A STUDY OF TECHNOLOGY TRANSFER AT CYBERNET SLASHSUPPORT Pvt Ltd, COIMBATORE

By

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A PROJECT REPORT

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BONAFIDE CERTIFICATE

Certified that the Project report titled **A STUDY OF TECHNOLOGY TRANSFER AT CYBERNET SLASHSUPPORT Pvt Ltd, COIMBATORE** is the bonafide work of Ms. **JENEFAR ANE JR** who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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ABSTRACT

Technology transfer is the process of sharing of skills, knowledge, technologies, methods of manufacturing, samples of manufacturing and facilities among organizations to ensure that scientific and technological developments are accessible to a wider range of users who can then further develop and exploit the technology into new products, processes, applications, materials or services. It is closely related to knowledge transfer.

Technology transfer is the process by which basic science research and fundamental discoveries are developed into practical and commercially relevant applications and products. Technology Transfer personnel evaluate and manage invention portfolios oversees patent prosecution, negotiate licensing agreements and periodically review cooperative research agreements already in place.

This project titled as "**A STUDY OF TECHNOLOGY TRANSFER AT CYBERNET SLASHSUPPORT Pvt Ltd, COIMBATORE**" was done to examine the perception of employees about Technology Transfer and its activities carried out currently by the Organization. Good amount of emphasis has been laid on collecting suggestions that could be implemented in order to expand the Technology Transfer activities. The research a descriptive research where the participants are the employees of the company. It is done using CONVENIENT SAMPLING. The study has obtained views from the employees and the findings provide points to help the managers understand where the Organization stands in creating awareness Technology Transfer within Organization and how far employees are contributing towards the same.

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CHAPTER 1- INTRODUCTION

Employees working in the organization are considered as an important asset. The organizational chart of a company shows the scalability of the company in delivery and the target audience. The variety in which the company deals with to make better businesses from the existing scenario and for bringing better results to have the economy with advanced technology or to give a technological breakthrough.

To bring these streamlined and customized the strategies, company requires strong foundation and experience in handling such situations. The employees will need to help in creating innovative ideas, adaptability, catching the power of the business in current and future world and finally to help the organization to make better businesses for the target audience.

The employees and the management should communicate for mutual benefits. The management will seek for grey areas in the businesses and make people to R&D and find efficient way of handling the undiscovered areas. The management will need to see to that the employees are performing up to the standards and required skills are attained at the proper interval. Tools are to be created for the project metrics, process metrics, resource allocation and technology handling.

The management takes care of the employees through career advancement by enabling training, cross-cultural learning, Out-bound training and other official & unofficial trips. Employees in the organization should have different experience in their tenure for sculpturing their attitude and to increase the ability to think outside the box or pod.

Development is a broad, ongoing multi-faceted set of activities (training activities among them) to bring someone or an organization up to another threshold of performance, often to perform some job or new role in the future. Training involves an expert working with learners to transfer to them certain areas of knowledge of skills to improve in their current jobs. Training is the corner stone of sound management.

Organization should extract the maximum possible work and best contributions from each employee from both fresh & experience employees in any organization. This helps in organization to tackle or tailor the situations at any point in time. More money will be saved when this is always planned from the top management.

Management should do the appraisal not only for the employee's performance, but also in employee's contributions, improvisations, adaptability to the climate change. Employees and management knows that learning is a continuous process and knowledge stands as repository.

1.1 RESEARCH BACKGROUND - DESCRIPTION OF IT INDUSTRY

Technology transfer is the key area where the CSS Coimbatore should concentrate and the best way to inject this technology transfer within the company needs to be identified. A systematic way of injecting technology transfer into CSS Coimbatore can be done mainly with the laterals and experienced associates. The proposed system need to get inputs from the employees for new ideas/initiatives, their strengths and their goals/aspirations for the upcoming year for each vertical. Each employee idea(s) should focus on their project size and ability/capability. The productivity of each employee with their routine work need to be tracked and progress of their work is triggered as a report to the employees and managers.

1.2 COMPANY PROFILE

Cybernet-SlashSupport (CSS) is a global technology solutions provider to enterprises, consumers & technology companies. CSS follows a support-centric model to all its services that help its clients leverage IT to align business objectives. CSS manages four centers of excellence that create solutions for specific industry needs through a combination of its strategic assets - people, process and technology.

CSS manages technology, infrastructure, platforms and applications for Fortune 2000 companies, and provides 24x7 support solutions for leading enterprise, consumer and technology vendors.

1.2.1 QUALITY POLICY

CSS will continuously strive to exceed our customers' expectations by partnering with them in delivering greater value and relentlessly pursue our passion to build stronger and better businesses.

CSS will deliver innovative, world-class and industry leading technology, infrastructure and business process solutions.

1.2.2 MISSION, VISION AND VALUES

Our Vision

We aspire to become a $250 M global organization in the next 5 years and will de-risk ourselves of concentration risk across customers and regions.

Our Mission

- 100% Reference able Customers
- We are the 'preferred services partner' for our customers, helping optimize their Technology Operating Expenditure (OpEx) based on:
- Our commitment in being the leading provider of technology focused support-centric solutions
- Our customer satisfaction-driven quality processes

Our Values

- We create value for our global customers by focusing on providing lean, efficient and high quality solutions to optimize their Operating Expenses.
- We are a specialist, providing services in the areas of Technology Support, Customer Support, Infrastructure Management, Performance Engineering, R & D, and Independent Verification and Validation Services.
- We will ensure continued operational excellence to maintain and enhance customer satisfaction by institutionalizing our Rationalize, Optimize and Innovate (ROI) framework.
- We will share our tools and best practices with our customers and also contribute our tools to the community under General Public License (GPL).
- We believe in growth from within. We will inspire & enable people to achieve high expectations and challenging goals, and will invest in significant training programs to enable them to become leaders.
- We will build superior relations with all parties who contribute to fulfilling our corporate purpose, including our customers, employees, shareholders and society.
- We will assist CSS Foundation's efforts in supporting education of the less privileged.

1.2.3 FOCUSED EXPERTISE

- At CSS, we exclusively focus our talent & experience to meeting your end users' needs capably, comprehensively & cost-effectively.
- CSS follows a support-centric model to all its services, whether your end-users are internal customers of IT, external enterprise customers of your products/services, or consumers. This focused approach gives us a unique advantage over other "one-stop shop" outsourcing companies where the business is driven by a consulting mentality that seeks to increase complexity and of course, billing.
- Our focused approach and robust methodology helps you achieve your strategic goals.

1.3 IDENTIFIED PROBLEM

Technology Transfer is the main focus for the Cybernet SlashSupport, Coimbatore Division (CSS CBE) to compete with the clients and customers. Recently the CSS CBE has started concentrating on more consultative business. This is from strong understanding of the client businesses and it is to gain confidence from the clients. CSS CBE takes steps strategically to fulfill the expectations of our clients.

The analysis is made with the existing projects in our organization and need to derive with many organizational initiatives suiting each project requirement. From this analysis new systems should be evolved where employees can know all the information from their workplace. More ideologies should be implemented in CSS CBE to allow the employees to share their views from all the business units.

1.4 NEED FOR STUDY

The Study of Technology Transfer helps in knowledge sharing, innovate new ideas or methodologies, making the employees aware of the current business trend and satisfying the needs immediately. This helps the managers in taking better business decisions which in turn makes employees feel better of the organizational climate change. It is also extremely important to identify type of projects under each business unit and the climate of each business unit.

1.5 OBJECTIVES

1. To study and analyze the employees involvement in technology transferring and sharing the knowledge of the technology among them.

2. To analyze the reasons for implementing Technology Transfer in Cybernet SlashSupport Technology Solutions Ltd.

3. To identify the major results after implementing Technology Transfer within associates.

1.6 DELIVERABLES

- Success factors in implementing technology transfer methods
- Employee involvement level in adopting technology transfer and operation pinnacle
- Organization ability to focus on the operation pinnacle and to increase the productivity rapidly.

