CHAPTER - 4
ANALYSIS AND INTERPRETATION OF DATA

After collecting the relevant data with the help of suitable tools, statistical analysis was performed by applying one way analysis of variance (one way ANOVA) for testing the Null Hypotheses. In case of significant F-ratio, Post-hoc analysis was done with the help of 't' test and thereafter interpretations were made of statistical obtained results. The present chapter provides the description of analysis and interpretation of the data in a systematic and elaborative manner.

4-1 COMPARISON OF THREE GROUPS OF EDUCATIONALLY DISADVANTAGED STUDENTS (SC, ST AND OBC) ON LEARNING MODES AND LEARNING STYLES

Summary of One Way Analysis of Variance in respect of learning modes and learning styles and summary of 't' test in case of significant F-ratio is given in Table 4.1(a) and Table 4.1(b).

It is evident from Table 4.1(a) that F-ratio (.263) was too less to reach the level of significance (p>.05, df 2/349). This suggests that Scheduled Caste (SC), Scheduled Tribe (ST) and Other Backward Class (OBC) students did not differ significantly with reference to their preference for concrete experience mode. Alternatively, it may be said that on the average above referred three groups of students had similar tendency of preference for learning through concrete experience mode.

It may be seen in Table 4.1(a) that ‘F-ratio’ (10.502) corresponding to reflective observation mode came out to be highly significant (p < .01, df 2/349). This indicates that SC, ST and OBC exhibited marked difference in mean scores of reflective observation mode. This further implies that above referred three groups of students had differential preference for learning through reflective observation mode. Since 'F-ratio' tells overall results regarding differences and
does not pin-point the exact source of differences, 't' test was applied for specifying the exact source of variation in mean scores of the three groups. Tables 4.1(b) provides the obtained results.

Table 4.1(a)

Summary of ONE-WAY-ANOVA in Respect of Learning Modes and Learning Styles of SC, ST and OBC Students

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>14.051</td>
<td>2</td>
<td>7.025</td>
<td>0.263 NS</td>
</tr>
<tr>
<td>Experience</td>
<td>9314.813</td>
<td>349</td>
<td>26.69</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9328.864</td>
<td>351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective</td>
<td>406.885</td>
<td>2</td>
<td>203.443</td>
<td>10.502**</td>
</tr>
<tr>
<td>Observation</td>
<td>6761.044</td>
<td>349</td>
<td>19.373</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7167.929</td>
<td>351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td>162.849</td>
<td>2</td>
<td>81.425</td>
<td>2.985 NS</td>
</tr>
<tr>
<td>Conceptualization</td>
<td>9517.375</td>
<td>349</td>
<td>27.27</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9680.224</td>
<td>351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>394.898</td>
<td>2</td>
<td>197.449</td>
<td>5.378**</td>
</tr>
<tr>
<td>Experimentation</td>
<td>12812.51</td>
<td>349</td>
<td>36.712</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13207.41</td>
<td>351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diverger</td>
<td>571.501</td>
<td>2</td>
<td>285.751</td>
<td>6.035**</td>
</tr>
<tr>
<td>Learning Style</td>
<td>16525.72</td>
<td>349</td>
<td>47.352</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17097.22</td>
<td>351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assimilator</td>
<td>1015.533</td>
<td>2</td>
<td>507.766</td>
<td>12.003**</td>
</tr>
<tr>
<td>Learning Style</td>
<td>14763.33</td>
<td>349</td>
<td>42.302</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15778.86</td>
<td>351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Converger</td>
<td>84.528</td>
<td>2</td>
<td>42.264</td>
<td>0.762 NS</td>
</tr>
<tr>
<td>Learning Style</td>
<td>19365.29</td>
<td>349</td>
<td>55.488</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19449.82</td>
<td>351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accommodator</td>
<td>264.563</td>
<td>2</td>
<td>132.281</td>
<td>3.066*</td>
</tr>
<tr>
<td>Learning Style</td>
<td>15056.96</td>
<td>349</td>
<td>43.143</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15321.52</td>
<td>351</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*=Significant at .05 level  
**=Significant at .01 level  
NS= Not-significant at .05 level
Table 4.1(b)
Summary of t-tests for Learning Modes and Learning Styles in Respect of SC, ST and OBC Students

<table>
<thead>
<tr>
<th>Caste/Mode</th>
<th>SC M</th>
<th>ST M</th>
<th>OBC M</th>
<th>Comparison</th>
<th>df</th>
<th>‘t’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective</td>
<td>30.07</td>
<td>31.81</td>
<td>32.77</td>
<td>1&amp;2</td>
<td>241</td>
<td>2.98**</td>
</tr>
<tr>
<td>Observation</td>
<td>30.03</td>
<td>28.63</td>
<td>27.33</td>
<td>1&amp;2</td>
<td>241</td>
<td>1.79NS</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>63.59</td>
<td>65.69</td>
<td>66.78</td>
<td>1&amp;2</td>
<td>241</td>
<td>2.29*</td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>56.56</td>
<td>58.64</td>
<td>60.88</td>
<td>1&amp;2</td>
<td>241</td>
<td>2.72**</td>
</tr>
<tr>
<td>Assimilator</td>
<td>63.55</td>
<td>62.5</td>
<td>61.34</td>
<td>1&amp;2</td>
<td>241</td>
<td>1.288NS</td>
</tr>
<tr>
<td>Accommodator</td>
<td>60.81</td>
<td>65.04</td>
<td>70.92</td>
<td>1&amp;2</td>
<td>241</td>
<td>2.461**</td>
</tr>
</tbody>
</table>

* = Significant at .05 level
** = Significant at .01 level
NS = Not-significant at .05 level

It may be noted from Table 4.1(b) that ‘t’ value of 2.98 found to be significant at .01 level of significance. It means that group 1 (SC) and group 2 (ST) differed significantly with regard to their preference for reflective observation. A look at the mean scores of two groups tells that scheduled tribe students preferred learning through reflective observation mode more than scheduled caste students (m 31.81>m 30.07). It may further be seen in Table 4.1(b) that the second ‘t’ value (4.67) also came out highly significant (p<.01, df 215). The mean difference of the groups clearly reveals that OBC students tended more towards the use of reflective observation than their counterparts scheduled caste students. The third ‘t’ value (1.72) representing comparison between group 2 (ST) and group 3 (OBC) did not reach the level of significance (p>-.05, df 242). This leads to be conclusion that scheduled tribe and OBC students had similar preference for learning through reflective observation mode.
Table 4.1(a) shows that the obtained F-ratio (2.985) was not significant at .05 level of significance with df 2/349 from this, it may be inferred that SC, ST and OBC students adopted abstract conceptualization mode more or less to the
same degree. In other words SC, ST and OBC students had similar preference for learning through abstract conceptualization mode.

