

ENHANCEMENT OF SKILLS THROUGH E-LEARNING: PROSPECTS AND PROBLEMS

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Abstract: Of late, the landscape of education of students has been reportedly progressive and remarkably competitive. The knowledge they have gained is enormous with the help of various sources of information. Plenty of information is available at their fingertips. . But one of the most important factors the students need to concentrate is their employability skills. Many students struggle a lot to get job, not because of their lack of knowledge, but paucity of Employability Skills. Soft Skills are the part and parcel of employability skills. Nowadays, enhancing the employability skills with the help of e-learning is not only an absolute possibility but also a definite necessity. Almost every student accesses his/her study materials at the touch of the screen (smart phone). An analysis was done with the help of 500 students of a private engineering college on the importance of e-learning to develop their employability skills. This paper describes the ways and means of enhancing the employability skills such as Job skills, Aptitude skills, Soft skills and Technical skills (JAST) through e-learning, which in turn increases the opportunity of getting employed or become the most sought after in the job market.

Keywords: E-learning, Employability skills, Online, Soft skills, Student

Introduction

Education is very important for an individual's success in life. Education instills in pupils skills necessary to realise their full potential in all aspects of life and prepare them to step into the world of career development. The main purpose of education is to educate individuals within the society, to prepare and qualify them for work in economy. (Rusk, 1919) Barring the top tier and other major educational institutions, the current curriculum in management excludes the very aspect of facing various challenges in business environment. How to manage uncertainty and complexity is the most important question still remains unaddressed by many business schools. They merely teach the management concepts with case studies. They don't focus on the challenges arising out of rapid growing technology and the challenges involved in running an enterprise. (Rao MS, 2010). The concept of e-learning has started emerging among the students. Students had been accessing internet for references, but now they have also started studying and getting certified thro' e-learning.

India has the second largest educational system in the world after China (Cheney et al., 2006). Although the Indian education system is the world's largest, the country also has the maximum number of illiterates (Mujumdar, 2013). The Gross Enrolment Ratio (GER) in Higher Education, which was 11% in 2005-06, almost got doubled to 19.4% in the year 2010-11. The GER for women in Higher Education increased from 9.4 to 17.9% during the same period (Singh, M., 2013).

Men and Women student growth in higher education from 1950-51 to 2012-13

Year	Men ('000)	Women ('000)	Total Enrolment ('000)	Women as percent of all Students
1950-51	157	17	174	9.77
1955-56	252	43	295	14.58
1960-61	468	89	557	15.98
1965-66	849	218	1067	20.43
1970-71	1563	391	1954	20.01
1975-76	2131	595	2726	21.83
1980-81	2003	749	2752	27.22
1985-86	2512	1059	3571	29.66
1990-91	2986	1439	4425	32.52
1995-96	4235	2191	6426	34.10
2000-01	4988	3012	8000	37.65
2005-06	6562	4466	11028	40.50
2012-13*	13468	10687	24155	44.24

Source: Enrolment of women in higher education (Selected Educational Statistics 2005-06; UGC, Annual report) *Statistical Report – registrar.uoregon.edu/statistics/reports

Table: 1

E-learning

Technology plays a very important role in reforming education from conventional to technology-based learning. The significant growth of technology in education has replaced the traditional learning such as using the blackboard and chalk in explaining the subject by technology-based learning such as doing homework on the laptop, internet, or tablet (Evans, 2011). Living in the current digital age enables everyone to easily access the learning materials anytime and everywhere using technology tools (Fu, 2013). Therefore, it has facilitated intensive communication among learners as well as between learners and the instructor whether in the classroom or outside. Adam and Nel (2009) stated that in establishing two way communications between teachers and learners, some technology tools have been applied and adapted in education. Blended learning is a general scope of teaching-learning model. To name a few, one of the strongest market leaders in Enterprise Resource Planning (ERP) named Systematic Application Product in Data Processing (SAP) has introduced the concept of sap-learninghub to students through cronos in India. Coursera is one of the key players in providing online courses.

