



A STUDY ON EMPLOYABILITY SKILLS AND WORK EFFICIENCY AMONG SOFTWARE PROFESSIONALS IN CHENNAI

P. David Paul

Ph.D Research Scholar (Enrolment No. 7616), Manonmaniam Sundaranar University, Tirunelveli

Dr. M. V. Sudhakaran *

Professor and Head, School of Social Sciences, Tamil Nadu Open University, Chennai *
Corresponding Author

KEYWORDS :

INTRODUCTION

Suitable employment commensurate with the individual's skills and capabilities is a matter of concern for the students, their parents, their educators as well as the government. What is expected of the candidates by the employers are the readily transferrable skills that enable them to perform the assigned job roles in an effective manner and also to manifest various behavioural skills required according to each organization towards accomplishing the common organizational goals. However, the current educational system does not pay much attention to these transferable skills and the candidates are unable to apply their learning in work environments. The job entrants have an array of skills that they may not be aware of that are useful in the workplace. They need to recognise the skills that they already possess and how these can be transferred to the workplace. Further, the employers are highly concerned about the work output of their employees. The employees need to strike a balance between what is required of them in the industry and what they perform. The employees towards work performance need to utilize all their transferable skills through which they have to perform both in terms of quality and quantity. In the light of this situation, it was proposed through the present study to undertake an assessment of the employability skills and work efficiency of the young software professionals in Chennai City.

Employability Skills

Employability skill refers to a person's ability as whether he or she has capabilities and knowledge to get the job and maintain employment, and shift self-sufficiently if required.

Employability according to international labour organization's definition, it refers to individual "capable of combining experiences, capacities and needs, thus developing their competencies to face the labour context; they recognize themselves as the builders of their own paths identifying their own possibilities and difficulties, as well as those offered by their surrounding"

Employability skills are not usually discrete functions of work, although at time they can be. They operate within and between work functions and underpin work and integrate the different aspects of work. They are often not related to academic performance or technical performance and are closer to emotional intelligence than to traditional notions of intelligence. Employability skills are context-specific and cannot be accurately assessed away from a specific application for example, working in a team cannot be assessed outside a team engaged in meaningful work; problem-solving at work can't be assessed outside a work problem. They are not a package of skills, but operate in many different ways (Tilahun Mengesha Afrassa, 2008).

What is more required is that, everyone needs the skills to be able to manage themselves at work and between job, the learning that they

need. Employability Skills, in and of themselves, are not a new concept. They describe non-technical skills and competencies that have always been an important part of effective and successful participation in the workplace. Enterprises are increasingly asking for Employability Skills, and as a result learners and candidates for assessment need to know what these skills are and how to demonstrate them.

Some of the important skills that the employers are concerned are as follows:

Communication skills: The one skill mentioned most often by employers is the ability to listen, write and speak effectively.

Team work: It is an ability to work in groups/ teams, communication well with the other members and accomplishing the common goals through contributing effectively for the success of the group.

Problem solving: It involves the ability to find solution to problem based on the available resources and information, creativity reasoning ability etc. innovation problem-solving, generating workable solutions, resolving complaints etc. are the skills which contribute to productive outcomes.

Creative Thinking: It deals with one's ability to assess a situation seek multiple perspectives, gather more information based on the requirement and identify key issues that need to be addressed.

Planning/Organizing: It deals with one's ability to design plan, organize, setting goals/targets and implement task within an allotted time frame.

Leadership: This area deals with the ability to take charge, delegate, manage and get the thing done towards fulfillment of the organizational goals. Goal-driven, maintaining productive work climate, confident, motivated, mobilizing, coaching employees to meet high performance standards are outcome of this skill.

Self-Management: These skills give the employer "hints" as to whether or not one's personality will fit with that of the company, the bosses, employees, and customers.

Work Efficiency

Work efficiency is closely synonymous to Job performance. Most of the available literature highlights the concepts of Job performance. Job performance is a commonly used, yet poorly defined concept in industrial and organizational psychology, the branch of psychology that deals with the workplace. It's also part of Human Resources Management. It most commonly refers to whether a person performs their job well. Despite the confusion over how it should be exactly defined, performance is an extremely important criterion that relates to organizational outcomes and success. Among the

most commonly accepted theories of job performance comes from the work of John P. Campbell and colleagues. Coming from a psychological perspective, Campbell describes job performance as an individual level variable. That is, performance is something a single person does. This differentiates it from more encompassing constructs such as organizational performance or national performance which are higher level variables.

Characteristics of employees with high work efficiency

1. Develop goals and plans
2. Enhance communication among members
3. Develop and maintain positive relationships
4. Solve problems and make decisions on a timely basis
5. Successfully manage conflict
6. Facilitates productive meetings
7. Clarify roles for team members
8. Operate in a productive manner
9. Exhibit effective team leadership
10. Provide development opportunities for team members

Need and Importance of the Study

With the technological developments advancing very rapidly, software industry is one which is highly flourishing with the intake of huge number of workforce. Though the software professionals need to dispense their work related to their core competencies of software development and testing, the other set of skills called employability skills are highly essential to sustain and progress in their work place. Further, this industry pays highly commensurate to the degree of skill the incumbent possesses. The employers are highly conscious of their work efficiency which directly contributes to the productivity of self as well as the organization. The assessment of the levels of work efficiency will enable the individual employee as well as the employer to take appropriate action to level up the skills lacking so that they turn out to be an asset to the organization rather than being a liability.

Therefore, with this backdrop of vital significance, the present study was undertaken.

Statement of the Problem

The present study seeks to assess the levels of employability skills and work efficiency among software professionals in Chennai.

Objective of the Study

The present study is undertaken with the following objectives:

- To assess the levels of employability skills of the software professionals
- To evaluate the levels of work efficiency of the software professionals
- To study the relationship between employability skills and work efficiency among software professionals
- To study the differences in employability skills and work efficiency of the software professionals with regard to demographic variables

Research Design

The design adopted for the current research study is exploratory research design.

