CHAPTER - 5

FINDINGS AND SUGGESTIONS

5.1. FINDINGS

A research can be interpreted based on the findings given by the researcher. Every researcher should give his or her findings of the study with the conclusion he has arrived at after completing the study. The following findings were found out after the data was analyzed and interpreted. Findings of the research are presented as below:

There is significant difference between male and female, married and unmarried employees, employees with different age groups and various educational level with regard to blended learning by factors and their level of satisfaction vary.

The study says that there is significant difference between Job Category of employees at Caterpillar with regard to Blended Learning. In this aspect, the Welding Category employees were able to implement their learning skills after the learning. Employees with Machinist Category also expressed that there was a positive change in behaviour at their workplace and their job performance have also increased after the learning. It was significant with 5% level. So the learning impact was more at Caterpillar.

Analysis shows that there is a significant difference between employee’s attitudes and job performance with regard to Learning Duration of the employees and blended learning factors. Based on Duncan Multiple Range test, it was proved that, learners could make a positive impact on employees and therefore could change the attitude for them.
The study says that there is significant difference between duration of the learning session with regard to blended learning factors. Employees were happy with the learning duration by months as well as days. Since it was a flexible mode of learning, employees were able to understand the learning process quickly. As per the result, it was significant with 1% as well as 5% level. It means the statement was true according to the result.

There is an association between Gender and learning satisfaction. It was significant at 5% level. More male employees expressed their satisfactory level on learning duration. Since it was a Manufacturing Company, obviously, female employees were less and their satisfactory level were also comparatively less than male as per result.

There is a significant difference between Age group of employees with regard to Attitude, Behaviour and Instructor’s Feedback by Trainees based on Duncan Multiple Range Test. The result says that the same age group of employees had a positive opinion about their instructor due to their good co-ordination and healthy relationship among them. It was significant with 1% as well as 5% level.

There is a significant difference between Employees Attitudes with regard to learning factors. Based on the result, the graduate employees have a confident attitude about the learning because of their effective communication. It was significant with 1% level.

The null hypothesis is rejected at 1% level of significance with regard to attitude, behaviour and implementation of learning skills and Experience of the employees. Employees having 16-25 years of experience at Caterpillar were able to implement their learning skill effectively after the learning session. The same was agreed with the employee who has 6-15 years of experience.
The null hypothesis is rejected at 1% level of significance with regard to implementation of learning skill with respect to Job Category of Caterpillar Employees. Since Caterpillar is a Manufacturing Industry, all category of people like, welder, assembler and machinist were able to implement their learning skill after their immediate learning. The assembly group of employees say that their behaviour has changed positively after their learning additionally. Machinist category employees say that their job performance have also improved after the learning. This was significant with 5% level also.

The null hypothesis is rejected at 5% level of significance with regard to learning duration by months and with factors of job performance and attitudes. Employees with 7-12 years of experience were able to implement the performance effectively due to continuous learning. Based on Duncan Multiple Rage test, the employees having one year of experience had a positive attitude after the learning.

The null hypothesis is rejected at 5% level of significance with regard to the Gender and satisfactory levels of learning duration. The null hypothesis is rejected at 1% level of significance with regard to the Job category of employees and satisfactory levels of learning duration. Hence there is an association between Job category and satisfactory levels of learning duration of Caterpillar employees with respect to blended learning.

The null hypothesis is rejected at 5% level of significance with regard to age group and their difficulties in implementing the learning skills in the job.

Hence there is an association between the employees age group and the difficulties in implementing their learning skills at workplace. Employees with more experience with Caterpillar did not accept their difficulties, which means they were satisfied and were able to implement their job effectively. Only little percentage of employees say that they have a difficulty to implement the skill.
The null hypothesis is rejected at 5% level of significance with regard to educational qualification of the employees with respect to difficulties in implementing the job skill. As compared with diploma and graduate employees, the capacities of graduate employees were more in understanding the learning concepts. This may not be possible immediately by other qualified employees at Caterpillar. Hence there is an association between the educational qualification of the employees with regard to the learning implementation.

The null hypothesis is rejected at 5% level of significance with regard to the Marital Status of the employees and satisfactory level of learning duration. Hence there is an association between Marital Status of the employees and satisfactory level of learning duration with respect to blended learning.

Since blended learning is a flexible mode of learning, employees can practice any time at their workplace. So married employees were more comfort than single.

The null hypothesis is rejected at 5% level of significance with regard to experience of the employees and with level of Job Performance.

The Correlation and Coefficient between employees Attitude and Behavioural Factor is 81% with the positive relationships between employees attitude and behaviour at 1% level of significance.

The Correlation and Coefficient between employees Knowledge and job performance then skill and job performance factor is 60% with a positive relationship between knowledge and skill. The employees at Caterpillar had expressed their positive opinion through result, that their knowledge such as understanding the manufacturing process and identifying the importance of the job and then realizing the flexibility of learning helps them to attain Job Performance.
The Correlation and Coefficient between employees Knowledge and Instructors Feedback by Trainees as well as Peer's Feedback by Trainees on Blended Learning Factor is 0.455 and 0.553 which indicates the percentage of 46 and 55 respectively.

