Chapter – VI
CONCLUSIONS AND IMPLICATIONS

This chapter deals with the major findings and conclusions of the study with respect to the hypotheses that the investigator started with. It also deals with working out of educational implications of the findings. Any meaningful research effort must ultimately plough back research findings into the professional and thereby enrich it, as well as make it more responsive to the needs of its target population. Thus in this chapter, investigator attempts to follow a two-pronged approach i.e. link the present findings with past experience and also make future inferences.

HYPOTHESES RESTATE

The importance of hypotheses in a research study is that:

- They act as the questions to which, answers or solutions are expected to be arrived at through the attempted research.
- They provide the direction for the design of the study as well as for the inception of findings. Without well-defined hypotheses, the interpretations and discussions of the findings might lose its focus and become tangential to the main viewpoint of the study.
So, the investigator deems it fit to restate the hypotheses of the study at this juncture, and establish whether they can be retained or rejected according to the findings of the study.

The following null and alternate hypotheses were formulated for realizing the objectives of the present study:-

\( H_01: \) Training will not impact the knowledge of sales and service executives in service industry

\( H_11. \) Training impacts the knowledge of the sales and service executives in service industry

\( H_02: \) Training will not impact on-the-job skill of sales and service executives in service industry

\( H_12. \) Training impacts on-the-job skills of the sales and service executives in service industry

\( H_03: \) Training will not impact business performance of sales and service executives in service industry

\( H_13. \) Training impacts the performance on key business parameters for sales and service executives in service industry

\( H_04: \) On-the-job skills of sales and service executive will not be significantly related to their knowledge

\( H_14. \) On-the-job skills of sales and service executive are significantly related to knowledge of executive

\( H_05: \) Performance on business parameters of sales and service executive will not be significantly related to their knowledge
H₁₅. Performance on business parameters of sales and service executives is significantly related to their knowledge

H₀₆: Performance on business parameters of sales and service executive will not be significantly related to their on-the-job skills

H₁₆: Performance on business parameters of sales and service executives is significantly related to their on-the-job skill

DISCUSSION OF THE FINDINGS AND THEIR IMPLICATIONS

Findings Related To Hypotheses Number 1

*Training impacts the knowledge of the sales and service executives in service industry.*

The findings of the present study reveal that in both organizations, there has been a positive shift in knowledge scores of executives both in control group and experimental group. This positive shift may be attributed to passage of time and experience, people ability to learn on the job and become proficient their job. Knowledge scores for control group and experimental group pre-training and post-training for Airtel are shown in table 6.1.
### Table 6.1: Knowledge Scores for Control Group and Experimental Group - Airtel

<table>
<thead>
<tr>
<th>Knowledge Scores - Airtel</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Training Mean Score (M1)</td>
<td>35.61</td>
<td>43.18</td>
</tr>
<tr>
<td>Post-Training Mean Score (M2)</td>
<td>80.34</td>
<td>44.35</td>
</tr>
<tr>
<td>Difference of Means (D = M2-M1)</td>
<td>44.73</td>
<td>1.17</td>
</tr>
<tr>
<td>t-value</td>
<td>16.82</td>
<td>0.32</td>
</tr>
<tr>
<td>t-critical at 99%</td>
<td>3.012</td>
<td>3.012</td>
</tr>
</tbody>
</table>

The above tabulated scores clearly demonstrates that t-value for experimental group is 16.82, which is greater than t-critical 3.012 at 99% significance level. Hence, it can be concluded that there is an improvement in the knowledge of experimental group members, as improvement in scores is statistically significant at 99% significance level, whereas improvement in knowledge scores for control group is statistically not significant, as t-value of 0.32 for the control group is less than t-critical 3.012 at 99% significance level. (also refer table 4.3, 4.4, 4.5).