Hypotheses:

1. There will be no significant relationship between employability skills and work efficiency of the software professionals
2. There will be no significant relationship between the sub-dimensions of employability skills with the overall work efficiency of the software professionals

3. There will be no significant relationship between the sub-dimensions of work efficiency with the work overall employability skills of the software professionals

4. There will be no significant relationship between the sub-dimensions of Employability Skills and sub-dimensions of Work Efficiency of the software professionals

5. There will be no significant difference in the employability skills of the software professionals based on the demographic variables.

6. There will be no significant difference in the work efficiency levels of the software professionals based on the demographic variables.

Operational Definitions

Employability Skills

Employability refer to the level of readiness of an individual to take up a work which also includes possession of the requisite skills, knowledge, attitudes and an understanding about work environments in an organization that makes them to be productive and enables achieving the organizational goals.

Work Efficiency

The ability to accomplish an entrusted responsibility adeptly with greater degree of precision within the specified time in a graceful manner.

Sample

The sample included for the purpose of conducting the present study comprised of the software professionals who were engineering graduates.

Size of Sample

The total number of respondents included for the study constituted 80 software professionals who are presently working in 10 different software companies in Chennai. Among the total respondents 50 were male and 30 were female.

Sampling Technique Adopted

In order to select the respondents for including as subjects in the present study, simple random sampling technique was adopted.

Source of Sample

The respondents included in the present study were drawn from 10 small software companies (with not more than 25 employees) in Chennai who were working in their respective companies for at least two years and not below the age of 28 years.

Tools for Data Collection

For the purpose of the study, the following instruments were employed for collecting data from the respondents:

- Personal Data Sheet
- Employability Skills Assessment Scale
- Work Efficiency Assessment Schedule

Description of the Tools Used

1. Personal Data Sheet

For the purpose of collecting and recording personal and demographic related details of the respondents the personal data sheet was prepared.

2. Employability Skills Assessment Scale

For assessing the employability skills of the respondents, the employability skills assessment scale was developed. This scale has 44 test items grouped under nine different dimensions of employability skills viz., Communication, Leadership, Creative Thinking, Planning and Organising, Self-Management, Problem Solving, Team Work, Job Process Skills, and Time Management. Each

test item was provided with a three point scale for the subjects to indicate their responses as "I'm not as skilled as I'd like", "I'm skilled" and "I'm very skilled".

Scoring:

All the test items were assigned positive scoring except the test item number 30. If the subject responded "I'm not as skilled as I'd like" a score of 1 was assigned. For the response "I'm skilled", a score of 2 was assigned and if the subject indicated "I'm very skilled" for a test item, a score of 3 was provided. However, these scores were reversed for item number 30 while scoring the responses.

Thus, the score for each test item was arrived at and the total of all the scores obtained in respect of the 44 test items were added to derive the total employability skills score of a respondent.

Interpretation

Higher the employability score indicated that the respondent possessed good employability skills and a lesser score indicated that the employability skill of the respondent was poor.

Reliability

For the purpose the present study, the Employability Skills Assessment Scale developed by the Researchers. Initially the tool was administered on 50 Engineering Graduates who were at the verge of completing their studies and were about to venture into some gainful employment activity. The cronbach's Alpha coefficient of Reliability was found to be 0.6. However, for the purpose of the present study, the tool was pre-tested among 40 software professionals in Chennai who were possessing similar characteristics as the respondents of the main study. Through this process, the rating scale was reduced to three points instead of a five point rating scale due to the convenience of the respondents. Through this process, the reliability of the tool was established. The Cronbach's Alpha Reliability Coefficient was found to be 0.868 for the Employability Skills Assessment Scale after incorporating the necessary changes after the pre-testing.

Validity

Face and content validity of the tool was established with the help of experts and practitioners in the field who thoroughly scrutinized the tool and suggested modifications.

Work Efficiency Assessment Schedule

To assess the work efficiency of the respondents, the work efficiency assessment schedule was formulated based on the job content along with the behaviourally anchored aspects at work. Thus a total of 50 work performance and work behavior related items were included under 6 different dimensions viz., Job knowledge, Job Performance, Devotion to Duty, Sociability, Communication, and Managing Resources. For each item of assessment, a six point rating scale was provided for the rater to objectively assess the level of the employee being rated on the respective assessment items viz., excellent, very good, good, fair, poor and very poor.

Scoring

For the purpose of scoring the ratings of the rater on the work efficiency assessment schedule, the responses for excellent, very good, good, fair, poor and very poor were assigned scores of 6, 5, 4, 3, 2, and 1 respectively. These scores were totaled for each of the six dimensions separately to obtain the rating for that respective dimension and the total score of all the dimensions were added up to obtain the overall work efficiency score in respect of an employee being rated.

Interpretation

Higher the score on the work efficiency assessment schedule

indicated that the efficiency of work performance is also higher and vice-versa.

Work Efficiency Score	Interpretation
50-91	Very Poor Work Efficiency
92-133	Poor Work Efficiency
134-175	Fair Work Efficiency
176-217	Moderate Work Efficiency
218-259	Good Work Efficiency
260-300	Very Good Work Efficiency
260-300	Excellent Work Efficiency

Reliability

Based on the pilot testing with 40 software professionals, the reliability of the tool was established as follows:

Dimension	Cronbach's Alpha Coefficient of Reliability
Job knowledge	0.776
Job Performance	0.764
Devotion to Duty	0.832
Sociability	0.758
Communication	0.747
Managing Resources	0.791
All Dimensions	0.941

Validity

Face and content validity of the tool was established with the help of experts and practitioners in the field who thoroughly scrutinized the tool and suggested modifications.

Data Collection

For the purpose of the collecting the data, the researcher administered the tool individually to all the respondents. Initially the respondents were requested by the investigator to furnish their demographic details on the Personal Data Sheet attached along with the tools for data collection. Further, they were provided specific instructions to provide their responses on the Employability Skills Assessment Scale. With regard to the Work Efficiency Assessment Scale, it was a requisite that the concerned employer of the respondent had to furnish necessary data and also provide work efficiency rating on the prescribed schedule in respect of the software professional working under him/her. Thus, data was obtained on employability skills from 80 software professionals and the ratings on their levels of work efficiency was obtained from their respective employers/reporting officers.

