



## A STUDY ON COMPETENCY MAPPING TO ENHANCE EMPLOYABILITY SKILLS OF ARTS AND SCIENCE STUDENTS IN TAMIL NADU

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### Abstract

The purpose of this study was to investigate Arts and Sciences students' employability skills as they are perceived. The study also examined if there were any differences in perceptions on employability skills among students on assigned variables. Data for this study were collected via validated and reliability tested questionnaire. Analysis of Variances (ANOVA) was used, and the results showed that there were significant differences among participants on Arts and Sciences: coping with Collaboration, understanding, and interpersonal relationship for the advantage of students from Science College.

**Key Words:** Collaboration, Time Management, Critical Thinking and Self-Confidence.

### Introduction

Competence is a concept widely recognized in scientific literature since the early of 20<sup>th</sup> century, and particularly stressed in human resource management. Formally, competence is understood as the relation between humans and work tasks, specifically, which knowledge and skills are required to perform a specific task in an efficient way. The concept of competence is related to the concept of competency; in a competency is defined as "a specific, identifiable, definable, and measurable knowledge, skill, ability and/or other deployment-related characteristic (e.g. attitude, behavior, physical ability) which a human resource may possess and which is necessary for the performance of an activity". In, in the effort of univocally identify HR concepts, authors define a competency as "the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development", while a competence as "a competency (knowledge + skills + abilities) in a particular context (e.g. situation, domain)". An effective competences management within an organization, i.e. oriented to the continuous enhancement and development of individual and organizational competences, requires as first and necessary step the mapping of organization competences. A Competences map can be defined a representation of key competences of each member of an organization; it represents a valuable tool for identifying members of an organization who possess competences to perform a task.

Ai-Hwa Quek, (2005) graduate employees also expressed value improving skills, practical orientation abilities and cognitive skills as being important for successful work performance. These generic competencies are important for enabling Malaysian graduate employees to transfer learning from the classroom to the workplace for success in work performance. Anne Martensen and Lars Grønholdt (2009) the estimated importance score and performance score for each competency can be combined in a competency map, and it is shown how the four cells in the map can be interpreted in useful ways, when essential areas for quality improvement of the study programme are to be identified.

Besides being important in the business oriented organizations, competence mapping is recognized to be important in many contexts. One of the most interesting is the academic environment where competence mapping may provide a fruitful avenue for intellectual capital management. In such context, and in particular within the scientific community focused on collaborative production of new knowledge, a problem currently faced is the inability of an organizations to know the competences owned by their members which prejudices the multi-disciplinary research and community creation

### Literature Review

Antonios Panagiotakopoulos, (2012) argues that there is an immediate need for policy makers to develop a national policy on key skills in HE, in order to help students secure employment, as well as help domestic firms meet their skill needs. Auli Toom et al (2015) use of the procedure in the practice of teacher education, it promisingly fulfills the aims to demonstrate the moral core of teaching and teacher's central role in it for student teachers. Beverley Jackling, Riccardo Natoli, (2015) The results indicate that from the internship providers' perspective the most highly developed skill of interns is team skills.

E. Carson et al (2004) understanding of human and structural capital as key components of intellectual capital by refining their definitions and outlining their relationships. Francis Osaë Otopah and Perpetua Dadzie, (2013) shaping, improving, integrating and supporting students' PIM habits, skills, personal information collections and memories respectively. Georgina Andrews, Marilyn Russell, (2012) key emerging themes include issues surrounding the role of higher education; deficiencies in the classification of graduate destinations; the challenge of predicting the needs of employers of the future; and gaps between strategies, perceptions and realities.



Jenneth Parker, (2010) highlight potential elements of more widely informed knowledge literacy, including philosophical, sociological and cultural aspects, that is needed to support the development of these competencies. Joanne Raybould and Victoria Sheedy, (2005) there are transferable skills that employers like to see in a graduate and these can vary according to type of role; also, in general, graduates are keen to develop their skills further. There are organisations to help graduates improve these employability skills like Graduate Advantage and higher education institutions. Joseph Lee and Dieter Fink, (2013) Encouragement factors were found to be those that organisational management has direct control over such as communicating and promoting KMaps and appointing a management champion. Impeding factors were those under the control of software maintenance management and are more difficult to manage.