Knowledge scores for control group and experimental group pre-training and post-training for BSES are shown in table 6.2.
Table 6.2: Knowledge Scores for Control Group and Experimental Group - BSES

<table>
<thead>
<tr>
<th>Knowledge Scores – BSES</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Training Mean Score (M1)</td>
<td>39.04</td>
<td>42.57</td>
</tr>
<tr>
<td>Post-Training Mean Score (M2)</td>
<td>79.29</td>
<td>44.31</td>
</tr>
<tr>
<td>Difference of Means (D = M2-M1)</td>
<td>37.25</td>
<td>1.74</td>
</tr>
<tr>
<td>t-value</td>
<td>7.87</td>
<td>0.40</td>
</tr>
<tr>
<td>t-critical at 99%</td>
<td>3.012</td>
<td>3.012</td>
</tr>
</tbody>
</table>

The above tabulated scores clearly demonstrates that t-value for experimental group is 7.87, which is greater than t-critical 3.012 at 99% significance level. Hence, it can be concluded that there is an improvement in knowledge scores for experimental group members, as improvement in scores is statistically significant at 99% significance level, whereas improvement in knowledge scores for control group is not statistically significant, as t-value of 0.40 for the control group is less than t-critical 3.012 at 99% significance level. (also refer table 5.3, 5.4, 5.5)

Since, in both organizations, improvement in knowledge scores in case of experimental group has been greater than the improvement in knowledge scores of control group in similar time frame. Also, the positive shift in scores in experimental group has been found to be statistically significant in both the organizations even at 99% significance (0.01) level. However, shift in knowledge scores of control group in both organizations was not found to be significant.
Also, there is no other difference in any environmental factors between the control group and experimental group, except the training of experimental group. This demonstrates that training does help to develop knowledge level of executives significantly.

Thus, the null hypotheses 1, ‘H₀₁: Training will not impact the knowledge of sales and service executives in service industry’, is rejected and alternate hypotheses 1, ‘H₁₁. Training impacts the knowledge of the sales and service executives in service industry’ is retained.

Some other studies have also evaluated the impact of training on learning. Study conducted by Singh (2001) of 27 supervisors from 10 mills, concluded that as compared to control group, learning scores for training group has improved significantly, demonstrating, training did result in learning.

Study conducted by Pattanayak (1998), concluded that training programs are successful to enhance employees understanding of their job requirements and responsibilities (72% of respondents agreed). This was also the conclusion of study conducted by Baral, Bhattarai, Thapa, Ghimire and Burathoki (1994) that training brought considerable change in knowledge and attitude of health worker.

These studies corroborate this study that training impact the knowledge scores of participants.
Findings Related To Hypotheses Number 2

Training impacts on-the-job skills of the sales and service executives in service industry.

The findings of the present study reveal that in both organizations, there has been a positive shift in on-the-job skill evaluation scores of executives both in control group and experimental group. This positive shift may be attributed to passage of time and experience, people ability to learn on the job and become proficient their job. On-the-job skill evaluation scores for control group and experimental group pre-training and post-training for Airtel are shown in table 6.3.

Table 6.3: On-the-job Skill Evaluation Scores for Control Group and Experimental Group - Airtel

<table>
<thead>
<tr>
<th>On-the-job Skill Evaluation Scores - Airtel</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Training Mean Score (M1)</td>
<td>46.5</td>
<td>67.5</td>
</tr>
<tr>
<td>Post-Training Mean Score (M2)</td>
<td>83</td>
<td>71</td>
</tr>
<tr>
<td>Difference of Means (D = M2-M1)</td>
<td>36.5</td>
<td>3.5</td>
</tr>
<tr>
<td>t-value</td>
<td>7.73</td>
<td>0.32</td>
</tr>
<tr>
<td>t-critical at 99%</td>
<td>3.012</td>
<td>3.012</td>
</tr>
</tbody>
</table>

The above tabulated scores clearly demonstrate that t-value for experimental group is 7.73, which is greater than t-critical 3.012 at 99% significance level. Hence, there is improvement in on-the-job skill evaluation score for experimental group members as improvement in scores is statistically significant at 99% significance level, whereas
improvement in knowledge scores for control group is not statistically significant, as t-value of 0.32 for the control group is less than t-critical 3.012 at 99% significance level. (also refer table 4.7, 4.8, 4.9)

On-the-job skill evaluation scores for control group and experimental group pre-training and post-training for BSES are shown in table 6.4.