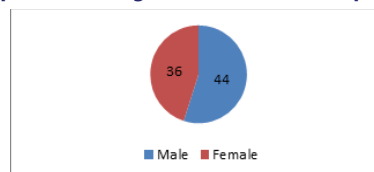
Data analysis

The data thus collected from the data were scored as per the procedures indicated above. The data was then classified and tabulated for the convenience of statistical analysis. Descriptive statistical analytical procedures were used to describe the levels of employability skills and work efficiency of the respondents. Inferential statistical techniques such as t-test, ANOVA were used to study the statistical difference between various categories and groups. Pearson's Product Moment Correlation was computed to find out the significant relationships between the study variables and also to study the influences of the demographic variables on the study variables.

Results

The following sections present the results of the present study.

Graph -1. Showing the Gender of the Respondents



Graph –1. Shows the gender break-up of the respondents included in the study. The total sample consists of 80 software professionals working in Chennai. Among them, 44 were Male and 36 were female respondents.

Table – 1: Family Type of the Respondent

Family Type	No of Respondent		
	Male	Female	Total
Joint	9	9	18
Nuclear	33	27	60
Extended	2	0	2
Total	44	36	80

Table –2: Details of Previous Employment of the Respondents

Whether employed previously	No of Respondent		
	Male	Female	Total
Yes	8	2	10
No	36	34	70
Total	44	36	80

When the respondents were inquired about their previous jobs, only 10 respondents had worked previously while 70 respondents told that they had not worked previously and the current position as Software Professional was their first employment.

Table –3: Community Details of the Respondents

Community	No of Respondent		
	Male	Female	Total
General	17	10	27
SC	4	6	10
ST	4	4	8
OBC	19	16	35
Total	44	36	80

From the demographic details furnished by the respondents, it was found that 35 respondents belonged to OBC category, 27 were from the general category while 10 respondents each belonged to scheduled caste and scheduled tribes respectively.

Table – 4 Religion of the Respondents

Religion	No of Respondent		
	Male	Female	Total
Hindu	44	35	79
Muslim	0	1	1
Total	44	36	80

It was found from the details provided by the respondents that 79 respondents follow Hindu religion whereas only one respondent follows Islamic faith.

Table – 5 Employability skills of the each dimension wise Respondent

Each Dimension wise	Gender	No of Respondent	Mean Values
Team Work	Male	44	21.20
	Female	36	20.50
	Total	80	20.89
Problem solving	Male	44	11.55
	Female	36	11.31
	Total	80	11.44
Creative thinking	Male	44	11.86
	Female	36	10.83
	Total	80	11.40

Planning	Male	44	4.75
	Female	36	4.47
	Total	80	4.62
Time management	Male	44	4.25
	Female	36	4.42
	Total	80	4.32
Leadership	Male	44	16.6136
	Female	36	16.3889
	Total	80	16.5125
Self- Management	Male	44	15.89
	Female	36	16.11
	Total	80	15.99
Employability Skills	Male	44	101.57
	Female	36	99.39
	Total	80	100.59

With regard to the employability skills of the respondents, the Male respondents on the average scored higher than the female respondents in Team Work, Problem Solving, Creative Thinking, Planning and Leadership. The female respondents on the average scored high on Time-management and Self-management than their male counterparts. The overall mean scores of employability skills showed that the male respondents scored higher than the female respondents.

Table – 6: Mean Scores of Employability Skills of the Respondents based on their Gender

Gender	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation	Level of Employability Skills
Male	44	101.57	10.610	High
Female	36	99.39	10.864	High
Total	80	100.59	10.712	High

Based on gender it was found that on an average, the male respondents were possessing higher degree of employability skills than the female respondents.

Table – 7: Mean Scores of Employability Skills of the Respondents based on their Previous Work Experience

Work Experience	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
Yes	25	100.6	9.268
No	55	97.82	10.628
Total	80	99.21	9.814

Based on the work experience, it was found that only 25 respondents were possessing previous work experience and for majority of them this was their first kind of employment. However, it was found that on an average, those who possessed previous work experience were manifesting higher degree of employability skills than those who did not possess any previous work experience.

Table - 8: Mean Scores of Employability Skills of the Respondents based on their Parental Education (Father's Education)

Fathers Education	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
Illiterate	8	102.50	5.753
5 th Class	8	98.13	7.990
8 th Class	17	100.50	12.021
10 th Class	8	100.80	11.870
12 th Class	13	100.38	9.102
Graduate	21	101.00	10.239
Post Graduate	5	101.22	13.057
Total	80	100.78	10.633

Based on the level of parent's education (father's education) it was found that on an average, the respondents possessed higher employability skills who had their fathers as illiterates followed by parents who completed post-graduation, graduation, 10th class, 8th class, 12th class and 5th class respectively. This showed that the respondents who hailed from family backgrounds with lesser education were possessing good employability skills. This might be due to the efforts put in by those respondents to acquire and enhance such skills. It is to be noted here that the role of education cannot be ruled out here because of the fact that the number of respondents whose parents possessed post-graduation qualification were the highest and the employability skills of these respondents were also high as compared to the other levels of education of their parents. Therefore education plays a pivotal role in enhancing the employability skills. Besides, the other factors such as motivation, the parenting styles, environment of the respondents also are equally important to shape their learning and skills.

Table - 9 Mean Scores of Employability Skills of the Respondents based on their Parental Occupation (Father's Occupation)

Fathers Occupation	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
Private Sector	46	101.98	10.006
Government Sector	14	98.64	7.428
Tailor	3	103.33	12.220
Petty Shop owner	3	102.00	19.079
Business	5	99.60	9.044
Teacher	4	96.75	24.554
Advocate	1	93.00	.
Daily Wage Labourers	1	95.00	.
Total	77	100.79	10.702

From the data presented in Table - 10, it is observed that based on the parental occupation (father's occupation), the level of the employability skills of the respondents were computed and found that respondents whose fathers were Tailors possessed high employability skills, followed by the respondents whose fathers were petty shop owners, private sector employees, businessmen, government employees, teacher, advocate and daily wage labourer respectively. It is interesting to note that the wards of the teachers were possessing lesser degree of employability skills as compared to the wards of other professions.