It may be observed from Table 4.1(a) that the obtained F-ratio (5.378) turned out to be highly significant (p<.01, df 2/349). This gives the message that there was statistical significant difference in mean scores of active experimentation mode preference of the three groups. In order to specify the exact source of difference, 't' test was performed. The obtained results have been provided in Table 4.1(b).

It is clear from Table 4.1(b) that group 1 (SC) and group 2 (ST) did not differ significantly with respect to their preference for learning through active experimentation (t’ = 1.79, df 241). Group 2 (ST) and group 3 (OBC) also did not differ with regard to their preference for active experimentation (as the obtained 't'; value 1.691 was less than the table value of 't'. However, there existed significant difference between group 1 (SC) and group 3 (OBC). The mean difference was found in favour of group 1 (SC) (m 30.03>m 27.33) and t=3.119 was highly significant. This leads to the conclusion that SC students preferred learning through active experimentation more than OBC students.

**Figure 4.2 : Shows the Difference in Preference of SC and OBC Students for Active Experimentation Mode**
Table 4.1(a) exhibits that the obtained F-ratio (6.035) was greater than the table value of 'F' at .01 level of significance. This implies SC, ST and OBC students had significant variation in their preference for learning through diverger learning style.

The results of the 't' values given in 4.1(b) indicates that first 't'-value of 2.29 was significant at .05 level and second 't' value (3.50) was significant at .01 level. It means there was a significant difference in diverger learning styles of group 1 (SC) and group 2 (ST) as well as group 1 (SC) and group 3 (OBC). Further on the basis of mean difference in case of first comparison, it may be stated that ST students preferred learning through diverger learning style more than SC students. In the second comparison OBC students tended to prefer diverger learning style more than SC students. However, no significant difference emerged in diverger learning style, mean scores of group 2 (ST) and group 3 (OBC). In other words scheduled tribes and OBC students had similar magnitude of preference for the use of diverger learning style.

**Figure 4.3(a) : Showing the Difference in Preference of SC and ST Students for Diverger Learning Style**
Figure 4.3(b) : Showing the Difference in Preference of SC and OBC Students for Diverger Learning Style.

It may be noted from Table 4.1(a) that the obtained F-ratio (12.003) was highly significant (p<.01, df 2/349). From this result, it may be inferred that SC, ST and OBC students differed significantly with regard to their preference for assimilator learning style. For identifying the exact source of difference in mean scores of three referred groups, 't'-test was applied to the scores of the reference groups.

Table 4.1(b) discloses that all the three 't' values (2.72, 4.82, 2.49) were found highly significant (p<.01). This implies that there was a significant difference in the preference for assimilator learning style of group 1 and 2, group 1 and 3, group 2 and 3. A look at the respective mean reveals that group 2 (ST) preferred assimilator learning style more than group 1 (SC); group 3 (OBC) preferred assimilator learning style more than group 1 (SC) and group 2 (ST).
Figure 4.4(a) : Shows the Difference in Preference of SC and ST Students for Assimilator Learning Style

Figure 4.4(b) : Shows the Difference in Preference of SC and OBC Students for Assimilator Learning Style

Figure 4.4(c) : Shows the Difference in Preference of ST and OBC Students for Assimilator Learning Style
It is clear from Table 4.1(a) that the obtained 'F-ratio' (0.762) was quite less than the table value of 'F' with df 2/349) at .05 level of significance. It means group 1 (SC), group 2 (ST), groups 3 (OBC) students were alike with reference to their preference for converger learning style. In other words, they had the similar magnitude of preference for learning through converger learning style.

Table 4.1(a) shows that there was a significant difference in the preference of SC, ST and OBC students for learning through accommodator learning style as the obtained 'F-ratio' (3.066) turned out to be highly significant. Further analysis was done by 't' test the result is given in the Table 4.1(b).

It may be seen in Table 4.1(b) that 't' value (1.288) comparing group 1 (SC) group 2 (ST) was found to be non-significant at .05 level of significance. This implies that SC and ST students had similar preference for the use of accommodator learning styles. The second 't' value (2.461) came out to be highly significant which conveys that group 1 (SC) and group 3 (OBC) differed significantly on accommodator learning style. Since the mean value of SC group was greater than the mean value of OBC group, (m 63.55>m 61.34), it may be said that SC students were more inclined towards the use of accommodator learning style than the OBC students Table 4.1(b) further shows that the third 't' value (1.323) was not significant (p>.05 df 242). This suggests that ST and OBC students had similar level of preference for learning through accommodator learning style.

**Figure 4.5 : Showing the Difference in Preference of SC and OBC Students for Accommodator Learning Style**
4-2 COMPARISON OF SC, ST AND OBC MALE STUDENTS ON LEARNING MODES AND LEARNING STYLES

Summary of one way ANOVA in respect of learning modes and learning styles and summary of ‘t’ test in case of significant ‘F’ ratio given in Table 4.2(a) Table 4.2(b) and respectively.

