true meaning of soft skills which are now days the most essential skills set for engineering graduates in India. For increasing the productivity of any educational institute development of human capital of an institute must be the priority.

STATEMENT OF THE PROBLEM

The problem identified is analysis of employability skills of students in view of employers’ perspectives. Need of the study Employability skills are very significant for the students’ employability. The development of employability skills was seen as a continuous in learning and it’s highly important in getting job. Employability analysis is essential and it is required for the upcoming graduates.

OBJECTIVES OF THE STUDY

The following are the objectives

1. To identify the employability skills required for the students in study area
2. To know about the employability gap.
3. To identify the factors employability skills in students

DATA ANALYSIS

In the data analysis, the overall mean for satisfaction was plotted against the overall mean for importance, for each competency dimension. Interpretation for each survey question as follows.

* \(^1\) Table 1: Variation in personal and core skills of the management graduates with Industry expectation

<table>
<thead>
<tr>
<th>P-P Skills</th>
<th>Difference in Mean</th>
<th>Difference in Std. Deviation</th>
<th>Std. Error Mean</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coping with complexity</td>
<td>.2000</td>
<td>1.5841</td>
<td>.0807</td>
<td>2.477</td>
<td>.014</td>
</tr>
<tr>
<td>Influencing*</td>
<td>.-2078</td>
<td>.7928</td>
<td>.0404</td>
<td>-5.143</td>
<td>.000</td>
</tr>
<tr>
<td>Ethical sensitivity</td>
<td>-.0364</td>
<td>.3365</td>
<td>.0172</td>
<td>-2.120</td>
<td>.035</td>
</tr>
<tr>
<td>Negotiating</td>
<td>-.0701</td>
<td>.4977</td>
<td>.0254</td>
<td>-2.765</td>
<td>.006</td>
</tr>
<tr>
<td>Political sensitivity</td>
<td>-.0753</td>
<td>.5881</td>
<td>.0300</td>
<td>-2.513</td>
<td>.012</td>
</tr>
</tbody>
</table>
Analytical thinking                  -1.299   1.0987   .0560   -2.319   .021
Conflict resolution                 -0.857   .5547   .0283   -3.032   .003
Reflectiveness                      -1.974   .7517   .0383   -5.153   .000

*2 Table 2: Skills where there is nil variation in the expectation and perceived skill

<table>
<thead>
<tr>
<th>SKILLS</th>
<th>P-P Difference in Mean</th>
<th>P-P Difference in Std. Deviation</th>
<th>P-P Std. Error Mean</th>
<th>T</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*2 Cross-cultural awareness</td>
<td>-0.0234</td>
<td>.4232</td>
<td>.0216</td>
<td>-1.084</td>
<td>.279</td>
</tr>
<tr>
<td>Autonous</td>
<td>1.117</td>
<td>1.2606</td>
<td>.0642</td>
<td>1.738</td>
<td>.083</td>
</tr>
</tbody>
</table>

*3 Table 3: Variation of skills with student’s perceived skill are higher than the industry expected level

<table>
<thead>
<tr>
<th>SKILLS</th>
<th>Difference in Mean</th>
<th>Difference in Std. Deviation</th>
<th>Std. Error Mean</th>
<th>T</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3 Numeracy</td>
<td>-0.0625</td>
<td>0.5123</td>
<td>0.0261</td>
<td>-2.391</td>
<td>.017</td>
</tr>
<tr>
<td>Language</td>
<td>0.2396</td>
<td>1.2640</td>
<td>0.0645</td>
<td>3.714</td>
<td>.000</td>
</tr>
<tr>
<td>Self-awareness</td>
<td>-1.380</td>
<td>1.1376</td>
<td>0.0581</td>
<td>-2.377</td>
<td>.018</td>
</tr>
<tr>
<td>Stress tolerance</td>
<td>0.0833</td>
<td>0.5582</td>
<td>0.0285</td>
<td>2.926</td>
<td>.004</td>
</tr>
<tr>
<td>Self confidence</td>
<td>0.0755</td>
<td>0.5475</td>
<td>0.0279</td>
<td>2.703</td>
<td>.007</td>
</tr>
</tbody>
</table>