CHAPTER – 2 LITERATURE SURVEY

2.1 REVIEW OF LITERATURE

2.1.1 CASE STUDY 1: TECHNOLOGY TRANSFER OFFICE HELPS SMALL FIRMS

Ever accelerating technological change has intensified interest in the transfer of technology. Small firms play an important role in converting state-of-the-art technology from federal labs and universities; other small firms need to acquire state-of-the-market technology that is commercially available.

Technology transfer is the translation across organizations of knowledge that can be embodied in a process or a product. The knowledge may be explicit; frequently it is tacit--often called "know-how." Technology transfer includes any knowledge useful in the creation of new products and processes, and also the value of the technology, and principles of operation, management, and utilization.

The report makes clear that those federal R&D laboratories, as well as university licensing and technology transfer offices, could do a better job of transferring technology to small firms. In many cases, increased marketing efforts--possibly through joint ventures--may be necessary.

2.1.2 CASE STUDY 2: A TECHNOLOGY TRANSFER CASE STUDY ON BODY SHOCK

This case study presents a test of a technology transfer model developed by Karl Dakin of the Denver Technology Exchange Corporation. The model involves the creation of a new business organization dedicated solely to completing the transfer of a technology to a single application.

The Body Shock is a shock absorber for bicycles. It fits underneath the bicycle seat and replaces the seat post. Using Body Shock reduces rider fatigue and removes the pain and discomfort of standard bicycle seats. Mr. Hartway spent several years studying the problem of making a workable shock absorber. He developed and tested different prototypes until he achieved a model that he felt would be acceptable in the marketplace. With transfer, the technology buyer would provide all the resources

required for large scale manufacture and distribution. This removed the need to rise venture funding and build a skilled management team.

2.1.3 CASE STUDY 3: TECHNOLOGY TRANSFER AT PHARMACEUTICALS INDUSTRY

To survive in the increasingly competitive pharmaceutical industry, many players are boosting their in-licensing activities, consolidating manufacturing networks, and outsourcing production to less costly third-party manufacturers. These strategic initiatives require effective technology transfer—smoothly moving technical knowledge processes, and analytical requirements between the different parties involved.

Technology transfer also affects companies' ongoing operations—from research through commercial production. It underlies all key development and manufacturing activities needed to successfully bring a product to market. Despite the strategic role that technology transfer plays in today's industry, it often does not get the attention it deserves.

Cost reductions have ranged from 50% to 70% with improved alignment of processes and elimination of redundant activities. Quality improvements have resulted in fewer compliance problems identified during health authority inspections: fewer questions regarding chemistry and manufacturing control elements, fewer inspection days, and fewer FDA-483 observations

2.1.4 CASE STUDY 4: TECHNOLOGY TRANSFER IN US GOVERNMENT AND UNIVERSITY LABORATORIES

First, laboratory directors, regardless of sector, are generally optimistic about the payoffs of technology transfer. Second, there is surprisingly little difference between university and government laboratory directors' views. Third, the research mission of the laboratory is related to directors' assessments of the problems and benefits accruing from technology transfer activity. Finally, laboratories stressing development research encounter fewer disadvantages from technology transfer activity than those involved chiefly in basic or applied research oriented laboratories. The benefit most commonly cited by both government and university laboratory directors is increased public visibility for the laboratories' activities, and both indicate that the greatest problem is time taken away from the laboratories research activities

2.1.5 CASE STUDY 5: TECHNOLOGY ROADMAP HELPS IN CREATING INNOVATIVE TECHNOLOGIES FOR DEVELOPMENT AND ADVANMENT

The Bali Action Plan, the nationally appropriate mitigation actions of developing countries are to be supported and enabled by technology transfer. Furthermore, the agreement for "enhanced action on technology development and transfer to support action on mitigation and adaptation" is planned.

The G-77 countries want to create an institutional arrangement to facilitate technology transfer and development under the rubric of UNFCCC. The US believes new institutions under the UNFCCC are not required; the EU is all for 'voluntary co-operative technology-oriented agreements'.

Smelling an opportunity to push its Cool Earth programme (a technology roadmap for 21 innovative technologies), Japan is enthusiastic about the issue, but has a devastating rider: to support actions by developing countries, it wants 'Sectoral sub-groups with the participation of private sectors'.

It is clear that negotiations will revolve around the visible reluctance of the developed world to share technology via transfer. This attitude is most visible in the differing vocabulary used: the EU, for instance, wishes technology transfer to be limited to 'research, development and demonstration'; India, for instance, also wants 'manufacture, commercialization, deployment and diffusion' of technologies.

2.1.6 CASE STUDY 6: SUCCESS STORIES OF MITRE'S TECHNOLOGY TRANSFER OFFICE

The Universal Access Transceiver (UAT) is a wideband data link that addresses a significant problem in aviation surveillance applications. To meet an urgent need, the TTO hastened the effort to transfer the technology from MITRE to the public domain. Unquestionably, the UAT has achieved a remarkable degree of maturity and real-world use in a
short space of time. Transfer of the technology from MITRE to an avionics manufacturer early in the UAT's evolution was key to the success of the system.

2.2 RESEARCH GAP

A number of studies and research has been conducted regarding the employees working conditions and environment in this division. Also a number of studies have been made relating to the troubles faced by the Management and employees. Different studies have concentrated and analyzed on various problems like determining the stress undergone by the employees, the company's trend compared in the market, the conflicts and the issues faced that can happen for the management in customers satisfaction. The management focuses for delivery of the services with the temperament of the clients.

Such studies and researches imply that the management should seek for the higher customer satisfaction level. The managers should get the feedback from the client managers quarterly and improvise the project and employees.

So far, the research has suggested that the management should consider the employee productivity and help them in knowing the additional business and learn new technology. In certain cases the company should change its climate with the respective client and management should take proper steps for making the client business stronger or better.

CHAPTER – 3 METHODOLOGY

3.1 TYPE OF PROJECT

The study has been conducted in the form of survey, so that the inputs can be received from the respondents, "The Study Technology Transfer" identifies the major factors for knowledge sharing and attempts to capture the areas of improvement if any so as to increase and fine tune the benefits of implementing new ideas at right time.

3.2 TARGET RESPONDENTS

The target respondents are the employees of the organization. The employees are split into lower level employees (associates), middle level employees (leads) and the higher level employees (managers) since they are the ones servicing the clients.

3.3 ASSUMPTIONS, CONSTRAINTS AND LIMITATIONS

- The employees have disclosed all the information honestly and correctly without any bias.
- The company was not able to divulge certain confidential information's like the exact figures of the costs involved in any project of each business unit.
- The staff might not disclose all the details as they may be afraid of their superiors.

3.4 SAMPLING METHOD

TYPE OF RESEARCH DESIGNS

- **EXPLORATIVE RESEARCH DESIGN**

The research design of exploratory studies is characterized by a great amount of flexibility and adhoc variety. By definition this research design is a formulated detailed research programme. Here no clear hypothesis is developed about the problem.

- **DESCRIPTVE RESEARCH DESIGN**

Descriptive research design, in contrast to explorative research design is rigid and is market by the prior formulation at specific research question.

- **DIAGNOSTIC RESEARCH DESIGN**

Diagnostic studies determine the frequency with something else. Hence such studies seek to establish relationship between two or more variables.

- **EXPERIMENTAL RESEARCH DESIGN**

In an experienced study the research is expected to create an artificial situation with a view to obtain relevant data and to measure then effectively and accurately

Descriptive research has been used in this study. Descriptive research includes survey & fact-findings by consulting the respondents through questionnaire in a direct interview.

Descriptive research design is used to find suggestions for the research problems. It is rigid & formal. Descriptive study provides clear specification of who, what, when,

where, why& how aspects of research. It also involves more specific hypothesis & testing of them through statistical inference technique.

Two basic types of research design used in descriptive research are

- Case research design.
- Statistical research design.

The research design used for this study was descriptive research, as it analyses the characteristics of certain grouped: employees in organization with different age, income etc. It mainly involves survey & fact finding enquiries of different kinds.

3.4.1 SAMPLING TECHNIQUE

A sample design is a definite plan for obtaining a sample from a given population.