Table 6.4: On-the-job Skill Evaluation Scores for Control Group and Experimental Group - BSES

<table>
<thead>
<tr>
<th>On-the-job Skill Evaluation Scores - BSES</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Training Mean Score (M1)</td>
<td>34.52</td>
<td>36.37</td>
</tr>
<tr>
<td>Post-Training Mean Score (M2)</td>
<td>63.33</td>
<td>38.57</td>
</tr>
<tr>
<td>Difference of Means (D = M2-M1)</td>
<td>28.81</td>
<td>2.20</td>
</tr>
<tr>
<td>t-value</td>
<td>11.18</td>
<td>1.56</td>
</tr>
<tr>
<td>t-critical at 99%</td>
<td>3.012</td>
<td>3.012</td>
</tr>
</tbody>
</table>

The above tabulated scores clearly demonstrate that t-value for experimental group is 11.18, which is greater than t-critical 3.012 at 99% significance level. Hence there is improvement in on-the-job skill evaluation scores for experimental group members as improvement in scores is statistically significant at 99% significance level, whereas improvement in on-the-job skill evaluation scores for control group is not statistically significant, as t-value of 1.56 for the control group is less than t-critical 3.012 at 99% significance level. (also refer table 5.7, 5.8, 5.9)
Since, in both organizations, improvement in on-the-job skill evaluation scores in case of experimental group has been greater than the improvement in on-the-job skill evaluation scores of control group in similar time frame. Also, the positive shift in scores in experimental group has been found to be statistically significant in both the organizations even at 99% significance (0.01) level. However, shift in on-the-job skill evaluation scores of control group in both organizations was not found to be significant.

Also, there has not been any other difference in any environmental factors between the control group and experimental group, except the training of experimental group. This demonstrates that training does help to develop on-the-job skill level of executives significantly.

Thus, the null hypotheses 2, \( H_02: \) Training will not impact on-the-job skill of sales and service executives in service industry', is rejected and alternate hypotheses 2, \( H_12: \) Training impacts on-the-job skills of the sales and service executives in service industry’ is retained.

This has also been conclusion of research conducted by Sengupta (1999). It was found that there is significant improvement in teaching skills of experimental group of 14 trainee teachers, when compared with control group of 14 trainee teachers.

Comparative study for a technical training programme conducted by Leslie and Benson, 1996, of 70 trained engineers and 30 untrained engineers, demonstrated that all the trained engineers were able to
perform a construction task; less than half of untrained engineers could, demonstrating improvement in on-the-job skill level.

In the training for Healthsearch Pharmaceutical, Inc. to improve the selling skills of representatives by improving their skills in establishing specific call objectives, delivering the core promotional message to physician customers, and handling objections properly to influence physicians’ choice of prescriptions. The evaluation results show a significant improvement in physician prescribing behaviour in favour of HPI (human performance index), 112 responses, or 68.7 percent, through better handling of objections and better skills to influence physician prescribing behaviour (Stone 1999).

However, study conducted by Pattanayak (1998), comprising 1200 employees concluded that training is not fully effective when it comes to practice what one learns in the day-to-day job. This study was based on questionnaire methodology and no objective measurement of employee skills was conducted.

Even though study by Pattanayak (1998) has indicated that participants responded that training is not fully effective when it comes to practice in day-to-day job, number of other studies conducted through questionnaire methodology or observation has indicated that training has resulted in improvement in on-the-job skills of employees, validating the study.
Findings Related To Hypotheses Number 3

Training impacts the performance on key business parameters

In the present study, different business parameters are evaluated for each organization. In first organization, the business parameter considered was sales productivity i.e. average monthly sales per person. In second organization, the business parameter considered was customer satisfaction score i.e. number of customer rated the call in top two box. The findings of the present study reveal that in both organizations, there has been a positive shift in business result of average monthly sales per person and customer satisfaction scores of executives both in control group and experimental group. This positive shift may be attributed to passage of time and experience, people ability to learn on the job and become proficient their job or extraneous factors. Monthly sales per person figures for control group and experimental group pre-training and post-training for Airtel are shown in table 6.5.