*4 Table 4: Skills with high variation from the Industry and student’s perceived skill

<table>
<thead>
<tr>
<th>SKILLS</th>
<th>Difference in Mean</th>
<th>Difference in Std. Deviation</th>
<th>Std. Error Mean</th>
<th>T</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*4 Information retrieval</td>
<td>0.0573</td>
<td>1.1250</td>
<td>0.0574</td>
<td>0.998</td>
<td>.319</td>
</tr>
<tr>
<td>Written skill</td>
<td>0.0130</td>
<td>0.8317</td>
<td>0.0424</td>
<td>0.307</td>
<td>.759</td>
</tr>
<tr>
<td>Listening skill</td>
<td>-0.0391</td>
<td>0.8277</td>
<td>0.0422</td>
<td>-</td>
<td>0.356</td>
</tr>
<tr>
<td>Emotional</td>
<td>-0.0496</td>
<td>1.2512</td>
<td>0.0639</td>
<td>-</td>
<td>0.438</td>
</tr>
<tr>
<td>Oral presentation</td>
<td>-0.0104</td>
<td>0.9310</td>
<td>0.0475</td>
<td>-</td>
<td>0.827</td>
</tr>
</tbody>
</table>

*5 Table 5: Skills with high variation between the industries expected skill and the student’s perceived skill level

<table>
<thead>
<tr>
<th>SKILLS</th>
<th>Difference in Mean</th>
<th>Difference in Std. Deviation</th>
<th>Std. Error Mean</th>
<th>T</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*5 Problem solving</td>
<td>0.2708</td>
<td>1.1650</td>
<td>0.0595</td>
<td>4.555</td>
<td>.000</td>
</tr>
<tr>
<td>Commercial</td>
<td>0.1875</td>
<td>0.8527</td>
<td>0.0435</td>
<td>4.309</td>
<td>.000</td>
</tr>
<tr>
<td>Sincerity &amp; honesty</td>
<td>0.9115</td>
<td>1.6470</td>
<td>0.0841</td>
<td>10.844</td>
<td>.000</td>
</tr>
<tr>
<td>Decision making</td>
<td>0.0495</td>
<td>0.4025</td>
<td>0.0205</td>
<td>2.409</td>
<td>.016</td>
</tr>
<tr>
<td>Prioritizing</td>
<td>0.0417</td>
<td>0.4066</td>
<td>0.0208</td>
<td>2.008</td>
<td>.045</td>
</tr>
</tbody>
</table>

In the case of Problem solving, Decision making, commercial awareness, sincerity and honesty and prioritizing, the student’s level is lower than the industry expectation. This is due to the lack of opportunities for the students in getting experience through experiential learning as the industry give less opportunity to the students for interface (Table 5). In the case of accountability, explaining, critical analysis, subject application, justify and argue, creativity and adaptability, there is no much difference between industry expectation and the student’s skill level. The skills used here is limited to the institutions where cognitive and non-cognitive capabilities are less, but this research can be extended to high-standard institutions where this
skill set may vary. To segregate the skills where the industries expectation is higher than the attained skills of fresh graduates, we used 'T' test. In this, the pairs are formed taking some skill, but responses are taken from employer’s perception and placement officer’s assessment.

CONCLUSION

The purpose of this study was to investigate the gap between the employers’ expected skill sets of science and art students and the actual skills they possess at the time of recruitment. The employer’s perception of the level of skill attributes relevant for each sector was discussed, along with a look at the skills graduates acquire after their professional studies. From the empirical study, it can be concluded that the respondents see only 35% of them as employable, with a high level of variation each student possess based on many factors. In the five components of P-E (person to environment) fit, only three components which are P-P (person to person fit), P-G (person to group fit), and P-J (person to job fit) are relevant for a fresher recruitment.

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