Sampling design is basically of two types:

- ✓ Probability sampling
- ✓ Non-probability sampling

NON-PROBABLITY SAMPLING

The non- probability sampling design refers to the sampling procedures that do not afford any basis for estimating the probability that each item in the population was given equal chances to be included in the sample.

- Representative Sampling
- Judgment Sampling
- Purposive Sampling

- Accidental sampling/ convenience sampling.
- Quota sampling

SAMPLING

- Convenience sampling has been used to collect the data from the respondents.
- Convenience sampling as the name implies is based on the convenience of the researcher who is to select the sample.
- This type of sampling is also called as accidental sampling, as the respondents in the sampling are included in it merely on account of that being available on the spot where the survey is in progress.

Convenient sampling method has been used for the selection of the respondents for the study. The Information Technology professionals of 4 different verticals and 3 horizontals were contacted randomly for the study. 50 associates from RHML, 26 associates from Healthcare, 21 associates from Testing, 14 associates from Insurance, 5 Executive Learners from Academy and 4 Assistant Managers from GRMG

The survey was conducted by a sample size of 120 respondent samples are collected in Cybernet SlashSupport Pvt. Ltd

3.4.2 DATA COLLECTION

The study is based on both primary data and secondary data. The primary data was collected by means of questionnaire. Questionnaire prepared keeping in mind the objective of the study. Secondary data was collected with the help of company reports, brochures and company websites.

The questionnaire was constructed based on various factors that support the study of the survey. The Pilot Study was also conducted for a very small sample size to identify the feasibility of the survey at the large size. The data was collected and analyzed to check if they are sufficient and provide relevant data that would support the study.

3.5 DATA PROCESSING

The data thus gathered were appropriately summarized and analyzed using

- Chi Square Analysis using SPSS tool
- ANOVA table

CHI-SQUARE TEST USING SPSS TOOL

The Chi-Square test is one of the simplest and most widely used non-parametric tests in statistical work. The quantity Chi-square describes the magnitude of the discrepancy between theory and observation

SPSS is a computer program used for statistical analysis. In 2009 SPSS re-branded its software packages as PASW (Predictive Analytics Soft Ware). SPSS is among the most widely used programs for statistical analysis in social science

ANOVA TABLE

In statistics, analysis of variance (ANOVA) is a collection of statistical models, and their associated procedures, in which the observed variance is partitioned into components due to different explanatory variables. In its simplest form ANOVA gives a statistical test of whether the means of several groups are all equal, and therefore generalizes

RESEARCH METHODOLOGY AT A GLANCE

Research design	:	Descriptive Research
Data Source	:	Primary data, Secondary data.
Research Instrument	:	Questionnaire.
Research Approach	:	Survey
Contact Method	:	Personal Interview.
Sampling Technique	:	Convenience sampling.
Statistical Tools	:	Chi-Square using SPSS tool, ANOVA table.

CHAPTER - 4 DATA ANALYSIS AND INTERPRETATION

4.1 ANALYSIS AND INTERPRETATION

TABLE 1.1 **DESIGNATION WISE CLASSIFICATIONS OF RESPONDENTS**

Option	No. of Respondents	Percentage (approx)
Project Manager	4	3.33
Senior System Analyst	20	16.67
Assistant System Analyst	20	16.67
System Analyst	47	39.17
Senior Systems Administrator	3	2.5
Test Analyst	10	8.33
Team Lead	3	2.5
Software Engineer	7	5.83
Trainee	10	8.33
Total	**120**	100

Inference: **By this analysis we could infer that the employees working as system analyst's at Cybernet SlashSupport has contributed in a larger proportion for this survey**

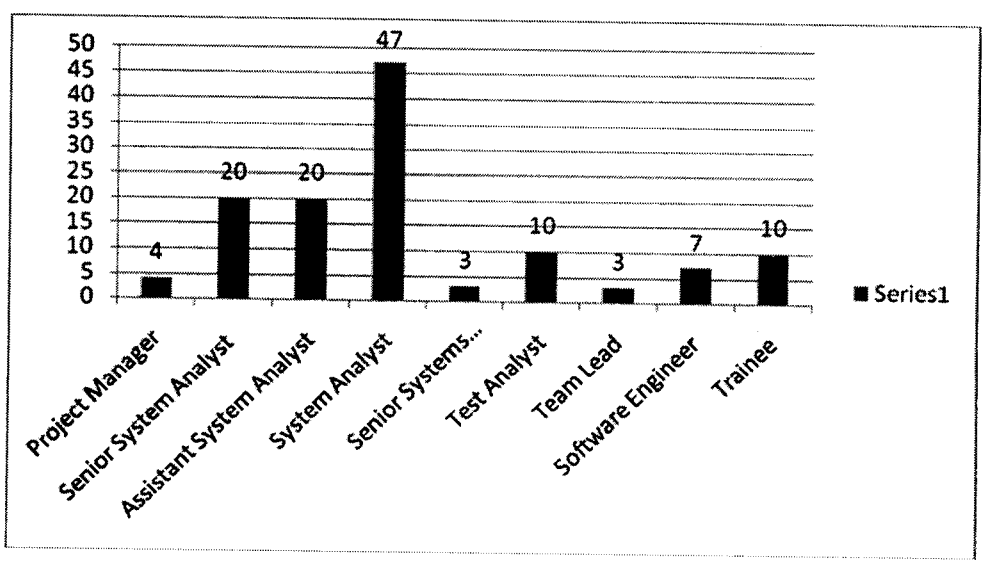


TABLE 1.2 GENDER WISE CLASSIFICATIONS OF RESPONDENTS

Gender	Number of respondents	Percentage
Male	86	72
Female	34	28
TOTAL	**120**	**100**

INFERENCE:

From the above table it is inferred that out of 120 respondents, maximum (72%) of them were male and minimum (28%) of them were female.

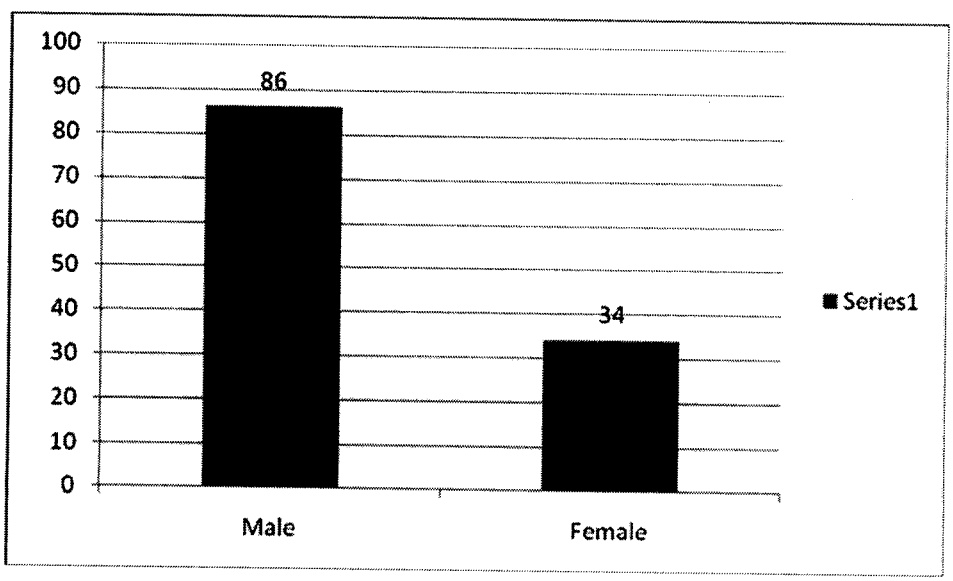


TABLE 1.3 CLASSIFICATIONS BASED ON THE AGE OF RESPONDENTS

Age-group	Number of respondents	Percentage
20 – 25 Yrs	32	26.6
25 – 30 Yrs	38	31.6
30 – 35 Yrs	30	25
Above 35 Yrs	20	16.6
TOTAL	**120**	**100**

INFERENCE:

From the above table it is inferred that out of 120 respondents, maximum (31.6%) of them are in the age group varying in between 25-30 years and minimum (16.6%) of them are in the age group of above 35 years.