<table>
<thead>
<tr>
<th>Business Result - Airtel</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Training Mean Score (M1)</td>
<td>19.01</td>
<td>28.59</td>
</tr>
<tr>
<td>Post-Training Mean Score (M2)</td>
<td>44.31</td>
<td>33.1</td>
</tr>
<tr>
<td>Difference of Means (D = M2-M1)</td>
<td>25.3</td>
<td>4.51</td>
</tr>
<tr>
<td>t-value</td>
<td>9.2</td>
<td>1.18</td>
</tr>
<tr>
<td>t-critical at 99%</td>
<td>3.012</td>
<td>3.012</td>
</tr>
</tbody>
</table>

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The above tabulated scores clearly demonstrate that t-value for experimental group is 9.2, which is greater than t-critical 3.012 at 99% significance level. Hence, there is improvement in business result for experimental group members as improvement in business results is statistically significant at 99% significance level, whereas improvement in business result for control group is not statistically significant, as t-value of 1.18 for the control group is less than t-critical 3.012 at 99% significance level. (also refer table 4.11, 4.12, 4.13)

Business result – customer satisfaction score for control group and experimental group pre-training and post-training for BSES are shown in table 6.6.

<table>
<thead>
<tr>
<th>Business Result - BSES</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Training Mean Score (M1)</td>
<td>40.33</td>
<td>41.83</td>
</tr>
<tr>
<td>Post-Training Mean Score (M2)</td>
<td>49.86</td>
<td>43.47</td>
</tr>
<tr>
<td>Difference of Means (D = M2-M1)</td>
<td>9.53</td>
<td>1.64</td>
</tr>
<tr>
<td>t-value</td>
<td>3.50</td>
<td>0.38</td>
</tr>
<tr>
<td>t-critical at 99%</td>
<td>3.012</td>
<td>3.012</td>
</tr>
</tbody>
</table>

The above tabulated scores clearly demonstrate that t-value for experimental group is 3.50, which is greater than t-critical 3.012 at 99% significance level. Hence, there is improvement in business result for experimental group members, as improvement in business results is
statistically significant at 99% significance level, whereas improvement in business result for control group is not statistically significant, as t-value of 0.38 for the control group is less than t-critical 3.012 at 99% significance level. (also refer table 5.11, 5.12, 5.13)

Since, in both organizations, improvement in business result in case of experimental group has been greater than the improvement in business result of control group in similar time frame. Also, the positive shift in scores in experimental group has been found to be statistically significant in both the organizations group even at 99% significance (0.01) level. However, shift in business result of control group in both organizations groups was not found to be significant.

Also, there has not been any other difference in any environmental factors between the control group and experimental group, except the training of experimental group. This demonstrates that training does impact business performance of executives significantly.

Thus, the null hypotheses 3, \( H_0^3: \) Training will not impact business performance of sales and service executives in service industry', is rejected and alternate hypotheses 3, \( H_1^3: \) Training impacts the performance on key business parameters' is retained.

This has also been agreed by research conducted by Raycham (1996) at Xerox. He found that post-training, Newcastle branch of Xerox, became the top branch in the country, in terms of sales productivity and number
of calls required to get an order was reduced by half from 48 to 24 post training.

Another example of business impact of training is implementation of training program (SWAT) at Toshiba, which has demonstrated benefits in areas of increased retention of sales staff, increased loyalty to Toshiba brand, and faster turn around time (Leiserson, 2005).

Benefits of training are visible even in small businesses, where the U.S. subsidiary of an Australian supplier of automotive brake components saved US$100,000 in overtime payments alone the first year after signing with GoTrain Corp. for its environmental, health and safety training.

While calculating ROI of technical training, in a field comparison of 70 trained engineers and 30 untrained engineers, training has resulted in increased productivity, lower mistakes and the conservative estimate of ROI for one year was 4,000 percent per year (Leslie and Benson, 1996).

Sales Negotiation Training Programme at Dell Computer Corporation has resulted in the total net profit to the company of $763,297. Motorola not only improved sales substantially through training, but also reduced costs by training employees to simplify processes and reduce waste (McManus, McManus and Williamson, 1994).