A few arguments on e-learning

This visual problem has also been mentioned by other authors (Blummer, 2006; Hernon et.al, 2007; Levine-Clark, 2007). They argued that most e-book readers only read short sections of e-books rather than reading the whole text online. This finding is in tandem with Vernon (2006) which revealed that online reading was physically more strenuous for students as opposed to reading a traditional textbook and prior studies which have shown that level of content assimilation for online reading is lower (Dillon & Gabbard, 1998; Bellaver & Gillette, 2004; Landoni & Hanlon, 2006; Kang, Wang & Ling, 2009) and level of cognitive load is higher

(Wästlund, Reinikka, Norlander, & Archer, 2005). The authors such as Clyde (2005) were concerned about students facing difficulties in understanding the digital content.. The study by Letchumanan & Tarmizi (2011) revealed that the participants found that reading through screen affects their retention of subject conten

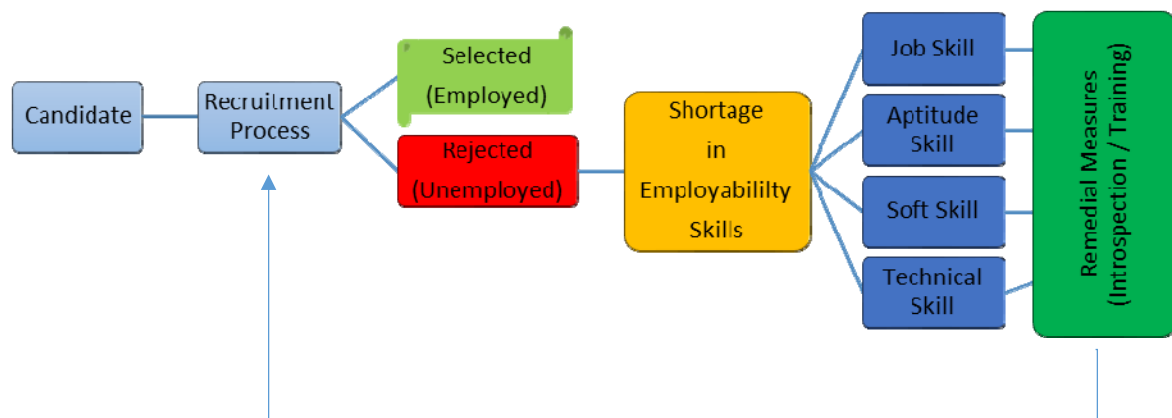
CONCEPTUAL THEORETICAL FRAMEWORK

Education and employment are to be conceptually linked with the construct ‘employability’. Employability has been defined as the ‘ability to secure and sustain employment’ (Berntson, Naswall & Sverke, 2008; Bhagwan & Selvaraj, 2010; Curtis & Mckenzie, 2001; Fugate & Ashforth, 2004; Hillage & Pollard, 1998) Employability is viewed as ‘a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy’ (Yorke, 2004).

Many graduates pass out from colleges with good grades but do not make it to the top owing to lack of personality and soft skills. Hence, it is imperative that organisations must have excellent people management process to retain managers (Showry, 2012). There are many different terms, often used interchangeably or in a vague sense (Binkley et al., 2005) to describe similar concepts, including enabling skills , generic skills , core skills , key competencies , essential skills , and necessary skills . Through the earlier research with the help of Mann-Whitney test, it was understood that the job skills are more important for service industry sector than manufacturing sector as far as both top and bottom level of employees. (Nathan, 2015). The learning process will take place not only in the class but also outside it; students will take responsibility for their own learning and learn at their own pace.

The conceptual framework of this study is derived with the help of various sources of literature and research as shown in Fig.1.

Fig.1 *Conceptual framework of the shortage of employability skills*



METHODOLOGY ADOPTED FOR THIS RESEARCH

This study was chosen to understand the skills possessed by students during college days with special reference to employability skills and the ways and means of fulfilling the gap by equipping the various skills through e-learning.