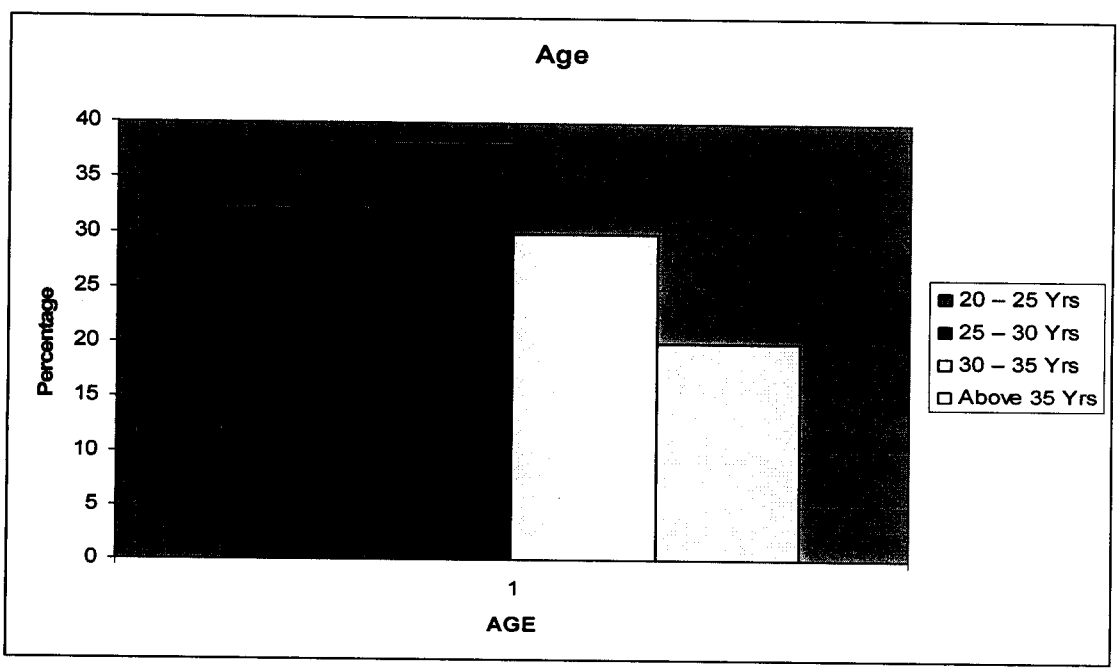
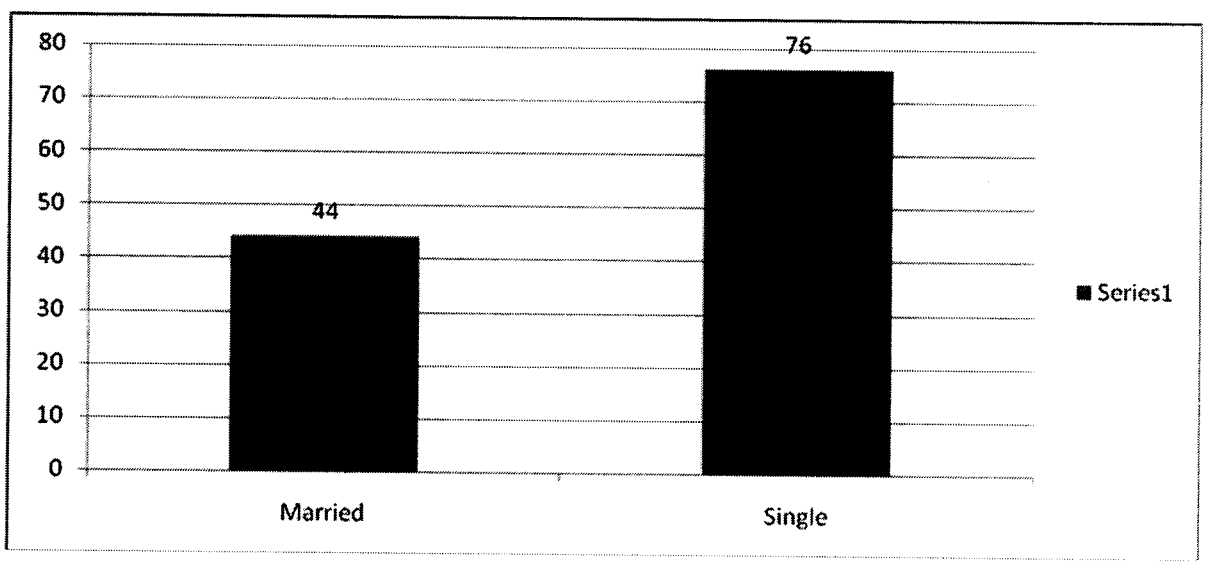


TABLE 1.4 CLASSIFICATIONS BASED ON MARITAL STATUS

Marital status	Number of respondents	Percentage
Married	44	36.67
Single	76	63.33
TOTAL	**120**	**100**

Inference:

From the above table it is inferred that out of 120 respondents, maximum 63.33% are Single.



TO ANALYZE IF TECHNOLOGY TRANSFER IS OCCURRING WITHIN THE ORGANIZATION

TABLE 1.5

S No	Questions	Definitely yes	Yes, to some extent	Neutral	No, to some extent	Definitely No	total
2.1	Does the organization support its employees in creation of new ideas?	44	46	26	4	0	120
2.2	How do you see employee's contribution in creating new ideas?	44	56	19	1	0	120
2.3	Are you aware of the technology involved in your process?	42	69	5	4	0	120
2.4	Are you aware of the Projects running across organizations	46	44	14	11	5	120
2.5	Are you aware of the technologies involved in your neighboring projects?	40	56	20	4	0	120
2.6	How will you rate the employee's involvement in technology transfer	32	48	28	12	0	120
2.7	Does your organization offers monetary incentives for supporting technology transfer?	10	11	42	25	32	120
2.8	Regularly dedicates resources for detecting and obtaining information on various technologies involved in your organization?	16	40	20	20	24	120
2.9	Is training given adequate importance in your organization?	17	53	32	8	10	120
2.10	Are you aware of any metrics to assess the success or effectiveness of technology transfer?	16	55	32	13	4	120
2.11	Does the organization provide onsite openings in order to learn new technologies?	10	12	30	40	28	120
2.12	Regularly updates databases of the employee after he is expertised in any technology?	18	20	32	10	40	120
2.13	Facilitating the importance of documenting the complete study of any technology practiced in the organization?	44	29	28	15	4	120
	Total	**379**	**539**	**328**	**167**	**147**	**1560**

HYPOTHESIS:

Null Hypothesis (Ho):

Technology transfer is not much effective at CSS Coimbatore.

Alternative Hypothesis (Ha):

Technology Transfer is effective at CSS Coimbatore.

Correction factor (C.F) = T^2/n

= (1560) ^2/65

= 37440

Sum of Squares between Training (SSB)

$= 379^2/13 + 539^2/13 + 328^2/13 + 167^2/13 + 147^2/1 - 37440$

=8040.307692

Total sum of square (SST)

= 56966

Sum of Square within Training (SSW)

=SST – SSB

= 48925.69231

ANOVA TABLE 1.6

Sources of variation	Sum of square	Degree of Freedom	Mean Square	Variance ratio of F
Between Samples	**SSB=8040.3**	**C-1=5-1 = 4**	**MSB = 2010.075**	**F=MSB/MSW = 2.65**
Within Samples	**SSW=48925.7**	**N – C=60**	**MSW= 815.4**	

F table value (60, 4) = 2.53

F cal = 2.65

F cal > F tab

Based on the above analysis, calculated value is greater than the tabulated value, thus accept the alternate hypothesis.

Inference:

From the above analysis, we infer that technology transfer happens in CSS Coimbatore.

TO ANALYZE THE RESONS FOR IMPLEMENTING TECHNOLOGY TRANSFER IN THE ORGANIZATION

TABLE 1.7

S.No	Questions	Critical	Important	Not all Important	Somewhat Important	total
3.1	To improve the competitive advantage of your firm or organization	36	76	4	4	**120**
3.2	To help integrate the technology currently using along with additional technology to bring out much efficient work	10	68	0	42	**120**
3.3	To protect your firm or organization from loss of knowledge on technology due to workers' departures	26	72	12	10	**120**
	total	**72**	**216**	**16**	**56**	**360**

HYPOTHESIS:

Null Hypothesis (Ho):

Technology transfer is not required at CSS Coimbatore.