Table - 10: Mean Scores of Employability Skills of the Respondents based on their Parental Income (Father's Income)

Father income	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
0-5000	3	103.33	9.713
5001-10000	8	106.00	8.864
10001-20000	17	100.87	10.623
20001-25000	18	101.32	13.642
25001-30000	16	97.63	11.051
30001-35000	9	98.89	8.298
35001-40000	1	96.50	6.364
40001-45000	1	102.00	.
55001-60000	3	106.67	3.786
Total	76	100.83	10.768

Based on the parental income (fathers income) the respondents employability skills were classified and found that those respondents with their fathers earning higher level of income were manifesting better employability skills while parents with lesser

income were also possessing better employability skills. However, the respondents who had fathers earning high income were affordable to acquire newer skills through taking up additional courses while the respondents who had fathers with lesser income levels, they could develop their employability skills based on their intrinsic and extrinsic motivational factors.

Table - 11: Mean Scores of Employability Skills of the Respondents based on their Parental Education (Mothers Education)

Mothers education	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
Illiterate	18	99.78	7.930
5th Class	21	99.38	12.106
8th Class	18	102.17	10.988
10th Class	12	104.17	11.754
12th Class	10	98.60	10.946
Post graduate	1	89.00	.
Total	80	100.59	10.712

From the table - 11 it was found that based on the educational qualification of the mothers of the respondents, the employability skills scores were classified. It was observed that the respondents possessed better degree of employability skills who had mothers with lesser education and as their mothers educational level increased, the respondents manifested a decrease in their employability skills. This indicates that employability skills of the respondents are inversely proportional to their mothers education.

Table - 12: Mean Scores of Employability Skills of the Respondents based on their Parental Occupation (Mothers Occupation)

Mothers Occupation	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
Home Maker	75	100.84	10.698
Government Employee	1	104.00	.
Private Sector Employee	3	98.67	12.897
Tailoring	1	103.00	.
Total	80	100.82	10.571

From the above table it was found that the respondents who had their mothers working in private sector showed lesser degree of employability skills than the respondents who had their mothers who were house wives.

Table - 13: Mean Scores of Employability Skills of the Respondents based on their Parental Income (Mothers Income)

Mothers Income	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
0-5000	2	91.50	4.950
5001-10000	2	100.50	3.536
10001-15000	1	100.00	.
15001-20000	3	99.67	15.948
Total	8	97.88	9.672

From the table above, it is found that the employability skills of the respondents from middle income groups were possessing higher employability skills.

Table - 14: Mean Scores of Employability Skills based on the number of siblings of the Respondents

Number of siblings	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
One	4	103.00	7.439

Two	24	102.88	12.241
Three	33	98.64	10.249
Four	17	101.53	10.032
Five	2	92.50	7.778
Total	80	100.59	10.712

It was found that the respondents who had one sibling possessed better employability skills followed by those who had two siblings, four siblings tree siblings and five siblings respectively.

Table – 15: Mean Scores of Employability Skills based on the ordinal position of the Respondents

Ordinal position	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
First	34	100.21	9.174
Second	31	101.90	12.180
Third	12	96.00	9.863
Four	3	109.67	10.214
Total	80	100.59	10.712

Based on the ordinal position of the respondents, it was found that the respondents who were in the fourth ordinal position possessed greater degree of employability skills followed by who were in the ordinal positions second, first and third respectively.

Table – 16: Mean Scores of Employability Skills based on the Family Type of the Respondents

Family type	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
Joint	18	98.89	11.318
Nuclear	60	101.43	10.314
Extended	2	90.50	17.678
Total	80	100.59	10.712

Based on the family type of the respondents, it was found that the mean scores of the employability skills were higher for those who were from the Nuclear family systems followed by those in the joint and extended families respectively.

Table – 17: Mean Scores of Employability Skills based on the Community of the Respondents

Community	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
GEN	27	101.93	9.872
SC	10	102.10	13.404
ST	8	98.13	8.254
OBC	35	99.69	11.232
Total	80	100.59	10.712

Based on the community of the respondents, it was found that the respondents who belonged to scheduled caste scored high on employability skills followed by those respondents belonging to general, OBC and Scheduled Tribe categories respectively.

Table - 18 Mean Scores of Employability Skills based on the Religion of the Respondents

Religion	Number of Respondents	Mean Scores on Employability Skills	Std. Deviation
Hindu	79	100.48	10.738
Muslim	1	109.00	.
Total	80	100.59	10.712

From the table above it was found that on an average, the respondents belonging to Islamic faith scored high on

employability skills than the respondents who followed Hindu religion. However, it was found that only one respondent belonged to Muslim religion and therefore the average of their employability skills might change in case the number of respondents increase.

Table - 19: Work Efficiency sub Dimension wise of the Respondent

Each Dimension wise	Gender	No of Respondent	Mean Values
Job Knowledge	Male	44	23.77
	Female	36	24.83
	Total	80	24.25
Job Performance	Male	44	47.20
	Female	36	47.19
	Total	80	47.20
Devotion of duty	Male	44	47.86
	Female	36	46.83
	Total	80	47.40
Sociability	Male	44	47.89
	Female	36	48.14
	Total	80	48.00
Communication	Male	44	48.57
	Female	36	49.72
	Total	80	49.09
Managing Resources	Male	44	23.95
	Female	36	23.42
	Total	80	23.71
Work Efficiency	Male	44	239.25
	Female	36	240.14
	Total	80	239.65

Over all, the respondents have been rated to possess good work efficiency and its dimensions by their respective employers. Male Respondents scored higher on the Job Performance, Devotion to Duty, Sociability and Managing Resources dimensions of Work Efficiency than the Female Respondents. The Female Respondents scored high on the average on the Job Knowledge and Communication dimensions of Work Efficiency than the Male Respondents. Based on the total score on work efficiency, the Female respondents scored higher than the Male respondents on the average.

.Table - 20 Mean Scores of Work Efficiency based on the Gender of the Respondents

Gender	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
Male	44	239.25	22.821
Female	36	240.14	25.565
Total	80	239.69	24.193

On the average, it was noticed that the female respondents showed higher work efficiency as compared with their male counterparts.