Lorraine Dacre Pool and Peter Sewell, (2007) it will be a useful tool for lecturers, personal tutors, careers advisors and any other practitioners involved in employability activities. It will also be used to develop a measurement tool for employability. Metso Sari, (2014) the students' development of professional skills was enhanced by three organizational factors: an innovative climate, guidance, and interactions with seniors. Furthermore, the results emphasized that other employees have a central role in enhancing the students' professional skills development.

Naureen Durrani, Vicki N. Tariq, (2012) The results reveal the importance that employers attach to graduates' numeracy skills and the extent to which employers use numeracy tests in graduate recruitment. Nicoline Frølich and Bjørn Stensaker, (2010) the study reveals that student recruitment strategies are often grounded in inherent institutional identities, while at the same time responding to external ideas about excellence and diversity. Noriko Milman (2011) Young students apply lessons to self and peer, regulating attentiveness and socializing one another to the norms of their classroom. They are also resourceful actors who skillfully use their understandings of attentiveness to maneuver around the strict order of the day. Schoolchildren multitask, conceal other focal concerns, and give the impression of attentiveness, all of which influence what behaviors get detected as "(in) attentive."

Nosheen Fatima Warraich and Kanwal Ameen, (2011) the employers complained of weak communication, practical and presentation skills. They expect graduates with more multidimensional and market oriented skills. However, the school takes a lead in introducing new curricula among the rest. Rao M.S., (2014) The study found that there must be effective coordination among faculty, students, industry and directors of educational institutions for enhancing employability skills among students. Feicheng Ma, (2013) Student average web searching competency level was found to be comparatively low overall, within preliminary stages of development. A lot of students are unable to search the web with efficiency. Competency levels for searching academic tasks were higher than those of daily-life tasks, especially when the degree of difficulty increased.

Simon Cassidy, (2006) Results suggest that, whilst students would accept peer assessment as an element of their course, its introduction at least should focus on the development of evaluative skills and provide support to alleviate an onerous sense of responsibility. It is concluded that, if the value of peer assessment in terms of employability skill development is accepted, then it should be adopted as regular practice on undergraduate programmes wishing to equip students with a complete repertoire of employment relevant skills. Sue Spence and Denis Hyams-Ssekasi, (2015) Overall both mentors and mentees reported positive responses to the mentoring scheme. From the mentees point of view self-confidence, employability skills and networks were enhanced. Mentors reported satisfaction in contributing to the local community. Challenges were found in matching mentors with appropriate mentees. Taran Thune and Liv Anne Støren, (2015) the study indicates that only certain forms of interactions between students and WOs have benefits for students; namely the ones that involve a certain degree of time and commitment. Programme officers in higher education should target more committed interaction forms, because the added value is significantly higher for the students.

Tomas Hellström and Kenneth Husted, (2004) this paper argues that knowledge mapping may provide a fruitful avenue for intellectual capital management in academic environments such as university departments. Vinod Kumar Khanna, Ruby Gupta, (2014) The paper reveals that competency-based training has a positive correlation on, 5 "S" and TQM, and is instrumental in improving the level of 5 "S" and TQM in both industries.

## **Methods**

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. Thus it is the various steps that are generally adopted by a researcher in studying his research problem with the logic behind them. It has many dimensions and methods which constitute a part of the research and widens the scope of the research and a research objective follows;

1. To identify the competencies mapping and employability skills for the students.
2. To make students effective in his employment and paves way for their career development.



Literature and descriptive studies are undertaken in many circumstances. When the researcher is interested in knowing the characteristics of certain groups such as gender, year of study and faculty of study descriptive study is necessary. Descriptive research is used to collect information about the employees to whom the competency mapping is done.