Alternative Hypothesis (Ha):

Technology Transfer is necessary at CSS Coimbatore.

Correction factor (C.F) = T^2/n

= (360) ^2/12

= 10800

Sum of Squares between Training (SSB)

$= 72^2/3 + 216^2/3 + 16^2/3 + 56^2/3 - 10800$

=7610.7

Total sum of square (SST)

= 19696

Sum of Square within Training (SSW)

=SST – SSB

= 12085

ANOVA TABLE 1.8

Sources of variation	Sum of square	Degree of Freedom	Mean Square	Variance ratio of F
Between Samples	**SSB=7610.7**	**C-1=3-1 = 2**	**MSB = 3805.35**	**F=MSB/MSW = 3.14**
Within Samples	**SSW=12085**	**N– C=10**	**MSW= 1208.5**	

F table value (10, 2) = 3.10

F cal = 3.14

F cal > F tab

Based on the above analysis, calculated value is greater than the tabulated value, thus accept the alternate hypothesis.

Inference:

From the above analysis, we infer that Technology Transfer is necessary at CSS Coimbatore.

TO ANALYZE THE RESULTS AFTER IMPLEMENTING TECHNOLOGY TRANSFER IN THE ORGANIZATION

TABLE 1.9

S.No	Questions	Very effective	Effective	No Change	Somewhat effective	Not at all effective	total
4.1	Increased our knowledge sharing horizontally (across departments, functions or business units)	31	48	20	16	5	**120**
4.2	Improved worker efficiency and / or productivity	26	52	18	20	4	**120**
4.3	Improved skills and knowledge of workers	23	50	17	23	7	**120**
4.4	Increased our number of markets (more geographic locations)	5	68	15	14	18	**120**
4.5	Improved client or customer relations	10	67	17	18	8	**120**
4.6	Helped us add new products or services	9	52	19	24	16	**120**
4.7	Increased our adaptation of products or services to client requirements	17	72	16	9	6	**120**
4.8	Increased flexibility in production and innovation	16	51	29	13	11	**120**
4.9	Prevented duplicate research and development	7	60	23	27	3	**120**
4.10	Increased our ability to capture knowledge from other business enterprises, industrial associations, technical literature, etc.	11	59	24	18	8	**120**
4.11	Improved involvement of workers in the workplace activities	12	45	26	26	11	**120**
	total	**167**	**624**	**224**	**208**	**97**	**1320**

HYPOTHESIS:

Null Hypothesis (Ho):

Injecting technology transfer is not much useful for the organization.

Alternative Hypothesis (Ha):

Injecting technology transfer at CSS Coimbatore improves productivity and efficiency among the employees which makes the organization to excel in the competitive advantage.

Correction factor (C.F) = T^2/n

= (1320) ^2/55

= 31680

Sum of Squares between Training (SSB)

= $167^2/11 + 624^2/11 + 224^2/11 + 208^2/11 + 97^2/11 - 31680$

=15603.09

Total sum of square (SST)

= 49558

Sum of Square within Training (SSW)

=SST – SSB

= 33954.91

ANOVA TABLE 1.10

Sources of variation	Sum of square	Degree of Freedom	Mean Square	Variance ratio of F
Between Samples	**SSB=15603.09**	**C-1=5-1 = 4**	**MSB = 3900.77**	**F=MSB/MSW = 5.74**
Within Samples	**SSW=33954.91**	**N – C=50**	**MSW= 679.09**	

F table value (50, 4) = 2.56

F cal = 5.74

F cal > F tab

Based on the above analysis, calculated value is greater than the tabulated value, thus accept the alternate hypothesis.

Inference:

Injecting technology transfer at CSS Coimbatore improves productivity and efficiency among the employees which makes the organization to excel in the competitive advantage.

CHI- SQUARE ANALYSIS USING SPSS

TABLE 2.1 **Does the organization supports its employees in creation of new ideas?**

Data

Creation of new ideas	Number of Respondents
Definitely yes	44
Yes, to some extent	46
Neutral	26
No, to some extent	4
Definitely No	0
Total	120

Chi – Square Analysis

Null – Hypothesis

The organization does not support its employees in creation of new ideas

Alternate Hypothesis

The organization supports its employees in creation of new ideas

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	44	30.0	14.0
Yes to some extent	46	30.0	16.0
Neutral	26	30.0	-4.0
No to some extent	4	30.0	-26.0
Total	120		

Test Statistics

	Options
Chi-Square	38.133[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

Inference

As asymptotic significance is less than 0.05, we infer that organization supports its employees in creation of new ideas.

TABLE 2.2 **How do you see employee's contribution in creating new ideas?**

Data

Contribution of new ideas	Number of Respondents
Definitely yes	44
Yes, to some extent	56
Neutral	19
No, to some extent	1
Definitely No	0
Total	120

Chi – Square Analysis

Null – Hypothesis

Employees does not contribute to the creation of new ideas

Alternate Hypothesis

Employees contributes to the creation of new ideas

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	44	30.0	14.0
Yes to some extent	56	30.0	26.0
Neutral	19	30.0	-11.0
No to some extent	1	30.0	-29.0
Total	120		

Test Statistics

	Options
Chi-Square	61.133[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

Inference

As asymptotic significance is less than 0.05, we infer that Employees contributes to the creation of new ideas

TABLE 2.3 **Are you aware of the technology involved in your process?**

Data

Technology in your process	Number of Respondents
Definitely yes	42
Yes, to some extent	69
Neutral	5
No, to some extent	4
Definitely No	0
Total	120

Chi – Square Analysis

Null – Hypothesis

No, not aware of the technology involved in my process

Alternate Hypothesis

Yes, aware of the technology involved in my process

SPSS Output

Options	Observed N	Expected N	Residual
Definitely Yes	42	30.0	12.0
Yes to some extent	69	30.0	39.0
Neutral	5	30.0	-25.0
No to some extent	4	30.0	-26.0
Total	120		

Test Statistics

	Options
Chi-Square	61.133[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

Inference

As asymptotic significance is less than 0.05, we infer that the employees are aware of the technology in their process.

TABLE 2.4 **Are you aware of the Projects running across organizations?**

Data

Projects across organization	Number of Respondents
Definitely yes	46
Yes, to some extent	44
Neutral	14
No, to some extent	11
Definitely No	5
Total	120

Chi – Square Analysis

Null – Hypothesis

No, not aware of the Projects running across organizations

Alternate Hypothesis

Yes, aware of the Projects running across organization

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	46	24.0	22.0
Yes to some extent	44	24.0	20.0
Neutral	14	24.0	-10.0
No to some extent	11	24.0	-13.0
Definitely No	5	24.0	-19.0
Total	120		

Test Statistics

	Options
Chi-Square	63.083[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we infer that employees are aware of the projects across the organization.

TABLE 2.5 **Are you aware of the technologies involved in your neighboring projects??**

Data

Technologies in neighboring projects	Number of Respondents
Definitely yes	40
Yes, to some extent	56
Neutral	20
No, to some extent	4
Definitely No	0
Total	120

Chi – Square Analysis

Null – Hypothesis

No, not aware of the technologies involved in my neighboring projects

Alternate Hypothesis

Yes, aware of the technologies involved in my neighboring projects

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	40	30.0	10.0
Yes to some extent	56	30.0	26.0
Neutral	20	30.0	-10.0
No to some extent	4	30.0	-26.0
Total	120		

Test Statistics

	Options
Chi-Square	51.733[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

Inference

As asymptotic significance is less than 0.05, we infer that employees are aware of the neighboring projects.