Table – 21: Mean Scores of Work Efficiency based on the Parental Education (Fathers Education) of the Respondents

Father Education	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
Illiterate	8	244.50	18.360
5th Class	8	243.88	12.484
8th Class	17	217.50	28.991
10th Class	8	246.87	31.509
12th Class	13	244.50	17.944
Graduate	21	239.92	22.541
Post Graduate	5	240.10	23.931
Total	80	240.41	23.763

Based on the education of the fathers of the respondents, it was found that those respondents who had their fathers who have passed SSLC scored high on their work efficiency ratings followed by the respondents whose fathers have passed higher secondary schooling, illiterates, fifth class, post graduates, graduates, and those who have passed eighth class respectively.

Table – 22 Mean Scores of Work Efficiency based on the Parental Occupation (Fathers Occupation) of the Respondents

Father Occupation	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
Private Employee	46	242.93	18.413
Government Employee	14	234.93	35.920
Tailor	3	221.00	19.079
Petty Shop owner	3	244.67	28.919
Business	5	252.20	21.534
Teacher	4	233.50	35.986
Advocate	1	222.00	.
Daily wages	1	246.00	.
Total	77	240.57	23.875

From the data above it was found that on the average, the wards of the fathers who were businessmen scored high ratings on their work efficiency levels, followed by those respondents whose fathers were daily wage workers, shop keepers, private employees, government employees, teachers, advocates, and tailors respectively.

Table – 23: Mean Scores of Work Efficiency based on the Parental Income (Fathers Income) of the Respondents

Father Income	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
5001-10000	11	230.00	22.220
10001-20000	17	240.00	27.529
20001-25000	18	243.47	18.907
25001-30000	16	247.81	21.615
30001-35000	9	238.89	34.607
35001-40000	2	222.50	36.062
40001-45000	1	227.00	.
55001-60000	3	250.00	22.605
Total	77	240.74	23.990

While comparing with the income levels of the fathers of the respondents and the work efficiency levels of the respondents, the respondents whose fathers earned the highest secured the highest ranking on work efficiency while the respondents secured lesser rating whose fathers earned between Rs.35001-40000 per month.

Table – 24: Mean Scores of Work Efficiency based on the Parental Education (Mothers Education) of the Respondents

Mother Education	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
Illiterate	18	247.33	20.211
5th Class	21	235.00	29.601
8th Class	18	239.83	20.757
10th Class	12	244.08	26.973
12th Class	10	233.00	16.173
Post Graduate	1	209.00	.
Total	80	239.65	23.942

Based on the education of the mothers of the respondents, it was found that the respondents scored highest on their level of work efficiency whose mothers were illiterates and contrarily, the

respondents whose mothers were post graduates scored the least ratings on an average.

Table – 25: Mean Scores of Work Efficiency based on the Parental Occupation (Mothers Occupation) of the Respondents

Mother Occupation	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
House wife	75	239.30	23.666
Government Employee	1	209.00	.
Private Employee	3	253.33	7.024
Tailoring	1	284.00	.
Total	80	240.01	23.873

The wards of mothers who were practicing tailoring scored the highest ratings on work efficiency on the average as compared with the least ratings obtained by the respondent whose mothers was a government employee.

Table – 26: Mean Scores of Work Efficiency based on the Parental Income (Mothers Income) of the Respondents

Mother Income	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
0-5000	2	250.00	5.657
5001-10000	2	256.00	39.598
10001-15000	1	228.00	.
15001-20000	3	226.67	28.885
Total	8	240.00	25.796

It was found that based on the income of the mothers of the respondents, the respondents whose mothers earned between Rs.5001-10000 per month got the highest ratings on work efficiency on the average followed by the wards of the mothers who earned up to Rs.5000, Rs.10001-15000 and Rs.15001-20000 respectively.

Table – 27: Mean Scores of Work Efficiency based on the number of Siblings of the Respondents

Number of sibling	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
One	4	236.25	10.689
Two	24	240.88	22.930
Three	33	235.94	27.067
Four	17	245.82	22.230
Five	2	240.50	17.678
Total	80	239.65	23.942

Based on the number of siblings, the work efficiency rating of the respondents were computed and found that on the average, those respondents who had 4 siblings got the highest rating on work efficiency followed by those who had 1, 2, 3, and 5 siblings respectively.

Table – 28: Mean Scores of Work Efficiency based on the Ordinal Position of the Respondents

Ordinal position	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
First	34	241.41	22.374
Second	31	236.65	26.931
Third	12	241.08	23.500
Fourth	3	245.00	14.731
Total	80	239.65	23.942

Based on the above table it is found that the respondents who were in the fourth ordinal position got the highest ratings on the work efficiency on the average followed by the respondents who have first, third and second ordinal positions respectively.

Table – 29: Mean Scores of Work Efficiency based on the Family Type of the Respondents

Types of family	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
Joint	18	236.50	25.480
Nuclear	60	239.88	23.324
Extended	2	261.00	32.527
Total	80	239.65	23.942

When computed the averages of the work efficiency scores of the respondents based on their family type it was found that the respondents who hailed from extended family system obtained higher rating followed by those living in the joint and nuclear family types.

Table – 30: Mean Scores of Work Efficiency based on their the Previous Employment Experience of the Respondents

Previous Employ	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
Yes	10	245.00	29.537
No	70	238.89	23.190
Total	80	239.65	23.942

With reference to the previous work experience of the respondents, it was found on the average that those respondents who had prior work experience showed higher levels of work efficiency as compared to their counterparts who had less or no work experience.

Table – 31: Mean Scores of Work Efficiency based on the Community of the Respondents

Community	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
GEN	27	238.93	23.107
SC	10	237.10	32.549
ST	8	244.50	14.852
OBC	35	239.83	24.287
Total	80	239.65	23.942

With regard to the community of the respondents, the average scores of their work efficiency were classified and found that the respondents belonging to Scheduled Tribes scored higher on their work efficiency followed by OBC, General and Scheduled Caste Categories.