Table 4.2(a)

Summary of ONE-WAY-ANOVA in Respect of Learning Modes and Learning Styles of Male SC, ST and OBC Students

<table>
<thead>
<tr>
<th>Source</th>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Between</td>
<td>5.27</td>
<td>2</td>
<td>2.635</td>
<td>0.092NS</td>
</tr>
<tr>
<td>Experience</td>
<td>Within</td>
<td>5299.968</td>
<td>186</td>
<td>28.494</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5305.238</td>
<td>188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective</td>
<td>Between</td>
<td>171.599</td>
<td>2</td>
<td>85.799</td>
<td>4.144**</td>
</tr>
<tr>
<td>Observation</td>
<td>Within</td>
<td>3850.285</td>
<td>186</td>
<td>20.7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4021.884</td>
<td>188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td>Between</td>
<td>110.696</td>
<td>2</td>
<td>55.348</td>
<td>1.809NS</td>
</tr>
<tr>
<td>Conceptualization</td>
<td>Within</td>
<td>5687.854</td>
<td>186</td>
<td>30.579</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5798.55</td>
<td>188</td>
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</tr>
<tr>
<td>Active</td>
<td>Between</td>
<td>171.481</td>
<td>2</td>
<td>85.741</td>
<td>2.118NS</td>
</tr>
<tr>
<td>Experimentation</td>
<td>Within</td>
<td>7528.37</td>
<td>186</td>
<td>40.475</td>
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</tr>
<tr>
<td>Total</td>
<td></td>
<td>7699.851</td>
<td>188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diverger</td>
<td>Between</td>
<td>236.776</td>
<td>2</td>
<td>118.388</td>
<td>2.334NS</td>
</tr>
<tr>
<td>Learning Style</td>
<td>Within</td>
<td>9434.472</td>
<td>186</td>
<td>50.723</td>
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</tr>
<tr>
<td>Total</td>
<td></td>
<td>9691.248</td>
<td>188</td>
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</tr>
<tr>
<td>Assimilator</td>
<td>Between</td>
<td>514.447</td>
<td>2</td>
<td>257.229</td>
<td>5.213**</td>
</tr>
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<td>Learning Style</td>
<td>Within</td>
<td>9178.42</td>
<td>186</td>
<td>49.346</td>
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</tr>
<tr>
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<td></td>
<td>9692.867</td>
<td>188</td>
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<tr>
<td>Converger</td>
<td>Between</td>
<td>99.114</td>
<td>2</td>
<td>49.557</td>
<td>0.749NS</td>
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<td>Learning Style</td>
<td>Within</td>
<td>12293.88</td>
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<tr>
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<td></td>
<td>12392.99</td>
<td>188</td>
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<tr>
<td>Accommodator</td>
<td>Between</td>
<td>177.661</td>
<td>2</td>
<td>58.83</td>
<td>1.199NS</td>
</tr>
<tr>
<td>Learning Style</td>
<td>Within</td>
<td>9127.651</td>
<td>186</td>
<td>49.073</td>
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</tr>
<tr>
<td>Total</td>
<td></td>
<td>9305.312</td>
<td>188</td>
<td></td>
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</tr>
</tbody>
</table>

*=Significant at .05 level  
**=Significant at .01 level  
NS= Not-significant at .05 level
Table 4.2(b)

Summary of t-tests for Concrete Experience Learning Mode and Assimilator Learning Style in Respect of SC, ST and OBC Male Students

<table>
<thead>
<tr>
<th>Caste/Mode/Style</th>
<th>Male SC (N=46)</th>
<th>Male ST (N=72)</th>
<th>Male OBC (N=71)</th>
<th>Comparison</th>
<th>df</th>
<th>‘t’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective</td>
<td>M=30.26</td>
<td>M=31.92</td>
<td>M=32.73</td>
<td>1&amp;2</td>
<td>116</td>
<td>1.78NS</td>
</tr>
<tr>
<td>Observation</td>
<td>SD=5.017</td>
<td>SD=4.808</td>
<td>SD=3.92</td>
<td>1&amp;3</td>
<td>115</td>
<td>2.83**</td>
</tr>
<tr>
<td>Assimilator</td>
<td>M=56.63</td>
<td>M=58.61</td>
<td>M=60.86</td>
<td>1&amp;2</td>
<td>116</td>
<td>1.72NS</td>
</tr>
<tr>
<td>Learning Style</td>
<td>SD=5.703</td>
<td>SD=6.677</td>
<td>SD=8.061</td>
<td>1&amp;3</td>
<td>115</td>
<td>3.32**</td>
</tr>
</tbody>
</table>

*=Significant at .05 level
**=Significant at .01 level
NS= Not-significant at .05 level

It may be observed in Table 4.2(a) that ‘F-ratio’ (0.092) corresponding to the comparison mean scores of concrete experience of SC, ST and OBC male students came out to be non-significant (p>.05 df 2/186). This implies that there was no significant difference in the preference of SC, ST, and OBC students preference for concrete experience mode. In other words, above referred three groups of students were having similar preference for learning through concrete experience mode.

Statistical results pertaining to reflective observation mode obtained through one way ANOVA has been summarized in Table 4.2(a). It is evident from table 4.2(a) that the computed ‘F-ratio’ (4.144) came out to be significant at .05 level of confidence. It indicates that SC, ST and OBC male students differed significantly with respect to their preference for reflective observation mode. Summary of the ‘t’-test obtained from post-hoc analysis has been given in Table 4.2(b). It is clear from Table 4.2(b) that the difference existed between group 1(SC male) group 3 (OBC male) with regard to reflective observation mode. The mean value of OBC male was greater than SC male (m 32.73>m 30.26). It may be said that OBC male student had stronger preference than SC male students for reflective observation mode (‘t’- value 2.83 was significant at .01 level). But
there was no significant difference between SC male, ST male; and SC male and OBC male students as the concerned 't' value (1.78 and 1.11) were found to be non-significant at .05 level of significance.

Figure 4.6 : Showing the Difference in Preference of SC and OBC Male Students for Reflective Observation Mode

It may be gleaned from Table 4.2(a) that 'F' ratio (1.809) did not reach the level of significance (p>.05, df 2/186) from this it may be inferred that SC, ST and OBC male students had no significant difference with respect to their preference for learning through abstract conceptualization mode. Alternatively, it may be said that SC, ST and OBC male students had similar magnitude of preference for using abstract conceptualization mode and the obvious difference in the mean scores of three groups may be ascribed due to chance factor.

It may be observed in Table 4.2(a) that 'F-ratio' (2.118, df 2/186) did not reach the level of significance (p>.05, df 2/186). This result speaks that on the average SC, ST and OBC male students had similar preference for learning through active experimentation mode. Indeed no marked difference appeared to exist in their inclination towards the use of active experimentation mode of learning.
Table 4.2(a) discloses that SC, ST and OBC male students did not differ significantly with respect to their preference for diverger learning style (F=2.334, p>.05, df 2/186). In other words, they were more or less equal on the use of diverger learning style during the learning process.