Even CIGNA (an insurance company), while evaluating impact of 7-day training program in basic management skills programme found that insurance premium collection improved from 75% to 96% in one year (Cascio, 1992).
In the training for Healthsearch Pharmaceutical, Inc. to improve the selling skills of representatives calculation of post-training revenue from sales for the 12-month period before and after the training demonstrated Post-training gain of $17,969,024 in revenue from sales in year 1997-98 against 1996-97 (Stone 1999).

Study by Hedges, Patricia and Dennis Moss (1996) in training of 16 managers, demonstrated that training was effective in sustainable improvement in annual BSI rating from 65 to 70 and subsequently to 80. While the average gain of Parcelforce as a whole was 11 BSI points over this period, the gains in the experimental office has been 15 BSI points.

Level 4 evaluation at Nicco Internet Ventures Limited, it was concluded that rate of professional charges negotiated with clients for 12.5% and above has improved from 33% to 44% of contract negotiated, demonstrating improved negotiation skills (Lahiry, 2005).

In HP services, as a result of the training program, approximately sixty individuals who were in the program voluntarily left the company, against 100 individuals left the company from untrained group; this has resulted in savings of over $1,600,000 towards cost to locate and hire. (Kirkpatrick, D.L. and Kirkpatrick, J.D. (2005).

In a study conducted by Trinh and Lacopetti (2005), at the end of training, 'Pathway to Excellence', at Von Duprin, a division of Ingersoll-Rand, it was observed that required production floor space reduced by
1120 sq.ft. (4355 to 3235 sq.ft.), Production rate increase by 50 per shift (800 to 850) and department staffing decreased by one (21 to 20).

In an evaluation of a soft skill training programme of time management at MCI WorldCom, the respondents felt that they were able to develop their skills of prioritising and weekly planning and were able to save 3.85 hours per week through application of the skills learned in time management training. In another evaluation of a training programme of change management at MCI WorldCom, the respondents believe their on-the-job performance had increased almost 15 percent through the application of the skills taught in the change management training. (Schmidt, 1999).

Effectiveness of training initiative at Cisco Systems, Inc. was evaluated and it was found that within one quarter write-offs due to non-traceable RTVs were reduced by 100 percent. Another benefit was that within four weeks, the cycle time for the return of boards was reduced from seven to ten days to three days and productivity among buyers went up by a minimum of 10 percent. (Kirkpatrick and Kirkpatrick, 2006)

A case study from India in textile industry demonstrates that training has yielded results in terms of improved productivity, reduce defect rate. (Sharma and Agarwal, 2000)

To quote Sanjeev Duggal (2000), “a sales training programme conducted by NIS Sparta for Coca Cola resulted in a 17 per cent increase in sales, while an intervention with the Indian Railways, which launched a
customer goodwill movement, resulted in a 34 per cent increase in the customer satisfaction score.” Even Baral, Bhattarai, Thapa, Ghimire and Burathoki (1994) in their study to measure the impact of training of basic health workers in leprosy control programme concluded that training improved service delivery provided by the health workers. This study and other studies have demonstrated that focused training impacts the business performance.

**Findings Related To Hypotheses Number 4**

*On-the-job skills of sales and service executive are significantly related to knowledge of executive*

Correlation between knowledge level of executives and skill evaluation scores of executives was calculated for each organization. In both organizations, a positive correlation exists between knowledge scores and on-the-job skill evaluation scores. This correlation between executive knowledge scores and skill evaluation scores is greater than probable error and is found to be statistically significant as shown in table 6.7 (Also refer table 4.14 and 5.14).

<table>
<thead>
<tr>
<th></th>
<th>Airtel</th>
<th>BSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>γ (between knowledge score and skill evaluation score)</td>
<td>0.92</td>
<td>0.65</td>
</tr>
<tr>
<td>Probable Error (P.E.)</td>
<td>0.02</td>
<td>0.08</td>
</tr>
<tr>
<td>6 P.E.</td>
<td>0.13</td>
<td>0.48</td>
</tr>
</tbody>
</table>
In both case, value of \( y > 6 \) P.E., this clearly demonstrates that change in knowledge of executive will lead to change in skill evaluation scores for sales and service executives in service industry. Thus increase in knowledge of executive will lead to better understanding of role and why and how to perform various task effectively.