Table - 32 Mean Scores of Work Efficiency based on the Religion of the Respondents

Religion	Number of Respondents	Mean Scores on Work Efficiency	Std. Deviation
Hindu	79	239.68	.
Muslim	1	237.00	24.093
Total	80	239.65	23.942

It was found that the respondents who followed Hindu religion scored high on their levels of work efficiency as compared to the respondents who followed Islam. This was found contrary to the employability skills wherein, the respondents who followed Islam scored high on employability skills than those who followed Hindu Religion.

Table: 33: Correlation between Employability Skills and Work Efficiency

Variables	Correlation Coefficient
Employability Skills	.758
Work Efficiency	

On analysis of the data, it was found that there was a significant relationship found between the independent and dependent variable employability skills and work efficiency of the respondents.

It is to be noted here that the employability skills are those basic skills which enables a person to secure a job, enables him to maintain and perform well on a job. These set of skills aid in enhancing work performance and increases the quality of work output. Arocena, P, Imanol Núñez, Mikel Villanueva, (2007) in their study observed that employability has close relationship with one's career self-efficacy. Through the present study, it was observed that employability skills can enhance one's level of work efficiency.

The integrationists' views suggest that employability is an interaction of person, occupational skills and labour market demands. Therefore, the phenomenon of employability of workers is not just dependent upon the labour market forces, but also on other factors. A recent study found that the essential features of employability encompasses individual's potential (capabilities) of being successful in any labour market situation with focus on willingness as well as capacity to be successful in a variety of jobs (Alison Taylor, 1999). It can be concluded focus on willingness to work and capacities to be successful in variety of jobs are also of paramount significance which would contribute to work efficiency apart from the employability skills. Therefore the Hypothesis – 1 stating that there will be no significant relationship between employability skills and wok efficiency of the software professionals was rejected

Table – 34: Correlation between the sub dimensions of Employability Skills and Work Efficiency

Variables	Correlation Coefficient
Communication	.465**
Team Work	.346**
Problem Solving	.317**
Creative Thinking	.059
Planning and Organising	.411**
Time Management	.323**
Leadership	.084
Self Management	.330**

** Significant at 0.01 level

The correlational analysis between the sub-dimensions of employability skills and the overall work efficiency scores indicated that there was a significant relationship between Communication, Team Work, Problem Solving, Planning and Organising, Time Management, Self-Management. However, there was no significant relationship found between the sub dimensions of employability skills viz., Leadership, and Creative Thinking with their work efficiency levels.

Al-Alawneh, Muhammad K. (2011) observed creativity as resulting from the interaction of individual, group and organisational variables. Aukje Nauta, Annelies van Vianen, Beatrice van der Heijden, Karen van Dam and Marja Willemsen,(2009) similarly focussed on social and organisational factors arguing in particular that creativity at work is supported by organisational and supervisory encouragement as well as by a diversity of ideas within the work group, Beatrice van der Heijden, (2002)

The Hypothesis-2 stating that “there will be no significant relationship between the sub-dimensions of employability skills with the overall work efficiency of the Software Professionals” was rejected.

Table – 35: Correlation between the sub dimensions of Work Efficiency and Employability Skills

Variables	Correlation Coefficient
Job knowledge	3.371**
Job Performance	.388**
Devotion to Duty	.230**

Sociability	.147
Communication	.309**
Managing Resources	.233**

** Significant at 0.01 level

While performing correlation analysis between the dimensions of work efficiency with the overall employability skills scores, it was found that there was a significant relationship between Job knowledge, Job Performance, devotion to duty, Communication, Managing Resources and the overall score of the employability Skills except Sociability. As observed earlier, the employability skills enable a person to secure a job or to sustain on a job. However, sociability is contingent on the personal characteristics, besides personal attitudes.

The Hypothesis-3 stating that "there will be no significant relationship between the sub-dimensions of work efficiency with the work overall employability skills of the Software Professionals" was rejected.

Table – 36: Correlation between the sub dimensions of Work Efficiency and the sub dimensions of Employability Skills

Correlation between	Job knowledge	Job Performance	Devotion to Duty	Sociability	Communication	Managing Resources
Communication	.396**	.303**	.346**	.108	.303**	.219*
Team Work	.374**	.362**	.303**	.117	.296**	.319**
Problem Solving	.321**	.365**	.291**	.118	.361**	.228*
Creative Thinking	.069	.150	.197	.136	.114	.111
Planning and Organising	.325**	.322**	.398**	.115	.231*	.342**
Time Management	.303**	.308**	.306**	.132	.305**	.315**
Self Management	.373**	.335**	.380**	.111	.214*	.383**
Leadership	.020	.171	.136	.181	.029	.111

** significant at 0.01 level

* significant at 0.05 level

From the table above it is evident that there exists a significant correlation between the dimensions of work efficiency and the dimensions of employability skills. However, the dimensions of employability skills viz., creative thinking and leadership did not correlate with the other sub-dimensions of work efficiency. Further the sub dimension of work efficiency Sociability did not have a significant correlation with the dimensions of employability skills.

Therefore, the Hypothesis-4 stating that "there will be no significant relationship between the sub-dimensions of Employability Skills and sub-dimensions of Work Efficiency of the Software Professionals" is rejected.

Table – 37: Significance of Difference in Employability Skills with regard to Gender

Variable	Mean	Standard Deviation	t-ratio	Level of Significance
Male	101.57	10.610	.904	NS
Female	99.39	10.864		

On investigating the differences with regard to employability skills based on gender, it was found that there was no significant

difference found between the male and female respondents. However, it was found from the mean value that males possessed higher degree of employability skills than the females.

Table – 38: Significance of in Employability Skills with regard to Father's Education, Occupation and Income

Demographic Variable	Variable	Sum of squares	Df	Mean square	F-ratio	Level of Significance
Father's Education	Between group	155.485	34	4.573	1.108	.371
	Within Group	177.400	43	4.126		
	Total	332.885	77			
Father's Occupation	Between group	127.175	34	3.740	1.518	.099
	Within Group	103.500	42	2.464		
	Total	230.675	76			
Father's Income	Between group	134.026	34	3.942	.981	.519
	Within Group	164.750	41	4.018		
	Total	298.776	75			

From the above ANOVA table it is observed that there exists no significant difference between the parental education (fathers education) and the employability skills of the respondents. It is evident here that the education one possess is directly transferred into skill form. The parental education has limited role in directly transferring skill to their offspring. It would only be possible for the parents to provide appropriate environment for developing the skills. However, successful acquisition of the skills still vests with the individual.