Research Objectives

1. To know the major skills required for the graduates to get employment
2. To evaluate various skills acquired through e-learning
3. To know the remedial measures for filling the gap between the skills possessed and skills through e-learning

Operational Definitions

Employability skills

Employability is the acquisition of attributes (knowledge, skills and attitudes) that make graduates more likely to be successful in their chosen occupations.

Aptitude skills

Covers the analytical, critical and lateral thinking

Job skills

Covers the immediate need for a student to get placed and to sustain in the company such as dress code, computer operations, group discussion, etc.

Soft skills

Covers the behavioural and interpersonal skills such as delegating skill, listening skills, learning skill, etc.

Technical skills

Covers the subject knowledge and core area.

Research design

Researchers have chosen exploratory research design for this research study. This exploratory research is defined as the initial research into a hypothetical or theoretical idea. An exploratory research is an attempt to lay the groundwork that will lead to future studies, or to determine if what is being observed might be explained by a currently existing theory. New perspectives can emerge from new ways of looking at things, either from a theoretical standpoint or a new way of measuring something.

Sampling Technique

The sample size represents 500 students from various branches of a private engineering institution in Tamil Nadu, India. Stratified convenient random sampling technique is adopted. The research samples were categorised into five categories. The students were from Computer Science Engineering (CSE), Electronic and Communication Engineering (ECE), Electrical and Electronic Engineering (ECE), Electrical and Instrumental Engineering (EIE), Information Technology (IT), Aeronautical Engineering (AE), Mechanical Engineering (ME) and Production

Engineering (PE). The objective of choosing students from various branches is to observe how important the employability skills are different to these different branches of students.

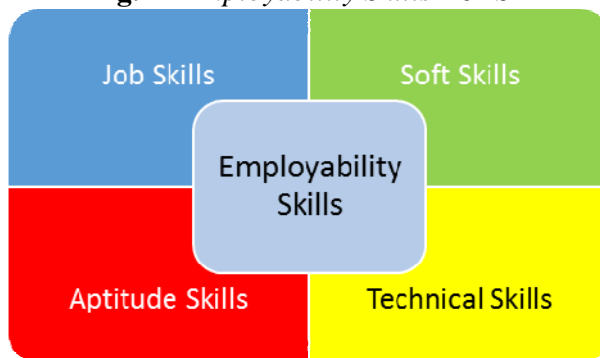
Data Collection method

This research study is divided into two major divisions. The first purpose is to find the main problems (skill gap), faced by the students. The second division deals with the remedial measures to fill the skill gaps, with the help of the data collected through the questionnaires. The questionnaire was designed with due care and evaluated for non-ambiguity, transparency, general validity and relevance. Data were collected through questionnaire in person and online.

Instrument used

The questionnaire was divided into three major divisions. Demography of the respondents, graduates lacking employability skills and graduates possessing employability. This research study is based on the literature and empirical study. The items in the questionnaire include most of the elements of employability skills expected by the employers.

Fig.2 *Employability Skills – JAST*



The questionnaire contains four constructs namely: (i) Job skills, (ii) Aptitude skills, (iii) Soft skills and (iv) Technical skills. Based on the various literature and research studies, researchers have created their own list of 36 sub criteria skills which are covered under four major skills such as – Job, Aptitude, Soft and Technical skills (JAST) as shown in Fig.2.

The researchers tried to adopt the standardized tools to evaluate the employability skills required for the students, they were able to find HKA agencies Appraisal form with different skills. It had ten major skills and 45 sub criteria. The researchers have not opted for that tool, as it is not so much relevant to their research study. And so they have developed their own list of 36 sub criteria skills, which were covered into four major skills as shown in table 2, such as – Aptitude, Job, Soft & Technical skills (JAST).