It may be observed in Table 4.2(a) that 'F-ratio' 5.213 turned out to be significant at .01 level of significance with df 2/186. It means significant individual difference existed in the preference of SC, ST and OBC male students for the use of assimilator learning style. In order to locate the exact source of difference of mean scores of three groups 't' test was applied. The summary of 't' statistics has been given in Table 4.2(b). The Table 4.2(b) reveals that the obtained 't' value for the significant difference in mean scores of SC male and ST male students was not found to be significant even at .05 level of significance. It means that SC and ST male students were alike with reference to their preference for learning through assimilator learning style. The second 't' value corresponding to the comparison of mean scores of assimilator learning style of SC and OBC male students was found to be significant at .01 level. Since the mean value of OBC male was greater than the mean score of SC male students, it may be interpreted that OBC male students had stronger preference for Assimilator learning style than their counterparts SC male students. It may further be observed from Table 4.2(b) that 't' value (1.81) representing comparison of ST and OBC male students came out to be non-significant even at .05 level of significance. This leads to the conclusion that ST and OBC male students were having more or less the same preference for learning through assimilator learning style.
It may be observed in Table 4.2(a) that ‘F-ratio’ (0.749) corresponding to the comparison mean scores of converger learning styles of SC, ST and OBC male students came out to be non-significant at .05 level of significance (p > .05 df 2/186). This implies that there was no significant difference in the preference of SC, ST and OBC students for converger learning style. It may be seen that three groups of students were having similar preference for learning through converger learning style.

It may be observed in table 4.2(a) that F-ratio (1.199) corresponding to the comparison of mean scores of accommodator learning styles of SC, ST and OBC male students came out to be non-significant at .05 level of significance (P>.05 df 2/186). This implies that there was no significant difference in the preference of SC, ST and OBC male students for accommodator learning style. It may be seen that three groups of students were having similar preference for learning through accommodator learning style.
4-3 COMPARISON OF SC, ST, AND OBC FEMALE STUDENTS ON LEARNING MODES AND LEARNING STYLES

Summary of one-way-ANOVA in respect of learning modes and learning styles and summary of 't' tests are (in case of significant F-ratio) given in Table 4.3(a) and 4.3(b) respectively.

Table 4.3(a)
Summary of ONE-WAY-ANOVA in Respect of Learning Modes and Learning Styles of Female SC, ST and OBC Students

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Between 8.999</td>
<td>2</td>
<td>4.499</td>
<td>0.179NS</td>
</tr>
<tr>
<td>Experience</td>
<td>Within 4014.485</td>
<td>160</td>
<td>25.09</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4023.484</td>
<td>162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective</td>
<td>Between 215.801</td>
<td>2</td>
<td>107.9</td>
<td>5.941**</td>
</tr>
<tr>
<td>Observation</td>
<td>Within 2906.064</td>
<td>160</td>
<td>18.163</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3121.865</td>
<td>162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td>Between 55.175</td>
<td>2</td>
<td>27.587</td>
<td>1.154NS</td>
</tr>
<tr>
<td>Conceptualization</td>
<td>Within 3825.942</td>
<td>160</td>
<td>23.912</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3881.117</td>
<td>162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>Between 386.522</td>
<td>2</td>
<td>193.261</td>
<td>6.057**</td>
</tr>
<tr>
<td>Experimentation</td>
<td>Within 5105.417</td>
<td>160</td>
<td>31.909</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5491.939</td>
<td>162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diverger</td>
<td>Between 312.688</td>
<td>2</td>
<td>156.344</td>
<td>3.531*</td>
</tr>
<tr>
<td>Learning Style</td>
<td>Within 7085.275</td>
<td>160</td>
<td>44.283</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7397.963</td>
<td>162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assimilator</td>
<td>Between 469.651</td>
<td>2</td>
<td>234.826</td>
<td>6.728**</td>
</tr>
<tr>
<td>Learning Style</td>
<td>Within 5584.263</td>
<td>160</td>
<td>34.902</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6053.914</td>
<td>162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Converger</td>
<td>Between 150.515</td>
<td>2</td>
<td>75.257</td>
<td>1.749NS</td>
</tr>
<tr>
<td>Learning Style</td>
<td>Within 6884.234</td>
<td>160</td>
<td>43.026</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7034.749</td>
<td>162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accommodator</td>
<td>Between 296.845</td>
<td>2</td>
<td>148.423</td>
<td>4.122*</td>
</tr>
<tr>
<td>Learning Style</td>
<td>Within 5760.639</td>
<td>160</td>
<td>36.004</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6057.484</td>
<td>162</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*=Significant at .05 level  
**=Significant at .01 level  
NS= Not-significant at .05 level
### TABLE 4.3(b)

**Summary of t-tests for Learning Modes and Learning Styles in Respect of SC, ST and OBC Female Students**

<table>
<thead>
<tr>
<th>Caste Mode/Style</th>
<th>Female SC (N=62)</th>
<th>Female ST (N=63)</th>
<th>Female OBC (N=38)</th>
<th>Comparison</th>
<th>df</th>
<th>'t' Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective</td>
<td>M=29.94</td>
<td>M=31.7</td>
<td>M=32.84</td>
<td>1&amp;2</td>
<td>123</td>
<td>2.33*</td>
</tr>
<tr>
<td>Observation</td>
<td>SD=4.012</td>
<td>SD=4.456</td>
<td>SD=4.328</td>
<td>1&amp;3</td>
<td>98</td>
<td>3.35**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>99</td>
<td>1.27NS</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>M=29.66</td>
<td>M=28.86</td>
<td>M=25.71</td>
<td>1&amp;2</td>
<td>123</td>
<td>0.767NS</td>
</tr>
<tr>
<td></td>
<td>SD=6.095</td>
<td>SD=5.616</td>
<td>SD=4.887</td>
<td>1&amp;3</td>
<td>98</td>
<td>3.566**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>99</td>
<td>2.961**</td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>M=63.44</td>
<td>M=58.67</td>
<td>M=60.92</td>
<td>1&amp;2</td>
<td>123</td>
<td>1.73NS</td>
</tr>
<tr>
<td></td>
<td>SD=6.198</td>
<td>SD=5.949</td>
<td>SD=6.39</td>
<td>1&amp;3</td>
<td>98</td>
<td>2.94**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>99</td>
<td>1.02NS</td>
</tr>
<tr>
<td>Assimilator</td>
<td>M=56.5</td>
<td>M=58.67</td>
<td>M=60.92</td>
<td>1&amp;2</td>
<td>123</td>
<td>2.11*</td>
</tr>
<tr>
<td>Learning Style</td>
<td>SD=5.55</td>
<td>SD=5.949</td>
<td>SD=6.39</td>
<td>1&amp;3</td>
<td>98</td>
<td>3.53**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>99</td>
<td>1.76NS</td>
</tr>
<tr>
<td>Accommodator</td>
<td>M=63.16</td>
<td>M=62.75</td>
<td>M=59.79</td>
<td>1&amp;2</td>
<td>123</td>
<td>0.371NS</td>
</tr>
<tr>
<td>Learning Style</td>
<td>SD=6.122</td>
<td>SD=6.383</td>
<td>SD=5.063</td>
<td>1&amp;3</td>
<td>98</td>
<td>2.981**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>99</td>
<td>2.572*</td>
</tr>
</tbody>
</table>