From the table above, it is observed that there exists no significant difference between the Parental Occupation (Fathers Occupation) and the Employability Skills of the respondents. The employability skill is unique to each individual and does not relate much with the parental occupation. The success to secure a job, survival and skillful performance depends on the degree of acquisition and utilization of the skills. On analysis, it was found that there exists no significant difference between the Parental Income (Fathers Income) and the Employability Skills of the Respondents.

Table – 39: Significance of in Employability Skills with regard to Mother's Education, Occupation and Income

Demographic Variable	Variable	Sum of squares	Df	Mean square	F-ratio	Level of Significance
Mother's Education	Between group	53.654	35	1.533	.662	.895
	Within Group	101.833	44	2.314		
	Total	155.487	79			
Mother's Occupation	Between group	127.175	34	3.740	1.518	.099
	Within Group	103.500	42	2.464		
	Total	230.675	76			
Mother's Income	Between group	134.026	34	3.942	.981	.519
	Within Group	164.750	41	4.018		
	Total	298.776	75			

The Table- 39 shows that there exists no significant difference between the Mothers Education and the employability skills of their wards. As was observed in the case of the father's education of the respondents it is seen that the parental education does not show any significant difference between the respondents with regard to their employability skills.

On computing the one-way analysis of variance for the respondent's employability skills based on the occupation of their mothers, it was found that there exists no significant difference between the respondents in their employability skills with regard to the parental occupation. This was also observed in the case of the father's occupation of the respondents. Therefore, the study reveals that there exists no significant difference in employability skills of the respondents based on the parental occupation.

Table-39 shows the f-ratio between different categories of respondents based on their mother's income and their employability skills. It was observed that there exists no significant difference between the mother's income of the respondents and the employability skills of the respondents. The same was also observed in the case of father's income. Therefore it is inferred in this study that there exists no significant difference between the parental income and the employability skills of the respondents.

Table – 40: Significance of in Employability Skills with regard to Number of Siblings, Ordinal Position, Family Type and Work Experience

Demographic Variable	Variable	Sum of squares	Df	Mean square	F-ratio	Level of Significance
Number of Siblings	Between group	28.754	35	.822	1.041	.446
	Within Group	34.733	44	.789		
	Total	63.488	79			
Ordinal Position	Between group	34.133	35	.975	2.076	.011**
	Within Group	20.667	44	.470		
	Total	54.800	79			
Family Type	Between group	10.283	35	.294	1.337	.179
	Within Group	9.667	44	.220		
	Total	19.950	79			
Work Experience	Between group	3.033	35	.087	.667	.891
	Within Group	5.717	44	.130		
	Total	8.750	79			

With regard to the number of siblings of the respondents, it was found that there exists no significant difference between the number of siblings and their employability skills.

On analysis, it was found that there was a significant difference existing among the respondents with regard to their ordinal position and their levels of employability skills they currently possess. The mean scores of the respondents based on their ordinal position indicates that the respondents who were in the fourth ordinal position possessed greater degree of employability skills followed by who were in the ordinal positions second, first and third respectively.

With reference to the family type of the respondents, the significant differences computed among the respondents in their employability skills, it was found that the F-ratio was 1.337 which was not significant. Therefore the respondents do not significantly

differ in their employability skills based on their family types.

Table – 40 shows the F-ratio between the previous work experience of the respondents and their employability skills; it was found that there exists no significant difference among the respondents with regard to their previous work experience and their employability skills. However, for majority of the respondents this was the first work experience.

Table – 41: Significance of in Employability Skills with regard to Number of Siblings and Religion

Demographic Variable	Variable	Sum of squares	Df	Mean square	F-ratio	Level of Significance
Community	Between group	74.488	35	2.128	1.377	.157
	Within Group	68.000	44	1.545		
	Total	142.488	79			
Religion	Between group	.321	35	.009	.605	.936
	Within Group	.667	44	.015		
	Total	.987	79			

With regard to the F-ratio computed based on the community of the respondents and their employability skills, it was found that there was no significant difference among the respondents based on their community and their employability skills.

On analysis to probe any differences among the respondents with regard to their religion and their employability skills, it was found that there existed no significant difference between the respondents' religion and their employability skills.

Therefore, the Hypothesis-5 stating that "there will be no significant difference between the Software Professionals in their overall employability skills based on the demographic variables" is rejected in view of the above significant difference.

Table – 42 Significance of Difference between Gender and Work Efficiency

Variable	Mean	Standard Deviation	t-ratio	Level of Significance
Male	239.25	23.017	1.214	NS
Female	240.14	24.782		

Based on the gender, the T-ratio was calculated for the respondents with regard to their work efficiency skills. There was no significant difference found among the respondents with regard to their gender and levels of work efficiency.

Table – 43: Significance of in Work Efficiency with regard to Father's Education, Occupation and Income

Demographic Variable	Variable	Sum of squares	Df	Mean square	F-ratio	Level of Significance
Father's Education	Between group	180.885	50	3.618	.643	.913
	Within Group	152.000	27	5.630		
	Total	332.885	77			
Father's Occupation	Between group	142.175	50	2.844	.835	.713
	Within Group	88.500	26	3.404		
	Total	230.675	76			

Father's Income	Between group	157.610	50	3.152	.558	.960
	Within Group	141.167	25	5.647		
	Total	298.776	75			

While it was noticed that there existed significant difference between the respondents in their work efficiency based on their educational qualification, there was no significant difference obtained between the respondents work efficiency scores based on their fathers education.

With regard to the fathers' occupation, there was no significant difference observed among the respondents in their work efficiency levels. This was also noticed in the case of the employability skills of the respondents that no significant differences existed with regard to the fathers' occupation.

From the table above, the F-ratio did not show any significant differences among the respondents in their work efficiency based on the Fathers Income.