TABLE 2.6 **How will you rate the employee's involvement in technology transfer?**

Data

Employee's involvement	Number of Respondents
Definitely yes	32
Yes, to some extent	48
Neutral	28
No, to some extent	12
Definitely No	0
Total	120

Chi – Square Analysis

Null – Hypothesis

Employees have low rate of involvement in technology transfer

Alternate Hypothesis

Employees have a high rate of involvement in technology transfer

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	32	30.0	2.0
Yes to some extent	48	30.0	18.0
Neutral	28	30.0	-2.0
No to some extent	12	30.0	-18.0
Total	120		

Test Statistics

	Options
Chi-Square	21.867[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

Inference

As asymptotic significance is less than 0.05, we infer that employees have a high rate of involvement in technology transferring

TABLE 2.7 **Does your organization offers monetary incentives for supporting technology transfer?**

Data

Monetary incentives	Number of Respondents
Definitely yes	10
Yes, to some extent	11
Neutral	42
No, to some extent	25
Definitely No	32
Total	120

Chi – Square Analysis

Null – Hypothesis

Organization does not offers monetary incentives for supporting technology transfer

Alternate Hypothesis

Organization offers monetary incentives for supporting technology transfer.

SPSS Output

Test Statistics

	Options
Chi-Square	31.417[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Options

	Observed N	Expected N	Residual
Definitely Yes	10	24.0	-14.0
Yes to some extent	11	24.0	-13.0
Neutral	42	24.0	18.0
No to some extent	25	24.0	1.0
Definitely No	32	24.0	8.0
Total	120		

Inference

Thus we can infer that the organization offers monetary benefits to its employees for supporting technology transfer

TABLE 2.8 Regularly dedicates resources for detecting and obtaining information on various technologies involved in your organization?

Data

Dedicating resources for collecting information	Number of Respondents
Definitely yes	16
Yes, to some extent	40
Neutral	20
No, to some extent	20
Definitely No	24
Total	12

Chi – Square Analysis

Null – Hypothesis

Organization does not dedicates resource for detecting and obtaining information

Alternate Hypothesis

Organization dedicates resource for detecting and obtaining information

SPSS Output

Test Statistics

	Options
Chi-Square	14.667[a]
df	4
Asymp. Sig.	.005

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Options

	Observed N	Expected N	Residual
Definitely Yes	16	24.0	-8.0
Yes to some extent	40	24.0	16.0
Neutral	20	24.0	-4.0
No to some extent	20	24.0	-4.0
Definitely No	24	24.0	.0
Total	120		

Inference

As asymptotic significance is more than 0.05, we infer that the organization does not dedicates resource for detecting and obtaining information

TABLE 2.9 **Is training given adequate importance in your organization?**

Data

Importance of training	Number of Respondents
Definitely yes	17
Yes, to some extent	53
Neutral	32
No, to some extent	8
Definitely No	10
Total	120

Chi – Square Analysis

Null – Hypothesis

Training is not given adequate importance in the organization

Alternate Hypothesis

Training is given adequate importance in the organization

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	17	24.0	-7.0
Yes to some extent	53	24.0	29.0
Neutral	32	24.0	8.0
No to some extent	8	24.0	-16.0
Definitely No	10	24.0	-14.0
Total	120		

Test Statistics

	Options
Chi-Square	58.583[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

Thus we infer that adequate training is provided in the organization

TABLE 2.10 **Are you aware of any metrics to assess the success or effectiveness of technology transfer?**

Data

Aware of metrics	Number of Respondents
Definitely yes	16
Yes, to some extent	55
Neutral	32
No, to some extent	13
Definitely No	4
Total	120

Chi – Square Analysis

Null – Hypothesis

No, not aware of metrics assess the success or effectiveness of technology transfer

Alternate Hypothesis

Yes, aware of metrics assess the success or effectiveness of technology transfer

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	16	24.0	-8.0
Yes to some extent	55	24.0	31.0
Neutral	32	24.0	8.0
No to some extent	13	24.0	-11.0
Definitely No	4	24.0	-20.0
Total	120		

Test Statistics

	Options
Chi-Square	67.083[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we infer that employees are aware of metrics used to assess the success or effectiveness of technology transfer

0TABLE 2.11 Does the organization provides onsite openings in order to learn new technologies?

Data

Onsite openings	Number of Respondents
Definitely yes	10
Yes, to some extent	12
Neutral	30
No, to some extent	40
Definitely No	28
Total	120

Chi – Square Analysis

Null – Hypothesis

The organization does not provides any onsite openings to learn any new technologies.

Alternate Hypothesis

The organization provides any onsite openings to learn any new technologies.

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	10	24.0	-14.0
Yes to some extent	12	24.0	-12.0
Neutral	30	24.0	6.0
No to some extent	40	24.0	16.0
Definitely No	28	24.0	4.0
Total	120		

Test Statistics

	Options
Chi-Square	27.000[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

Thus we infer that the organization provides onsite openings to learn any new technologies.

TABLE 2.12 **Regularly updates databases of the employee after he is expertise in any technology?**

Data

Updates database	Number of Respondents
Definitely yes	18
Yes, to some extent	20
Neutral	32
No, to some extent	10
Definitely No	40
Total	120

Chi – Square Analysis

Null – Hypothesis

Organization does not update databases of the employee after he is expertise in any technology

Alternate Hypothesis

Organization regularly updates databases of the employee after he is expertise in any technology

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	18	24.0	-6.0
Yes to some extent	20	24.0	-4.0
Neutral	32	24.0	8.0
No to some extent	10	24.0	-14.0
Definitely No	40	24.0	16.0
Total	120		

Test Statistics

	Options
Chi-Square	23.667[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, Organization regularly updates databases of the employee after he is expertise in any technology

TABLE 2.13 **Facilitating the importance of documenting the complete study of any technology practiced in the organization?**

Data

Documentation	Number of Respondents
Definitely yes	44
Yes, to some extent	29
Neutral	28
No, to some extent	15
Definitely No	4
Total	120

Chi – Square Analysis

Null – Hypothesis

The Organization does not documents the study of the technology

Alternate Hypothesis

The Organization documents the study of the technology practiced in the organization

SPSS Output

Options

	Observed N	Expected N	Residual
Definitely Yes	44	24.0	20.0
Yes to some extent	29	24.0	5.0
Neutral	28	24.0	4.0
No to some extent	15	24.0	-9.0
Definitely No	4	24.0	-20.0
Total	120		

Test Statistics

	Options
Chi-Square	38.417[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

The Organization documents the study of the technology practiced in the organization

TABLE 3.1 **To improve the competitive advantage of your firm or organization**

Data

Improve competitive advantage	Number of Respondents
Critical	36
Important	76
Not at all important	4
Somewhat important	4
Total	120

Chi – Square Analysis

Null – Hypothesis

Competitive advantage cannot be improved by implementing technology transfer in the organization

Alternate Hypothesis

Competitive advantage will be improved by implementing technology transfer in the organization

SPSS Output

Option

	Observed N	Expected N	Residual
Critical	36	30.0	6.0
Important	76	30.0	46.0
Somewhat important	4	30.0	-26.0
Not at all important	4	30.0	-26.0
Total	120		

Test Statistics

	Option
Chi-Square	1.168E2[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

Inference

As the asymptotic significance is less than the 0.05, we could infer that Competitive advantage will be improved by implementing technology transfer in the organization

TABLE 3.2 **To help integrate the technology currently using along with additional technology to bring out much efficient work**

Data

Integration of technology	Number of Respondents
Critical	10
Important	68
Not at all important	0
Somewhat important	42
Total	120

Chi – Square Analysis

Null – Hypothesis

Integrating the technologies does not brings much efficient work

Alternate Hypothesis

Integrating the technologies brings much efficient work among the employees in the organization

SPSS Output

Option

	Observed N	Expected N	Residual
Critical	10	40.0	-30.0
Important	68	40.0	28.0
Somewhat important	42	40.0	2.0
Total	120		

Test Statistics

	Option
Chi-Square	42.200[a]
df	2
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 40.0.