Name of the Skills	No. of Sub Criteria
Aptitude Skills	2
Job Skills	12
Soft Skills	20
Technical Skills	2
Total No. of skills- 4	36

Table: 2 Number of Sub criteria in JAST

FINDINGS

As far as the e-learning and four major skills are concerned, correlation test is used to measure the relationship between two or more variables. With the help of the correlation test and taking into consideration the level of significance as .05, we came to know that there was a positive correlation between e-learning (Mean = 19.48) & Technical Skills .007; but all other three factors were negatively correlated. They were between e-learning & Soft Skills .177; e-learning & Aptitude Skills .295 and e-learning & Job Skills .117. Technical Skill was the only positive correlating factor with e-learning. The same is shown in the Table 3.

Correlations test – e-learning & 4 Major factors

		e-learning	Soft Skills	Tech Skills	Job Skills	Apt Skills
e-learning	Pearson Correlation Sig. (1-tailed)	1				
Soft Skills	Pearson Correlation Sig. (1-tailed)	-.042 .177	1			
Tech Skills	Pearson Correlation Sig. (1-tailed)	.109 .007*	-.092 .019	1		
Job Skills	Pearson Correlation Sig. (1-tailed)	-.053 .117	-.240 .000	-.146 .001	1	
Apt Skills	Pearson Correlation Sig. (1-tailed)	.024 .295	-.117 .005	.007 .440	-.279 .000	1

*. Correlation is significant at the 0.05 level (1-tailed)

Table: 4

To know the association between e-learning and four major skills, χ^2 test is used. We came to know that there are significant associations between e-learning and Technical Skills ($\chi^2 = 9.872$, $0.43 < 0.05$), e-learning and Job Skills ($\chi^2 = 20.932$, $.000 < 0.05$) and overall Employability Skill ($\chi^2 = 9.90$, $0.41 < 0.05$). There are no significant association between e-learning and Aptitude Skills ($\chi^2 = 6.005$, $.199 > 0.05$) and e-learning and Soft Skills ($\chi^2 = 2.647$, $.618 > 0.05$)

With the help of RoC Curve Fig. 3 and Table: 5, we came to know that the Aptitude Skill, Soft Skill, Job Skill, Technical Skill and Overall Employability Skills have at least one link between the positive actual state group and the negative actual state group with reference to e-learning.

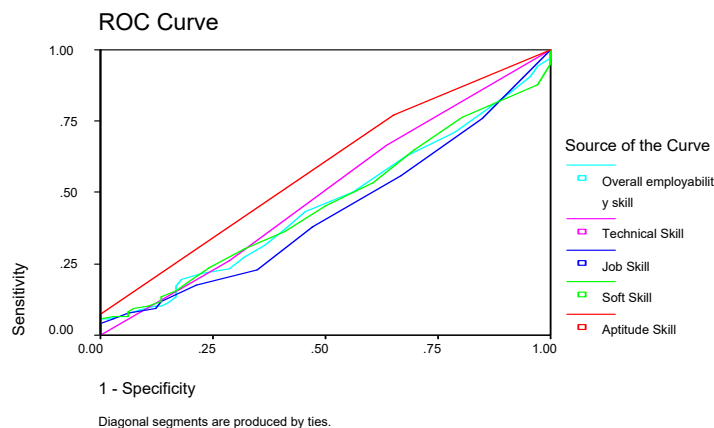


Fig. 4

Area Under the Curve

Test Result Variable(s)	Area
Aptitude Skill	.583
Soft Skill	.464
Job Skill	.431
Technical Skill	.502
Overall employability skill	.461

The test result variable(s): Aptitude Skill, Soft Skill, Job Skill, Technical Skill, Overall employability skill has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

Table: 5

CONCLUSION

Students are registered in colleges to get degrees. A few get jobs with the degree they possess. As it is very difficult for them to get employment only with their degrees, they prefer to study online certification courses. Among the four major skills, Technical skills can be learnt through e-learning. E-learning supplements and supports the students to gain more awareness and confidence in a specialized field, which enhances the possibilities for employment. The future research in the area could be the possibility of exploring various aptitude and soft skills. Though soft skills can be taught, it can also be imparted through e-learning as well. It opens the door of new avenues for further research in this regard.

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