Table – 44: Significance of in Work Efficiency with regard to Mother's Education, Occupation and Income

Demographic Variable	Variable	Sum of squares	Df	Mean square	F-ratio	Level of Significance
Mother's Education	Between group	85.821	51	1.683	.676	.889
	Within Group	69.667	28	2.488		
	Total	155.488	79			
Mother's Occupation	Between group	16.968	50	.339	.905	.629
	Within Group	10.500	28	.375		
	Total	27.468	78			
Mother's Income	Between group	11.375	6	1.896	3.792	.374
	Within Group	.500	1	.500		
	Total	11.875	7			

As was observed in the case of employability skills, there was no significant difference noticed among the respondents in their work efficiency with regard to their Mothers Education.

Through this study it was found that the respondents did not significantly differ in their work efficiency based on their Parental Occupation.

Based on the Mothers income, the work efficiency of the respondents was analysed. It was found that the respondents did not significantly differ with regard to their mothers income.

Table – 45: Significance of in Work Efficiency with regard to Number of Siblings, Ordinal Position, Family Type and Work Experience

Demographic Variable	Variable	Sum of squares	Df	Mean square	F-ratio	Level of Significance
Number of Siblings	Between group	44.488	51	.872	1.286	.240
	Within Group	19.000	28	.679		
	Total	63.488	79			

Ordinal Position	Between group	38.633	51	.758	1.312	.222
	Within Group	16.167	28	.577		
	Total	54.800	79			
Family Type	Between group	12.783	51	.251	.979	.538
	Within Group	7.167	28	.256		
	Total	19.950	79			
Work Experience	Between group	3.750	51	.074	.412	.997
	Within Group	5.000	28	.179		
	Total	8.750	79			

The respondents' level of work efficiency was analysed based on their number of siblings. Based on the number of siblings of the respondents, the respondents did not differ significantly.

With respect to the ordinal position of the respondents, the work efficiency the significant differences were computed and found that the F-ratio was .222 which was not significant. Therefore the respondents did not significantly differ in their work efficiency based on their ordinal position.

The respondents work efficiency levels were analysed based on the type of family from which they hail. The F-ratio was found to be .979 with respect to the family types of the respondents and their work efficiency scores. There was no significant difference noticed among the respondents in their work efficiency with respect to their family types.

The previous work experience of the respondents were taken into account the analysis and found that for most of them the current position was their first job. Based on the previous work experience and no work experience of the respondents, the F-ratio was calculated for their work efficiency scores. It was found that the F-ratio was .412 which was not found to be significant. This showed that the respondents did not significantly differ in their work efficiency based on their work experience.

The respondents did not significantly differ in their work efficiency based on their religion. The F-ratio was .179 which revealed that there was no statistically significant difference. Therefore, it was inferred that there exist no significant difference between the respondents in their work efficiency levels based on their religion.

Therefore, the Hypothesis-5 stating that "there will be no significant difference in the work efficiency based on the demographic variables is accepted as there were no significant differences found.

Conclusions

Based on the results the following conclusions were drawn:

- The overall mean scores of employability skills showed that the male respondents scored higher than the female respondents
- Male respondents on the average scored higher than the female respondents in Team Work, Problem Solving, Creative Thinking, Planning and Leadership.
- The female respondents on the average scored high on Time-management and Self-management than their male counterparts..
- Male respondents were possessing higher degree of employability skills than the female respondents
- Those who possessed previous work experience were having

higher degree of employability skills than those who did not possess any previous work experience.

- The respondents who had fathers earning high income had higher employability skills
- The respondents who had one sibling possessed better employability skills than those who had more than one
- Respondents who were in the fourth ordinal position (last position) possessed greater degree of employability skills
- Employability skills were higher for those who were from the Nuclear family
- Based on the total score on work efficiency, female respondents scored higher than the male respondents on an average.
- Male respondents scored higher on the Job Performance, Devotion to Duty, Sociability and Managing Resources dimensions of Work Efficiency
- Female respondents scored high on the average on the Job Knowledge and Communication dimensions of Work Efficiency than the Male Respondents.
- Respondents whose fathers earned the highest secured the highest scores on work efficiency
- Respondents who had 4 siblings (more number of siblings) got the highest rating on work efficiency
- Significant relationship found between the independent and dependent variable i.e., employability skills and work efficiency
- The correlation between the sub-dimensions of employability skills and the overall work efficiency scores indicated that there was a significant relationship between communication, team work, problem solving, planning and organizing, time management, self-management.
- There was a significant relationship between job knowledge, job performance, devotion to duty, communication, managing resources and the overall score of the employability skills
- Significant relationship between the dimensions of work efficiency and the dimensions of employability skills were established. However, the dimensions of employability skills viz., creative thinking and leadership did not correlate with the other sub-dimensions of work efficiency. Further the sub dimension of work efficiency Sociability did not have a significant correlation with the dimensions of employability skills.
- There was a significant difference in Employability Skills with regard to ordinal position of the respondents

Implications of the Study

The present study yielded the levels of employability skills and their levels of work efficiency among the Software Professionals. Such exercises can serve as evaluation/appraisal of the employability skills and work efficiency for the respondents so that their reporting officers can provide them objective feedback.

Limitations of the Study

1. In the present study, the number of respondents included were only 80 from 10 small software industries. Large scale studies may be conducted on these variables.
2. No comparisons were made with regard to the different professions in software development sector, therefore it was not possible to make such comparisons.
3. The professionals below the age group of 28 years were only

included as respondents.

4. Only Engineering graduates were included in the study.

Suggestions for Future Research

1. Large scale research covering the IT and IT Enabled Service (ITeS) Companies may be undertaken.
2. Studies including IT professionals with varied educational backgrounds and technical skill sets may be conducted.
3. Skill gap reports on employability skills excluding technical/core skills may be conducted and documented in the IT Sector.
4. Studies to strengthen the employability skills in alignment with the IT Sector may be conducted with implications for academia vis-à-vis training of the student youth.
5. Scientifically testing training modules may be developed for the IT Sector based on interventional studies and be disseminated widely so that the capacities of the youth can be built to become employability ready.

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