### Results Analysis

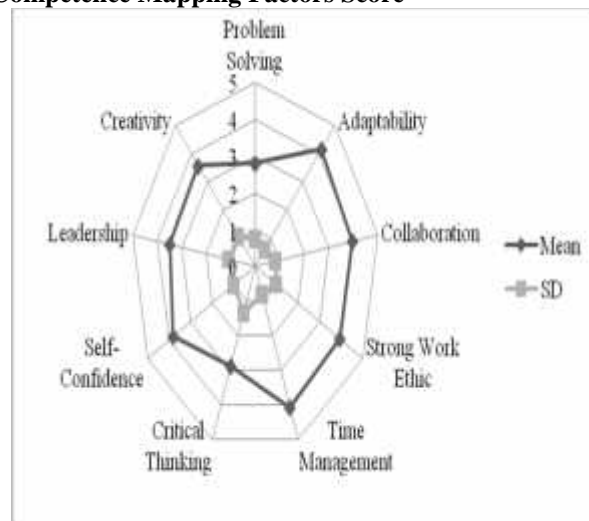
The analysis of the demographics in Table1 shows that 83.7 percentages of respondents are Male and 16.3 percentages are Female. The percentage of female in is showing a decline. According to the year of study, it shows that 15.3 percentage of respondents were in the first year and 83.7 percentage third year and reaming 1 percentage are second year students. According to the education shows that 32.2 percentage of respondents were from Arts and 67.8 percentages were from Science. Thus it can be interpreted that highest percentage was in the Science.

**Table and Figure 1: Percentage Analysis of Demographic Variables**

Demographic Variables	Frequency	Percent	
Gender	Male	432	83.7
	Female	84	16.3
Year of Study	First year	79	15.3
	second year	5	1.0
	Third year	432	83.7
Faculty of Study	Arts	166	32.2
	Science	350	67.8
Total	516	100.0	

**Table and Figure 2: Mean and SD of Competence Mapping Factors Score**

Descriptive Statistics	Mean	SD
Problem Solving	2.81	0.75
Adaptability	4.17	0.61
Collaboration	3.99	0.82
Strong Work Ethic	3.94	0.98
Time Management	4.09	0.80
Critical Thinking	2.89	1.35
Self-Confidence	3.82	1.01
Leadership	3.50	1.10
Creativity	3.58	1.06



It could be noted that, table and figure 2 highest to lowest mean and SD as follows; adaptability (M = 4.17, SD = 0.61) and time management (M = 4.09, SD = 0.80), lowest problem solving (M = 2.81, SD = 0.75) and critical thinking (M = 2.89, SD = 1.35).

Null Hypothesis (H<sub>0</sub>): There is no significant difference between Faculty of Study and Competence Mapping Factors scores.  
 Alternative Hypothesis (H<sub>1</sub>): There is a significant difference between Faculty of Study and Competence Mapping Factors scores.

Table 3 is the independent t-test analyses of perception of respondents are faculty of study. In the table, we can see the Competence Mapping and faculty of study (Arts and Science) mean, SD and significance value.



In the problem solving mean value of arts is ( $M = 2.79$ ,  $SD = 0.75$ ), science is ( $M = 2.82$ ,  $SD = 0.76$ ), and there is significant relationship between faculty of study and problem solving because the sig. value is less than  $0.000 > 0.05$ .

In the adaptability mean value of arts is ( $M = 4.17$ ,  $SD = 0.59$ ), science is ( $M = 4.17$ ,  $SD = 0.62$ ), and there is significant relationship between faculty of study and adaptability because the sig. value is less than  $0.002 > 0.05$ .

In the Collaboration mean value of arts is ( $M = 3.99$ ,  $SD = 0.81$ ), science is ( $M = 3.99$ ,  $SD = 0.83$ ), and there is significant relationship between faculty of study and Collaboration because the sig. value is less than  $0.004 > 0.05$ .

In the Strong Work Ethic mean value of arts is ( $M = 3.90$ ,  $SD = 1.00$ ), science is ( $M = 3.95$ ,  $SD = 0.96$ ), and there is no significant relationship between faculty of study and Strong Work Ethic because the sig. value is greater than  $0.078 > 0.05$ .