* = Significant at .05 level  
** = Significant at .01 level  
NS = Not-significant at .05 level

It may be observed in Table 4.3(a) that F-ratio (0.179) did not reach the level of significance (p>.5 df 2/160) from this it may be inferred that SC, ST and OBC female students had no significant difference with respect to their preference through concrete experience mode. Indeed no marked difference appeared to exist in their inclination towards the use of concrete experience mode of learning.

It may be observed in Table 4.3(a) F-ratio (5.941) turned out to be significant at .01 level of significance with df 2/160. It means that significant individual difference existed in the preference of SC, ST and OBC female...
students for use of reflective observation mode. The Table 4.3(b) reveals that the obtained 't' value (2.33) for the significant difference of mean scores of reflective observation of SC female and ST female students was found to be significant even at .05 level of significance. It means that ST female students has greater preference as compared to SC female students towards reflective observation modes (m 31.7>m 29.94). The second 't' value (3.35) corresponding to the comparison of the mean scores of reflective observation mode of SC and OBC female students was found significant (P<.01). Since mean difference was in favour of OBC group, it may be said that OBC female had stronger preference than SC female students with regard to their learning through reflective observation mode. The third 't' value between ST female and OBC female students was found non-significant. Hence there was no significant difference in preference of ST female and OBC female students with regard to their learning through reflective observation mode.

Figure 4.8(a) : Showing the Difference in Preference of SC and ST Female Students for Reflective Observation Mode
Figure 4.8(b): Showing the Difference in Preference of SC and OBC Female Students for Reflective Observation Mode

It may be observed in Table 4.3(a) that 'F-ratio' (1.154) did not reach the level of significance (p > .05 df 2/160). From this, it may be inferred that SC, ST and OBC female students had no significant difference with respect to their preference for learning through abstract conceptualization mode. Hence no marked difference appeared to exist in their inclination towards the use of abstract conceptualization mode of learning.

It may be observed that in Table 4.3(a) ‘F-ratio’ (6.057) turned out to be significant at .01 level of significance with df 2/160. It means that significant individual difference existed in the preference of SC, ST, and OBC female students for use of active experimentation mode.

The Table 4.3(b) reveals that the obtained 't' value (.767) for the significant difference of mean scores of active experimentation mode of SC female and ST female students was not found to be significant even at .05 level of significance.
It means that SC and ST female students had similar preference for active experimentation mode. The second 't' value (3.566) corresponding to the comparison of the mean scores of active experimentation mode of SC and OBC female students was found highly significant. The mean difference was found in favour of SC female students. Hence, it may be said that SC female students had more preference for learning through active experimentation mode. The third 't' value (2.961) computed for the mean scores of active experimentation mode ST females and OBC females came out to be significant at .01 level of significance. The mean difference came out to be in favour of ST females. This implies that ST female students had more preference for learning through active experimentation mode than OBC female students.

Figure 4.9(a) : Showing the Difference in Preference of SC and OBC Female Students for Active Experimentation Mode
Figure 4.9(b): Showing the Difference in Preference of ST and OBC Female Students for Active Experimentation Mode

It may be observed that in Table 4.3(a) 'F-ratio' (3.531) turned out to be significant at .05 level of significance with $df = 2/160$. This suggests that SC, ST and OBC female students differed significantly with regard to their preference for learning through diverger learning style.

The Table 4.3(b) reveals that the obtained 't' value (1.73) for the significant difference of mean scores of diverger learning style of SC female and ST female students was not found to be significant even at .05 level of significance. It means that both the groups had similar preference for diverger learning style. The second 't' value (2.94) computed for the mean scores of diverger learning style of ST female and OBC female came out to be significant at .01 level of significance. This implies that there was a significant difference between SC female and OBC female on diverger learning style. On the basis of their mean scores, it may be said that SC female students tended to favour diverger learning style more than that OBC female students. The third 't' value (1.02) value corresponding to the comparison of the mean scores of diverger learning style of ST and OBC female students was not found significant at .05 level of
significance. Hence it may be concluded that ST and OBC female student were at par with regard to their preference for diverger learning style.

**Figure 4.10 : Showing the Difference in Preference of SC and OBC Female Students for Diverger Learning Style**

It may be observed in Table 4.3(a) 'F-ratio' (6.728) turned out to be significant at .01 level of significance with df 2/160. It means that significant individual difference existed in the preference of SC, ST and OBC female students for use of assimilator learning style.

The Table 4.3(b) reveals that the obtained 't' value (2.11) for the significant difference of mean scores of assimilator learning styles of SC female and ST female students was found to be significant at .05 level of significance. Considering the mean scores, it may be said that ST female students had greater preference than SC female students on assimilator learning style. The second 't' value (3.53) for the significant difference in mean scores of assimilator learning style was significant at .01 level.

Because mean score of OBC female students was higher than the corresponding mean score of SC female students on assimilator learning style. It may be concluded that OBC female students had more liking for assimilator
learning style than SC female students. It may also be observed from table 4.3(b) reveals that the 't' value (1.76) comparing the mean scores of assimilator learning style was not found significant at .05 level. It means the obvious difference in the mean scores of two groups was not true. Hence, ST female and OBC female students had similar preference for assimilator learning style.