Thus, the null hypotheses 4, 'Ho4: On-the-job skills of sales and service executive will not be significantly related to their knowledge', is rejected and alternate hypotheses 4, 'H14: On-the-job skills of sales and service executive are significantly related to knowledge of executive' is retained.

Though investigator has not been able to find existing studies in corporate environment where a correlation between knowledge improvement and on-the-job skill has been calculated, however, studied evaluating safety habits among students and patient adhering to their prescription highlight this point.

In a study conducted by Wong, Chien, Luh, Lin, Wang and Cho (2004) of 163 full-time students from two vocational schools, it was concluded that students scoring lower in knowledge regarding chemicals were less likely to report the intention to wait for favorable air conditions prior to their using chemicals in the workplace (at 95% confidence level). Those scoring higher were more likely to use personal-protective equipment when occupationally using hairdressing chemicals (at 95% confidence level). This clearly demonstrates the correlation between knowledge of students and habit to using safe practices at work place.
A study by Smith (1996) to determine the correlation between literacy and basic skills and workplace occupational skills, found that those persons displaying high occupational skills also had high basic and literacy skill levels and were more likely to be engaged in technical or professional types of occupations. Therefore, the study concluded that there is a correlation between basic and literacy skills and occupational skills.

This study and studies from non-corporate environment corroborate the view that improvement in knowledge of employees result in improvement of on-the-job skills of employees.

**Findings Related To Hypotheses Number 5**

*Performance on business parameters of sales and service executives is significantly related to their knowledge*

Correlation between knowledge level of executives and business parameter of sales productivity and customer satisfaction score was calculated in each organization.

The findings of the present study reveal that in the first organization (Airtel), where average monthly sales per person is considered as business parameter, there has been a significant positive correlation between executive knowledge scores and sales productivity figures. Hence, the shift in executive knowledge scores will impact the business parameter of average sales productivity.
In the second organization (BSES), where customer satisfaction scores i.e. number of customers rating the call in top two boxes is considered as business parameter, correlation between change in knowledge scores and customer satisfaction scores is not significant. Hence, shift in knowledge scores in identified area does not have significant correlation with the business result of customer satisfaction score.

This is also shown in table 6.8 (Also refer table 4.15 and 5.15).

**Table 6.8: Correlation between knowledge score and business result for experimental group**

<table>
<thead>
<tr>
<th></th>
<th>Airtel</th>
<th>BSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y (between knowledge score and business result)</td>
<td>0.68</td>
<td>0.30</td>
</tr>
<tr>
<td>Probable Error (P.E.)</td>
<td>0.08</td>
<td>0.12</td>
</tr>
<tr>
<td>6 P.E.</td>
<td>0.48</td>
<td>0.75</td>
</tr>
</tbody>
</table>

In Airtel value of $\gamma \geq 6$ P.E., while in BSES value of $\gamma < 6$ P.E. This demonstrates that while in first organization, the training intervention was focused to deliver the identified business parameter of sales productivity. Hence, this hypothesis can be retained for sales productivity of executives in service industry.

However, even though there has been a significant shift in knowledge scores for second organization, this is not resulting in corresponding shift in business parameter of customer satisfaction scores. This might be due to various reasons, which might be that knowledge needs to be converted to on-the-job skill before impact on business results can be
seen. Hence, this hypothesis can not be retained for customer satisfaction scores for this organization.

This demonstrate that improvement in knowledge may lead to better effectiveness on performance of individual in service industry, however, same can not be always true in soft skill areas, as quoted by Ravi, 2003. Thus, the null hypotheses 5, ‘Ho5: Performance on business parameters of sales and service executive will not be significantly related to their knowledge’, is retained.

Though investigator has not been able to find existing studies in corporate environment where a correlation between knowledge improvement and business results has been calculated, however, some studies from social science highlight this point. In a study to examine the relationship between nutrition knowledge and eating behavior of a sample of middle school children, the relationship between nutrition knowledge and eating behavior was significant for seventh and eighth grade students (Pirouznia M. (2000).