In the Time Management mean value of arts is ( $M = 4.15$ ,  $SD = 0.73$ ), science is ( $M = 4.07$ ,  $SD = 0.83$ ), and there is a significant relationship between faculty of study and Time Management because the sig. value is less than  $0.009 < 0.05$ .

In the Critical Thinking mean value of arts is ( $M = 2.89$ ,  $SD = 1.35$ ), science is ( $M = 2.89$ ,  $SD = 1.35$ ), and there is a significant relationship between faculty of study and Critical Thinking because the sig. value is less than  $0.001 < 0.05$ .

In the Self-Confidence mean value of arts is ( $M = 3.85$ ,  $SD = 1.01$ ), science is ( $M = 3.80$ ,  $SD = 1.01$ ), and there is a significant relationship between faculty of study and Self-Confidence because the sig. value is less than  $0.002 < 0.05$ .

In the Leadership mean value of arts is ( $M = 3.52$ ,  $SD = 1.09$ ), science is ( $M = 3.48$ ,  $SD = 1.01$ ), and there is a significant relationship between faculty of study and Leadership because the sig. value is less than  $0.003 < 0.05$ .

**Table 3: T test for Faculty of Study Vs Competence Mapping Factors**

Competence Mapping		N	Mean	SD	t	Sig.
Problem Solving	Arts	166	2.79	0.75	.188	.000
	Science	350	2.82	0.76		
	Total	516	2.81	0.75		
Adaptability	Arts	166	4.17	0.59	1.030	.002
	Science	350	4.17	0.62		
	Total	516	4.17	0.61		
Collaboration	Arts	166	3.99	0.81	1.020	.004
	Science	350	3.99	0.83		
	Total	516	3.99	0.82		
Strong Work Ethic	Arts	166	3.90	1.00	.303	.078
	Science	350	3.95	0.96		
	Total	516	3.94	0.98		
Time Management	Arts	166	4.15	0.73	1.269	.009
	Science	350	4.07	0.83		
	Total	516	4.09	0.80		
Critical Thinking	Arts	166	2.89	1.35	.901	.001
	Science	350	2.89	1.35		
	Total	516	2.89	1.35		
Self-Confidence	Arts	166	3.85	1.01	.241	.002
	Science	350	3.80	1.01		
	Total	516	3.82	1.01		
Leadership	Arts	166	3.52	1.09	.158	.003
	Science	350	3.48	1.11		
	Total	516	3.50	1.10		
Creativity	Arts	166	3.57	1.10	.027	.002
	Science	350	3.59	1.04		
	Total	516	3.58	1.06		



In the Creativity mean value of arts is ( $M = 3.57$ ,  $SD = 1.10$ ), science is ( $M = 3.59$ ,  $SD = 1.04$ ), and there is a significant relationship between faculty of study and Creativity because the sig. value is less than  $0.002 < 0.05$ .

Independent t-test analyses conducted for Faculty of study categories like Arts and Science significance value of Competence Mapping Factors for respective categories do differ significantly (expect Strong Work Ethic). Therefore, null hypotheses ( $H_0$ ) are rejected.

Based on the results analysis there is some relationship between Competence Mapping and Employability Skills of Arts and Science Students in Tamil Nadu.

### Conclusion

A graduate student is about creating individuals who have a capacity to ask interesting, demanding, and difficult questions. It is also about skill development that takes the student beyond cultivating a strong analytical mind. Suggestions to lead graduate students in a direction that will leave them well prepared for the challenges they face in a global environment include a strong focus on professional development, mentorship by faculty, establishing milestones to mark achievement, integrating practice into research, and creating a connection to the community. In this results analysis we found that, arts college students are had less competence compare to Science graduates. Recognize that while skills are essential in an academic pursuit, there are many skills that graduate students can sharpen during this time. During any graduate students need to be aware that employers will evaluate candidates on the basis of how their diverse skill set can enhance their workplace, and how their personality will complement their new community.

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