**Figure 4.11(a) : Showing the Difference in Preference of SC and ST Female Students for Assimilator Learning Style**

<table>
<thead>
<tr>
<th>SC</th>
<th>Mean Scores</th>
<th>ST</th>
<th>Mean Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.5</td>
<td></td>
<td>58.67</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4.11(b) : Showing the Difference in Preference of SC and OBC Female Students for Assimilator Learning Style**

<table>
<thead>
<tr>
<th>SC</th>
<th>Mean Scores</th>
<th>OBC</th>
<th>Mean Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.5</td>
<td></td>
<td>60.92</td>
<td></td>
</tr>
</tbody>
</table>
It may be observed that Table 4.3(a) 'F-ratio' (1.749) turned out to be non-significant at df (2/160). From this it may be inferred that SC, ST and OBC female students had no significant difference with respect to their preference for learning through converger learning style (p > .05 df 2/160).

It may be observed in Table 4.3(a) that 'F-ratio' (4.122) was found to be significant at .05 level of significance (p < .05 df 2/160). It means that SC, ST and OBC female students were not having similar preference for accommodator learning style. Infact, they differed markedly on the use of accommodator learning style.

It may be noted from Table 4.3(b) that the 't' value of 0.371 for the significance of difference in the mean scores of group 1 (SC) and group 2 (ST) came out to be non-significant (p>.05, df123). It denotes that scheduled caste female students and scheduled tribe female students did not differ in their preference for accommodator learning style. Table 4.3(b) further shows that group 1 (SC) group 3 (OBC) differed significantly on accommodator learning style. And the mean difference was found in favour of SC female students ('t' 2.981, p<.01 df 98; mean 63.16>mean 59.79). Table 4.3(b) further shows that 't' value of 2.72 corresponding to the mean scores of group 2 (ST) and group 3 (OBC) came out to be significant at .05 level and mean score of ST female was greater than OBC female students. It means ST female students had stronger preference for learning through accommodator learning style than OBC female students.
Figure 4.12(a) : Showing the Difference in Preference of SC and OBC Female Students for Accommodator Learning Style

Figure 4.12(b) : Showing the Difference in Preference of ST and OBC Female Students for Accommodator Learning Style
4-4 COMPARISON OF LEARNING MODES AND LEARNING STYLES OF MALE AND FEMALE STUDENTS WITHIN SC, ST AND OBC GROUPS

The obtained result on gender differences in learning modes and learning styles within SC, ST and OBC groups have been responded in Table 4.4.

Table 4.4

Summary of t-tests for Learning Modes and Learning Styles in Respect Of Male and Female Students within SC, ST and OBC Groups

<table>
<thead>
<tr>
<th>Caste/Gender Mode/Style</th>
<th>SC Male</th>
<th>SC Female</th>
<th>ST Male</th>
<th>ST Female</th>
<th>OBC Male</th>
<th>OBC Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Experience</td>
<td>33.54</td>
<td>33.5</td>
<td>33.86</td>
<td>33.89</td>
<td>33.97</td>
<td>34.08</td>
</tr>
<tr>
<td></td>
<td>5.734</td>
<td>4.64</td>
<td>5.244</td>
<td>5.436</td>
<td>5.166</td>
<td>4.846</td>
</tr>
<tr>
<td></td>
<td>t=0.42NS</td>
<td>t=0.3NS</td>
<td>t=0.274NS</td>
<td>t=0.11NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>30.26</td>
<td>29.94</td>
<td>31.92</td>
<td>31.7</td>
<td>32.73</td>
<td>32.84</td>
</tr>
<tr>
<td></td>
<td>5.017</td>
<td>4.012</td>
<td>4.808</td>
<td>4.456</td>
<td>3.92</td>
<td>4.328</td>
</tr>
<tr>
<td></td>
<td>t=0.362NS</td>
<td>t=0.274NS</td>
<td>t=0.13NS</td>
<td>t=0.045NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>t=0.21NS</td>
<td>t=0.3NS</td>
<td>t=0.13NS</td>
<td>t=0.045NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>30.52</td>
<td>29.66</td>
<td>28.43</td>
<td>28.86</td>
<td>28.2</td>
<td>25.71</td>
</tr>
<tr>
<td></td>
<td>6.915</td>
<td>6.095</td>
<td>5.474</td>
<td>5.616</td>
<td>6.813</td>
<td>4.887</td>
</tr>
<tr>
<td></td>
<td>t=0.672NS</td>
<td>t=0.45NS</td>
<td>t=0.198*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>63.8</td>
<td>63.44</td>
<td>65.78</td>
<td>58.67</td>
<td>66.7</td>
<td>60.92</td>
</tr>
<tr>
<td></td>
<td>t=0.259NS</td>
<td>t=0.152NS</td>
<td>t=0.186NS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assimilator Learning Style</td>
<td>56.63</td>
<td>56.5</td>
<td>58.61</td>
<td>58.67</td>
<td>60.86</td>
<td>60.92</td>
</tr>
<tr>
<td></td>
<td>5.703</td>
<td>5.55</td>
<td>6.677</td>
<td>5.949</td>
<td>8.061</td>
<td>6.39</td>
</tr>
<tr>
<td></td>
<td>t=0.119NS</td>
<td>t=0.05NS</td>
<td>t=0.04NS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Converger Learning Style</td>
<td>56.89</td>
<td>56.23</td>
<td>55.13</td>
<td>55.83</td>
<td>56.32</td>
<td>53.79</td>
</tr>
<tr>
<td></td>
<td>t=0.435NS</td>
<td>t=0.57NS</td>
<td>t=1.846NS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>64.07</td>
<td>63.16</td>
<td>36.57</td>
<td>62.75</td>
<td>62.17</td>
<td>59.79</td>
</tr>
<tr>
<td></td>
<td>6.053</td>
<td>6.122</td>
<td>5.001</td>
<td>6.383</td>
<td>7.878</td>
<td>5.063</td>
</tr>
<tr>
<td></td>
<td>t=0.764NS</td>
<td>t=0.40NS</td>
<td>t=1.912*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*=Significant at .05 level
**=Significant at .01 level
NS= Not-Significant at .05 level
df for SC Male Vs SC Female = 106
df for ST Male Vs ST Female=133
df for OBC Male Vs OBC Female=107
It is evident from Table 4.4 that scheduled caste male and scheduled caste female students did not differ significantly on any learning mode or any learning style because no 't' value concerning learning mode and learning style emerged as significant at .05 level of confidence with df 106. From this it may be concluded that SC male and SC female students on the average had the same intensity preference for concrete experience, reflective observation, abstract conceptualization and active experimentation. They also had similar preference for Diverger, Assimilator, Converger and Accommodator learning styles, though slight differences were seen in the mean scores in some learning modes and learning styles may be observed in the mean scores. But those differences are not real and may be due to chance factor or sampling fluctuation. Table 4.4 further reveals that within ST group male and female students were found to be similar with regard to their preference for learning through particular learning mode and learning style as none of the 't' value reached at pre-decided level of significance. It may also be observed for the Table 4.4 within OBC, male and female students had similar preference for all learning modes except active experimentation and all learning styles except accommodator learning style. In case of active experimentation the obtained 't' value (2.198) was found to be significant at .05 level of significance. Since mean value of male students obtained greater for active experimentation than their counterparts OBC female students, it may be inferred that OBC male students had stronger preference for active experimentation than OBC female students.