In a study by Pickney and Arnason (2005) to evaluate correlation between patient recall of bone densitometry results and subsequent treatment adherence, it was concluded that patients with low BMD who correctly reported their results were more likely to have received a medication and to continue to take it (p <0.0001), establishing a link between patient knowledge level and desired result of having proper medication.
Study in textile industry by Sharma and Agarwal (2000) demonstrates that training has enhanced knowledge of employees yielding results in terms of improved productivity, reduce defect rate. Evaluation done at Nicco Internet Ventures Limited through pre- and post-training quizzes showed an improvement from 24 to 92 percent correct answers and level 4 evaluation it was concluded that rate of professional charges negotiated with clients for 12.5% and above has improved from 33% to 44% of contract negotiated, demonstrating improved negotiation skills (Lahiry, 2005). This demonstrated improvement in business result of effective negotiation as a result of improved knowledge.

Though in both studies in corporate sector no coefficient of correlation has been calculated between improvement in knowledge scores and business results and conclusion has been drawn on basis of improvement in mean value. Even though studies from social science indicate that there is a correlation between knowledge and desired results, the same has not been validated by this study. This might be due to the fact that knowledge of soft skill area like customer service may not have same impact on business results but knowledge of hard data like sales techniques, nutrition value or knowledge of health has direct correlation with desired results.
Findings Related To Hypotheses Number 6

Performance on business parameters of sales and service executives is significantly related to their on-the-job skill

Correlation between skill evaluation score of executives and business parameters of sales productivity and customer satisfaction score was calculated for each organization.

The findings of the present study reveal that in the first organization (Airtel), where average monthly sales per person is considered as business parameter, there has been a significant positive correlation between executive skill evaluation scores and sales productivity figures. Hence, the shift in executive skill evaluation scores will impact the business parameter of average sales productivity.

In the second organization (BSES), where customer satisfaction scores i.e. number of customers rating the call in top two box is considered as business parameter, correlation between change in skill evaluation scores and customer satisfaction scores is also significant. Hence, shift in skill evaluation scores in identified area have significant correlation with the business result of customer satisfaction score.

This is also shown in table 6.9 (Also refer table 4.16 and 5.16).

<table>
<thead>
<tr>
<th></th>
<th>Airtel</th>
<th>BSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y (between skill evaluation score and business result)</td>
<td>0.64</td>
<td>0.70</td>
</tr>
<tr>
<td>Probable Error (P.E.)</td>
<td>0.09</td>
<td>0.068</td>
</tr>
<tr>
<td>6 P.E.</td>
<td>0.54</td>
<td>0.41</td>
</tr>
</tbody>
</table>
In both cases value of \( \gamma > 6 \) P.E., this demonstrates that the training intervention was focused to develop skills of employees and deliver the identified business parameter of sales productivity and customer satisfaction score. Hence, in service industry, improvement in employee ability to perform his job better evaluated through on-the-job skill will have an impact on business performance.

Thus, the null hypotheses 6, 'Performance on business parameters of sales and service executive will not be significantly related to their on-the-job skills', is rejected and alternate hypotheses 6, \( H_16 \). Performance on business parameters of sales and service executives is significantly related to their on-the-job skill' is retained.

Study by Mussano (1977) of second semester freshmen living in dormitories at York College (Pennsylvania), compared study Techniques adopted by students with their overall grade-point averages (GPAs). The results indicated a clear positive correlation between study organization and GPA, and a significant positive correlation between study techniques and GPA.

This is also emphasized by a study for Motorola, Canada, improvement in selling skills of 42 people in experimental group, has led to increased sales to new customers for experimental group, by 63%, against reduction in sales by 16% for control group. Whereas, in case of sales to
existing customers, for experimental group, went up by 1%, against reduction in sales by 13% for control group (Raychem, 1996).

Study by Garner (2006) also pointed that for a forex trader, understanding the relationship between pair of currency, will allow traders to hedge positions, but it may also give them an edge when it comes to entering a trade.