Inference

As the asymptotic significance is less than the 0.05, we could infer that integrating the technologies brings much efficient work among the employees in the organization

TABLE 3.3 **To protect your firm or organization from loss of knowledge on technology due to workers' departures**

Loss of knowledge on technology	Number of Respondents
Critical	26
Important	72
Not at all important	12
Somewhat important	10
Total	120

Chi – Square Analysis

Null – Hypothesis

Loss of knowledge on technology due to workers' departures cannot be protected with the help of technology transferring

Alternate Hypothesis

Loss of knowledge on technology due to workers' departures could be protected with the help of technology transferring

SPSS Output

Option

	Observed N	Expected N	Residual
Critical	26	30.0	-4.0
Important	72	30.0	42.0
Somewhat important	10	30.0	-20.0
Not at all important	12	30.0	-18.0
Total	120		

Test Statistics

	Option
Chi-Square	83.467[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.0.

Inference

As the asymptotic significance is less than the 0.05, we could infer that loss of knowledge on technology due to workers' departures could be protected with the help of technology transferring

TABLE 4.1 **Increased our knowledge sharing horizontally (Across departments, functions or business units)**

Data

Increased knowledge	Number of Respondents
Very Effective	31
Effective	48
No change	20
Somewhat effective	16
Not at all effective	5
Total	120

Chi – Square Analysis

Null – Hypothesis

Knowledge sharing does not increases horizontally

Alternate Hypothesis

Knowledge sharing does not increases horizontally

SPSS Output

Option

	Observed N	Expected N	Residual
Very effective	31	24.0	7.0
Effective	48	24.0	24.0
No change	20	24.0	-4.0
Somewhat effective	16	24.0	-8.0
Not at all effective	5	24.0	-19.0
Total	120		

Test Statistics

	Option
Chi-Square	44.417[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

Thus we can infer that Knowledge sharing happens across departments, functions or business units

TABLE 4.2 **Improved worker efficiency and / or productivity**

Data

Increased efficiency	Number of Respondents
Very Effective	26
Effective	52
No change	18
Somewhat effective	20
Not at all effective	4
Total	120

Chi – Square Analysis

Null – Hypothesis

Technology transfer does not improves efficiency and / or productivity

Alternate Hypothesis

Technology transfer improves efficiency and / or productivity

SPSS Output

Option

	Observed N	Expected N	Residual
Very effective	26	24.0	2.0
Effective	52	24.0	28.0
No change	18	24.0	-6.0
Somewhat effective	20	24.0	-4.0
Not all effecive	4	24.0	-20.0
Total	120		

Test Statistics

	Option
Chi-Square	51.667[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

Thus Technology transfer improves efficiency and / or productivity.

TABLE 4.3 **Improved skills and knowledge of workers**

Data

Increased skills	Number of Respondents
Very Effective	23
Effective	50
No change	17
Somewhat effective	23
Not at all effective	7
Total	120

Chi – Square Analysis

Null – Hypothesis

Technology transfer does not improves skill and knowledge of workers

Alternate Hypothesis

Technology transfer improves skill and knowledge of workers

SPSS Output

Options

	Observed N	Expected N	Residual
Very Effective	23	24.0	-1.0
Effective	50	24.0	26.0
No change	17	24.0	-7.0
Somewhat effective	23	24.0	-1.0
Not all effective	7	24.0	-17.0
Total	120		

Test Statistics

	Options
Chi-Square	42.333[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05,we can infer that technology transfer improves skill and knowledge of workers.

TABLE 4.4 **Increased our number of markets (more geographic locations)**

Data

Increased markets	Number of Respondents
Very Effective	5
Effective	68
No change	15
Somewhat effective	14
Not at all effective	18
Total	120

Chi – Square Analysis

Null – Hypothesis

Injecting technology transfer does not increases our number of markets

Alternate Hypothesis

Injecting technology transfer increases our number of markets across various geographic locations.

SPSS Output

Options

	Observed N	Expected N	Residual
Very Effective	5	24.0	-19.0
Effective	68	24.0	44.0
No change	15	24.0	-9.0
Somewhat effective	14	24.0	-10.0
Not all effective	18	24.0	-6.0
Total	120		

Test Statistics

	Options
Chi-Square	1.048E2[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we can infer that technology transferring increases our number of markets across various geographic locations

TABLE 4.5 Improved client or customer relations

Data

Increased clients	Number of Respondents
Very Effective	10
Effective	67
No change	17
Somewhat effective	18
Not at all effective	8
Total	120

Chi – Square Analysis

Null – Hypothesis

Technology transferring does not improve client or customer relations.

Alternate Hypothesis

Technology transferring improves client or customer relations.

SPSS Output

Options

	Observed N	Expected N	Residual
Very Effective	10	24.0	-14.0
Effective	67	24.0	43.0
No change	17	24.0	-7.0
Somewhat effective	18	24.0	-6.0
Not all effective	8	24.0	-16.0
Total	120		

Test Statistics

	Options
Chi-Square	99.417[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we can infer that technology transferring improves client or customer relations

TABLE 4.6 **Helps us add new products or services**

Data

Increased products	Number of Respondents
Very Effective	9
Effective	52
No change	19
Somewhat effective	24
Not at all effective	16
Total	120

Chi – Square Analysis

Null – Hypothesis

Technology transfer does not helps in adding new products or services.

Alternate Hypothesis

Technology transfer helps in adding new products or services.

SPSS Output

Options

	Observed N	Expected N	Residual
Very Effective	9	24.0	-15.0
Effective	52	24.0	28.0
No change	19	24.0	-5.0
Somewhat effective	24	24.0	.0
Not all effective	16	24.0	-8.0
Total	120		

Test Statistics

	Options
Chi-Square	99.417[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we can infer that transferring of technology helps us add new products or services

TABLE 4.7 **Increased our adaptation of products or services to client requirements**

Data

Increased adaptation of products	Number of Respondents
Very Effective	17
Effective	72
No change	16
Somewhat effective	9
Not at all effective	6
Total	120

Chi – Square Analysis

Null – Hypothesis

Transferring of technology does not increase our adaptation to new products or services to client requirements.

Alternate Hypothesis

Transferring of technology increases our adaptation to new products or services to client requirements.

SPSS Output

Options

	Observed N	Expected N	Residual
Very Effective	17	24.0	-7.0
Effective	72	24.0	48.0
No change	16	24.0	-8.0
Somewhat effective	9	24.0	-15.0
Not all effective	6	24.0	-18.0
Total	120		

Test Statistics

	Options
Chi-Square	1.236E2[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we can infer that transferring of technology increases our adaptation to new products or services to client requirements.

TABLE 4.8 **Increased flexibility in production and innovation**

Data

Increased flexibility	Number of Respondents
Very Effective	16
Effective	51
No change	29
Somewhat effective	13
Not at all effective	11
Total	120

Chi – Square Analysis

Null – Hypothesis

Transferring of technology does not increases flexibility in production and innovation

Alternate Hypothesis

Transferring of technology increases flexibility in production and innovation

SPSS Output

Options

	Observed N	Expected N	Residual
Very Effective	16	24.0	-8.0
Effective	51	24.0	27.0
No change	29	24.0	5.0
Somewhat effective	13	24.0	-11.0
Not all effective	11	24.0	-13.0
Total	120		

Test Statistics

	Options
Chi-Square	46.167[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we can infer that transferring of technology increases flexibility in production and innovation

TABLE 4.9 **Prevented duplicate research and development**

Data

Prevents duplicate research	Number of Respondents
Very Effective	7
Effective	60
No change	23
Somewhat effective	27
Not at all effective	3
Total	120

Chi – Square Analysis

Null – Hypothesis

Transferring of technology does not prevent duplicate research and development.

Alternate Hypothesis

Transferring of technology prevents duplicate research and development.

SPSS Output

Options

	Observed N	Expected N	Residual
Very Effective	7	24.0	-17.0
Effective	60	24.0	36.0
No change	23	24.0	-1.0
Somewhat effective	27	24.0	3.0
Not all effective	3	24.0	-21.0
Total	120		

Test Statistics

	Options
Chi-Square	84.833[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we can infer that transferring of technology prevents duplicate research and development

TABLE 4.10 **Increased our ability to capture knowledge from other business enterprises, industrial association's technical literature, etc.**

Data

Increased knowledge on other business	Number of Respondents
Very Effective	11
Effective	59
No change	24
Somewhat effective	18
Not at all effective	8
Total	120

Chi – Square Analysis

Null – Hypothesis

Transferring of technology does not increase our ability to capture knowledge from other business enterprises, etc.