On accommodator learning style, male OBC had greater mean score than female OBC students (m 62.17>m 59.79) and 't' was significant at .05 level. From this it may be concluded that male OBC students tended to use accommodator learning style more than female OBC students.
Figure 4.13: Showing the Difference in Preference of Male OBC and Female OBC Students for Active Experimentation Mode

<table>
<thead>
<tr>
<th></th>
<th>Male OBC</th>
<th>Female OBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Scores</td>
<td>28.2</td>
<td>25.71</td>
</tr>
</tbody>
</table>

Figure 4.14: Showing the Difference in Preference of Male OBC and Female OBC Students for Accommodator Learning Style

<table>
<thead>
<tr>
<th></th>
<th>Male OBC</th>
<th>Female OBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Scores</td>
<td>62.17</td>
<td>59.79</td>
</tr>
</tbody>
</table>
4-5 COMPARISON OF SC, ST AND OBC STUDENTS OF SCIENCE STREAM ON LEARNING MODES AND LEARNING STYLES

Table 4.5(a) provides the summary of one-way-analysis of variance for learning modes and learning styles of SC, ST and OBC students belonging to science stream and 4.5(b) presents summary of 't' tests in case of learning styles where 'F-ratios' were found to be significant.

**Table 4.5(a)**
Summary of ONE-WAY-ANOVA in Respect of Learning Modes and Learning Styles of SC, ST and OBC Students of Science Stream

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Experience</td>
<td>33.442</td>
<td>2</td>
<td>16.721</td>
<td>0.889NS</td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>92.219</td>
<td>2</td>
<td>46.109</td>
<td>2.769NS</td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>101.989</td>
<td>2</td>
<td>50.995</td>
<td>2.041NS</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>186.082</td>
<td>2</td>
<td>93.041</td>
<td>2.396NS</td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>52.231</td>
<td>2</td>
<td>26.616</td>
<td>0.637NS</td>
</tr>
<tr>
<td>Assimilator Learning Style</td>
<td>376.348</td>
<td>2</td>
<td>188.174</td>
<td>5.919**</td>
</tr>
<tr>
<td>Converger Learning Style</td>
<td>38.779</td>
<td>2</td>
<td>19.389</td>
<td>0.382NS</td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>311.379</td>
<td>2</td>
<td>155.689</td>
<td>5.128**</td>
</tr>
</tbody>
</table>

* *=Significant at .05 level  
** *=Significant at .01 level  
NS= Not-significant at .05 level
### TABLE 4.5(b)
**Summary of ‘t’-tests for Assimilator and Accommodator Learning Styles in Respect of SC, ST and OBC Students of Science Stream**

<table>
<thead>
<tr>
<th>Stream/ Learning Style</th>
<th>SC Sci. (N=29)</th>
<th>ST Sci. (N=24)</th>
<th>OBC Sci. (N=34)</th>
<th>Comparison</th>
<th>df</th>
<th>'t' Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assimilator Learning Style</td>
<td>M=55.21</td>
<td>M=58.5</td>
<td>M=60.06</td>
<td>1&amp;2</td>
<td>51</td>
<td>2.541*</td>
</tr>
<tr>
<td></td>
<td>SD=4.746</td>
<td>SD=4.653</td>
<td>SD=6.835</td>
<td>1&amp;3</td>
<td>61</td>
<td>3.308**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>56</td>
<td>1.033NS</td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>M=65.21</td>
<td>M=62.21</td>
<td>M=60.79</td>
<td>1&amp;2</td>
<td>51</td>
<td>2.206*</td>
</tr>
<tr>
<td></td>
<td>SD=4.754</td>
<td>SD=5.065</td>
<td>SD=6.343</td>
<td>1&amp;3</td>
<td>61</td>
<td>3.15**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>56</td>
<td>0.942NS</td>
</tr>
</tbody>
</table>

*=Significant at .05 level
**=Significant at .01 level
NS= Not-significant at .05 level

Table 4.5(a) shows that 'F-ratio' of (.889) was found to be non-significant (p>.05, df 2/84). It implies that SC, ST and OBC students of science stream had more or less the same intensity of preference for learning through concrete experience mode. Table 4.5(a) further exhibits that 'F-ratios' (2.769, 2.041 and 2.396) for Reflective observation, abstract conceptualization and active experimentation learning modes came out to be non-significant. It reveals that SC, ST and OBC students of science stream did not differ significantly in their preference for learning through, reflective observation, abstract conceptualization and active experimentation modes. As regards learning styles are concerned SC, ST and OBC students of science stream reported similar level of preference for diverger learning style (F=.637, P>.05, df=2/86) and also for converger learning style (F=0.382, p>.05, df=2/86). However, the results of analysis variance pertaining to Assimilator and Accommodator learning style revealed that SC, ST, and OBC students of science stream had significant differences in their preference for Assimilator learning style (F=5.919, P<.01, df=2/86) and Accommodator learning style (F=5.128, P<.01, df=2/86). Comparison of SC, ST and OBC students of science stream for Assimilator learning style as per table 4.5(b) indicates that the obtained first 't' value (2.541) was significant at .05 level and mean of ST science group (58.5) was greater than mean of SC science.
group (55.21). It means that scheduled tribe students of science group had more preference for Assimilator learning style than scheduled caste science students. The second ‘t’ value of (3.308) was found to be highly significant (P<.01) which made comparison between SC science and OBC science students. Further mean difference was found in favour of OBC science students. It implies that OBC science students had greater preference for Assimilator learning style than SC science students. But no significant difference was found for Assimilator learning styles of ST and OBC science students as the concerned ‘t’ value (1.033) was non-significant.