60 and 73 percentage of positive relationship was found between Job Performance and Instructors Feedback as well as Job Performance and Peers Feedback Factor.

The Correlation and Coefficient between Employees Skill and Instructors feedback as well as Peers feedback Factor is 46% and 55% which indicates the positive relationships between Skill and Instructors Feedback as well as Skill and Peers Feedback Factor.

The multiple correlation coefficient is 0.670 and measures the degree of relationship between the actual values and the predicted values of the Job Performance. It indicates the relationship between Job Performance and the four independent variables like Knowledge, Skill, Attitude and Behaviour which are quite strong and positive.

The coefficient of employees knowledge is 0.048 which represents the partial effect of employee's Attitudes on Job Performance, holding other factors as constant. The estimated positive sign implies that such effect is positive and that Performance score would increase by 0.048 for every factor and this coefficient value is not significant at 5% level.

The coefficient of **Attitude** is 3.026 and represents the partial effect of Attitude towards Blended learning effectiveness, holding the employees Behaviour, Skill, Knowledge and Job Performance.

The coefficient of **Job Performance** towards Blended learning is 1.510 which represents the partial effect of blended learning on Job Performance. The estimated positive sign implies that such effect is positive and that blended learning would increase by every aspect in Job Performance and this coefficient value is significant at 1% level.
Based on Model Fit Summary, it is found that the calculated P value is 0.119 which is greater than 0.05 which indicates perfectly fit. GFI (Goodness of Fit Index) value and AGFI (Adjusted Goodness of Fit Index) value is greater than 0.9 which represents it as a good fit. The CFI (Calculated Fit Index) value is 0.978 which means that it is perfectly fit and also it is found that RMR (Root Mean Square Residuals) and RMSEA value is 0.081 which is less than 0.10 which indicates it is perfectly fit.

Based on the open-ended answers given by the employees, the majority says that they would like to attend the blended learning programme at their workplace continuously.

Caterpillar employees expressed their opinion on blended learning that the overall impact of blended learning was at satisfactory level, especially when practicing at workplace. Few percentage of employees say that they did not get an opportunity to practice the same.
5.2 SUGGESTIONS

Observations at Caterpillar After the Blended Learning

Based on the findings approximately more than 50% employees were satisfied with the learning sessions.

Employees were more impressed with simulation mode of learning followed by class-room learning.

Peers have reported that, individual’s knowledge, skills and attitude have increased towards the job after the learning session. It also made them realize their increased responsibility and involvement towards the job.

Employees gaining more satisfaction because of innovative learning method at Caterpillar. This leads to more confidence and more commitment at their job. This also says that they realized their increased responsibility and involvement towards the job.

After the learning session, employees were able to identify the defects at the initial stage of work at workplace.

After the learning they gained knowledge about their work which in other way increased the quality of work and also to solve issues aroused during the work.

After the learning session the employees felt that they have improved their decision making skills more effectively. They also had an opinion that learning has increased their healthy relationship with other employees in Caterpillar.

Employees gave an opinion that Instructor’s teaching methods have increased their job performance as well as it has changed their behaviour positively.

Employees also recommend others to attend the blended learning programme due to the satisfactory level of learning.

Employees with below 5 years of experience were not able to show their performance well. But other experienced group of employees were able to show their performance well.
Few Tips for Traditional Class-room Trainers at Workplace

It is important to design a course that provides immediate relevancy to learning materials that can be put into practice.

Trainers should have all sorts of materials, references, videos, lectures and free resources available. In such a perfect learning environment learners are more likely to get inspired or find something that makes them to learn more.

Should facilitate group discussions and communities. People will quickly start exchanging knowledge, and will also have fun.

Should make themselves available to people, invite subject-matter experts, authors, professors and other specialists in live online discussions and question and answer sessions.

Come up with different problem solving exercises and case studies.

Should make learners look for and find solutions.

Accommodate individual interests and career goals.

Encourage the learners to think by either providing them with brain teasers, or by asking thought-provoking questions.

Few Tips for E-learning Providers at Workplace

Courses should be reviewed to ensure accurate and relevant information to address the company’s current learning objectives.

It is important that the course created is applicable to all participants perhaps by creating specific area modules that learners can choose from.

To accomplish the specific job tasks and associated concepts based on defined objectives. This requires necessary prerequisite knowledge.

Guidance should be available as needed to teach the learner how to successfully complete the course and reach the outcome objectives.
Different social media channels, forums or discussion boards can become valuable tools to implement this ongoing learning experience in the company.

E-learning success should, be defined when designing appropriate outcome, may include assessment of skill proficiency, relevant knowledge obtained, the degree to which employees can display how to transfer material learned to the workplace and a measure of predictive validity to ensure the learning module is associated with better understanding of task requirements and improved task performance long term.