Alternate Hypothesis

Transferring of technology increase our ability to capture knowledge from other business enterprises, etc.

SPSS Output

Options

	Observed N	Expected N	Residual
Very Effective	11	24.0	-13.0
Effective	59	24.0	35.0
No change	24	24.0	.0
Somewhat effective	18	24.0	-6.0
Not all effective	8	24.0	-16.0
Total	120		

Test Statistics

	Options
Chi-Square	70.250[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we can infer that transferring of technology increase our ability to capture knowledge from other business enterprises, etc.

TABLE 4.11 Improved involvement of workers in the workplace activities

Data

Increased involvement	Number of Respondents
Very Effective	12
Effective	45
No change	26
Somewhat effective	26
Not at all effective	11
Total	120

Chi – Square Analysis

Null – Hypothesis

Transferring of technology does not improves involvement of workers

Alternate Hypothesis

Transferring of technology improves involvement of workers

SPSS Output

Options

	Observed N	Expected N	Residual
Very Effective	12	24.0	-12.0
Effective	45	24.0	21.0
No change	26	24.0	2.0
Somewhat effective	26	24.0	2.0
Not all effective	11	24.0	-13.0
Total	120		

Test Statistics

	Options
Chi-Square	31.750[a]
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

Inference

As asymptotic significance is less than 0.05, we can infer that transferring of technology improves involvement of workers

CHAPTER 5 - CONCLUSIONS

5.1 SUMMARY OF FINDINGS

The responses of the Information Technology professionals from different verticals were collected for the survey, using the questionnaire method for data collection. The professionals of 4 different domains and 3 horizontals in the CSS CORP are considered for this. On recording, summarizing and interpreting the collected data of a sample size of 120, the following findings were made:

- The study has thrown up performance appraisal of employees in the organization is good and the rating is satisfactory for 75% of the employees. The experience of the employees is more than 4 years for around 62% and hence employees can be mentored in a better way to get the work done by the 38% of the less experienced employees

- The employee contribution in creating new ideas shows 72% good and hence the employees willing to change in environment is much appreciated.

- Senior Management is helping the below organization level to around 45% making the employees work independently and identify new areas of work. Employees involvement in training program is low around 18% which reconfirms the difference in training required with change in market trend.

- Organizational rating is affected quarterly and the customer satisfaction level is around 40% which needs to 80% for any Information Technology company to acquire best business in the market.

- Management involves in keeping the GRMG to allocate right resources at the right place which is accounted to 41%. More than half of the employee strength is not assigned the right job and hence operation pinnacle can be used in moving the employees to the right cadre.

- More than 35% of the employees are open to learn new technologies and have positive attitude. Around 65% like to not willing to learn additional work. Management can provide more Technology Transfer programs to furnish the employee and management needs.

- Management is satisfied with the new comer's performance at about 88%.

- Involvement of the employees in the technology transfer programs is much appreciated to around 70% and awaiting for management to take decisions.

5.2 SUGGESTIONS & RECOMMENDATIONS

- The organization should pilot implement the Operation Pinnacle in the main divisions and rollout to all the centers of the organization to make this recessionary stage a real advantageous and to create win-win situation for the employees of the organization and the organization returning the great economy.
- The employees can be asked to improve further in learning and adapting new technologies or project or process.
- Also the Management can provide advanced training to the employees of the organization since the satisfaction level is as low as 28%.
- Management can use the new comers in the fixed bid projects and can make more profit.
- 70% of the respondents feel that their awareness on Technology Transfer will increase with a demonstration on it. Therefore the company can probably improve their training along with a demonstration on technology transfer.
- More employees can volunteer to encourage or motivate their colleagues to participate in Technology transferring activities.
- More guest lectures and seminars can be organized on technology transfer related topics.
- The organization can provide more recognition to the employees who contribute towards technology transfer activities, so they are motivated. This may result in the other employees developing an interest in contributing towards technology transfer activities.

5.3 CONCLUSIONS

The study reveals that the Technology Transfer programs and Operation Pinnacle is really effective and directed towards the objectives. Emphasis is given to the employees at various levels. The improvement of the company can be easily monitored since the organization can see the vast change in optimization, utilization, productivity improvement, fixed bid project and travelling smart in the organization. Employees need to relate the Process and Project which helps in resolving their work and scale them to the desired level for the each financial year. With the help of Technology transfer programs and Operation Pinnacle this can be achieved. Employees are aware that training, other tests and meetings which origins from the Technology Transfer helps the organization

5.4 DIRECTIONS FOR FUTURE RESEARCH

Future researches in these areas can be focused on the following aspects which were not deeply analyzed or covered in this study:

- The organization should find Key learning indicators monthly to increase the training hours attended by each employee.
- The organization implementing few Technology Transfer programs which helps associates see the organization from a different angle.
- When the learning is made available within the same project, the associates will not wish seeking new project or climate change.
- The Organization need to implement Operation pinnacle to make the resource cut and to keep the efficient employees.

APPENDIX

QUESTIONNAIRE

1. Personal Details						
1.1	Designation					
1.2	Gender	M	F			
1.3	Age	20-25 years	25-30 years	30-35 years	> 35 years	
1.4	Marital Status	Married	Unmarried			
2. Technology Transfer within your firm or organization						
2.1	Does the organization support its employees in creation of new ideas?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.2	How do you see employee's contribution in creating new ideas?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.3	Are you aware of the technology involved in your process?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.4	Are you aware of the Projects running across organizations	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.5	Are you aware of the technologies involved in your neighboring projects?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.6	How will you rate the employee's involvement in technology transfer	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.7	Does your organization offers monetary incentives for supporting technology transfer?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.8	Regularly dedicates resources for detecting and obtaining information on various technologies involved in your organization?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.9	Is training given adequate importance in your organization?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.10	Are you aware of any metrics to assess the success or effectiveness of technology transfer?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent

2.11	Does the organization provides onsite openings in order to learn new technologies?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.12	Regularly updates databases of the employee after he is expertise in any technology?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
2.13	Facilitating the importance of documenting the complete study of any technology practiced in the organization?	Yes, to some extent	Definitely Yes	Neutral	Definitely No	No, to some extent
	[illegible]					
	[illegible]					
3.1	To improve the competitive advantage of your firm or organization	Critical	Important	Somewhat Important	Not at all Important	
3.2	To help integrate the technology currently using along with additional technology to bring out much efficient work	Critical	Important	Somewhat Important	Not at all Important	
3.3	To protect your firm or organization from loss of knowledge on technology due to workers' departures	Critical	Important	Somewhat Important	Not at all Important	
	[illegible]					
4.1	Increased our knowledge sharing horizontally (across departments, functions or business units)	Very effective	Effective	No Change	Somewhat effective	Not at all effective
4.2	Improved worker efficiency and / or productivity	Very effective	Effective	No Change	Somewhat effective	Not at all effective
4.3	Improved skills and knowledge of workers	Very effective	Effective	No Change	Somewhat effective	Not at all effective
4.4	Increased our number of markets (more geographic locations)	Very effective	Effective	No Change	Somewhat effective	Not at all effective
4.5	Improved client or customer relations	Very effective	Effective	No Change	Somewhat effective	Not at all effective
4.6	Helped us add new products or services	Very effective	Effective	No Change	Somewhat effective	Not at all effective
4.7	Increased our adaptation of products or services to client requirements	Very effective	Effective	No Change	Somewhat effective	Not at all effective
4.8	Increased flexibility in production and innovation	Very effective	Effective	No Change	Somewhat effective	Not at all effective

4.9	Prevented duplicate research and development	Very effective	Effective	No Change	Somewhat effective	Not at all effective
4.10	Increased our ability to capture knowledge from other business enterprises, industrial associations, technical literature, etc.	Very effective	Effective	No Change	Somewhat effective	Not at all effective
4.11	Improved involvement of workers in the workplace activities	Very effective	Effective	No Change	Somewhat effective	Not at all effective

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