In the training for Healthsearch Pharmaceutical, Inc. it was established that improvement in selling skills of representatives by improving their skills in establishing specific call objectives, delivering the core promotional message to physician customers, and handling objections properly to influence physicians’ choice of prescriptions has resulted in post-training gain of $17,969,024 in revenue from sales in year 1997-98 against 1996-97 (Stone 1999), even though no correlation is calculated between improvement in skill and improvement in sales.

This study and other studies have clearly established that improvement in corresponding skills of employees will lead to improvement in business results.

**CONCLUSION**

While conclusively evaluating the impact of training various researchers have used quasi-experimental research design to ensure that impact of extraneous factors be nullified. In this research the control group and experimental group are clearly identified and divided physically. In case
of first organization, the two groups were clearly segregated as people were sitting in separate showrooms, in case of second organization; the people were under different team leaders and sitting in different bays, though on same floor. In both organizations, every effort was made to ensure that there is no differentiation between in the control groups and experimental groups, with respect to policies, infrastructure or market condition. The only difference was administration of training to experimental group, which was absent in control group.

The output parameters of training were divided into intermediate results and final results. Intermediate results were in terms of knowledge scores and skill evaluation scores, which can be primarily influenced by training inputs. The final results were in terms of business parameters of sales productivity and customer satisfaction scores.

While there has been a significant shift in intermediate results of knowledge scores and skill evaluation scores for the experimental group, there is also a correlation between improvement in knowledge scores and shift in skill evaluation scores.

The shift has been consistent in final result of sales productivity and customer satisfaction scores. The shift in sales productivity and customer satisfaction scores of experimental group has been significant. There is a positive correlation between employee on-the-job skill and business performance of sales productivity and customer satisfaction score.
However, while the correlation between knowledge scores and sales productivity has been found to be significant, the correlation between knowledge score of employees and customer satisfaction scores was not significant. This opens up areas for future research to identify the knowledge factors impacting customer satisfaction. Also, this research has evaluated impact on only one business parameter of sales productivity and customer satisfaction, other business parameters like employee morale, employee turnover, absenteeism, etc. could not be evaluated due to paucity of time, resources and data.

The positive impact of training on intermediate results of knowledge score and on-the-job skill evaluation score and business result parameter was also validated by number of other researchers. However, investigator was not able to find any existing literature analysing correlation between intermediate results and ultimate objective of training.

Yin, 1987 has clearly stated that case studies can not be generalized to theory automatically. A theory must be tested through replications of the findings in a second or even a third neighbourhood, where theory has specified that the same results should occur. Once such replication has been made, the results might be accepted for a much larger number of similar neighbourhoods.

This has been an attempt by the investigator, where the focus has been on methodology of research.
Limitations of the Study and Implications for Further Research

• This study has limited its scope to large service sector organizations in NCR only.

• Due to constraints of time and resources, the hypotheses were tested on a sample size of only two organisations.

• This study has evaluated only ultimate business result of sales and customer service. However, many other benefits of training critical to organization like employee attrition, employee motivation, absenteeism etc. have not been evaluated in this study.

• Since, the methodology adopted was quasi-experimental research and this study was conducted in real business environment, where there were issues of manpower attrition and participants from experimental group missing training due to various reasons (25% absenteeism in classroom attendance), impact of these factors could not be evaluated.

• Study has been focused on evaluating, if there is an impact of training on business critical parameter of sales and customer satisfaction. However, this study has not focused on evaluating the impact and accuracy of different steps in training cycle, like training need analysis, training content, methodology chosen or training delivery.

• This study only looks at evaluating improvement in business critical parameters due to training. However, this study does not evaluate return on investment made on training, that is, this study does not
evaluate if this difference is worth the investment made on training.

This is a detailed research subject.

**Direction for Future Research**

- Study with larger scope needs to be conducted covering larger sample size from all industry segments, covering diverse geographies and organization size to further validate the findings of this study.

- Further research is required to evaluate, if change in knowledge level of employee will result in change in business results, specifically in areas of soft skills and customer service.

- Further research is required to evaluate short-term and long-term benefits of training from business results and factors like reduced employee attrition, increased employee motivation and reduced absenteeism.

- Further research is required to evaluate the impact of different steps in training cycle, like training need analysis, training content, methodology chosen or training delivery.

- Further research is required to evaluate return on investment on training.