**Figure 4.15(a) :** Showing the Difference in Preference of SC and ST Science Students for Assimilator Learning Style

**Figure 4.15(b) :** Showing the Difference in Preference of SC and OBC Science Students for Assimilator Learning Style
It may also be noted from Table 4.5(b) on Accommodator learning style SC science students had more preference for accommodator learning style than ST science students and OBC science students (M=65.621 > M=62.21 and M=60.79). However, no significant difference was found in mean scores of Accommodator learning style of ST and OBC science students, meaning there by SC science and OBC science students had similar preference for learning through Accommodator learning style.

**Figure 4.16(a) : Showing the Difference in Preference of SC and ST Science Students for Accommodator Learning Style**

![Bar chart showing preference of SC and ST](chart1)

**Figure 4.16(b) : Showing the Difference in Preference of SC and OBC Science Students for Accommodator Learning Style**

![Bar chart showing preference of SC and OBC](chart2)
4-6 Comparison of SC, ST and OBC Students of Arts Stream on Learning Modes and Learning Styles

Table 4.6(a) provides the summary of one-way-ANOVA for learning modes and learning styles of SC, ST and OBC students belonging to arts stream and 4.6(b) presents the summary of 't' test.

Table 4.6(a)

Summary of ONE WAY-ANOVA in Respect of Learning Modes and Learning Styles of SC, ST and OBC Students of Arts Stream

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Experience</td>
<td>Between</td>
<td>320.349</td>
<td>2</td>
<td>160.174</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>5352.874</td>
<td>262</td>
<td>20.431</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>5673.223</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>Between</td>
<td>127.865</td>
<td>2</td>
<td>63.932</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>7323.471</td>
<td>262</td>
<td>27.952</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>7451.336</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>Between</td>
<td>219.899</td>
<td>2</td>
<td>109.945</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>9524.123</td>
<td>262</td>
<td>36.367</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>9744.022</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>Between</td>
<td>631.463</td>
<td>2</td>
<td>315.731</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>12891.43</td>
<td>262</td>
<td>49.204</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>13522.89</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>Between</td>
<td>691.523</td>
<td>2</td>
<td>345.761</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>11986.65</td>
<td>262</td>
<td>45.751</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>12678.17</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td>Assimilator Learning Style</td>
<td>Between</td>
<td>121.449</td>
<td>2</td>
<td>60.724</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>14949.09</td>
<td>262</td>
<td>57.057</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>15070.54</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td>Conformer Learning Style</td>
<td>Between</td>
<td>75.487</td>
<td>2</td>
<td>37.743</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>12380.11</td>
<td>262</td>
<td>47.252</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>12455.6</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>Between</td>
<td>57.533</td>
<td>2</td>
<td>28.667</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>7627.89</td>
<td>262</td>
<td>29.114</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>7685.423</td>
<td>264</td>
<td></td>
</tr>
</tbody>
</table>

*=Significant at .05 level
**=Significant at .01 level
NS= Not-significant at .05 level
Table 4.6(b)

Summary of t-tests for Learning Modes and Learning Styles in Respect of SC, ST and OBC Students of Arts Stream

<table>
<thead>
<tr>
<th>Stream/Mode&amp;Style</th>
<th>SC Arts N=79</th>
<th>ST Arts N=111</th>
<th>OBC Arts N=75</th>
<th>Comparison</th>
<th>df</th>
<th>'t' Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Experience</td>
<td>M=34.92 SD=5.363</td>
<td>M=33.00 SD=7.473</td>
<td>M=33.05 SD=6.314</td>
<td>1&amp;2</td>
<td>188</td>
<td>2.06**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>184</td>
<td>0.048NS</td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>M=26.99 SD=4.505</td>
<td>M=26.75 SD=5.509</td>
<td>M=28.37 SD=5.697</td>
<td>1&amp;2</td>
<td>188</td>
<td>0.329NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>184</td>
<td>1.934*</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>M=30.01 SD=6.738</td>
<td>M=28.63 SD=5.586</td>
<td>M=27.64 SD=5.876</td>
<td>1&amp;2</td>
<td>188</td>
<td>1.494NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>184</td>
<td>1.159NS</td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>M=62.99 SD=7.132</td>
<td>M=65.86 SD=7.094</td>
<td>M=66.83 SD=6.767</td>
<td>1&amp;2</td>
<td>188</td>
<td>2.739**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2&amp;3</td>
<td>184</td>
<td>0.941NS</td>
</tr>
</tbody>
</table>

*=Significant at .05 level
**=Significant at .01 level
NS= Not-significant at .05 level

Table 4.6(a) shows that F-ratio (7.839) in context of concrete experience mode was found to be significant at .01 level of significance with df 2/262. It implies that SC, ST and OBC students of arts had marked differences in their preference for learning through concrete experience mode. Table 4.6(b) makes it clear that 't' values (2.06) was found to be significant at .05 level and mean difference was found in favour of SC arts students. It implies that SC arts students tended to favour concrete experience mode more than ST arts students. The second 't' value (2.087) comparing mean score of SC arts and OBC arts students was also found significant at .05 level and mean difference of two groups favoured SC arts. It leads to the inference that SC arts has stronger preference for concrete experience mode than their counterparts OBC arts students. The third 't' value 0.048 did not reach at the level of significance. It means that there was no significant difference between ST arts and OBC arts students on concrete experience mode.
Table 4.6(a) further shows that SC, ST and OBC arts students had no
difference in their preference for learning through reflective observation mode as
obtained F-ratio (2.287) was less than the F-ratio of the table with df 2/262 at .05
level. In case of Abstract conceptualization F-ratio 3.023 was found to be highly
significant (p<.01 df 2/262). It tells that significant variation existed in the abstract
conceptualization learning mode of the three groups. The result given in Table
4.6(b) reveals that OBC arts students had greater preference for learning through
abstract conceptualization than their counterparts ST arts students ('t' = 1.934; M=28.37, M=26.75). However, no significant difference was found between SC and ST arts students and SC and OBC Arts students for learning through abstract conceptualization. In other words, they had the similar tendency to use abstract conceptualization as a learning mode.

Figure 4.18 : Showing the Difference in Preference of ST and OBC Arts Students for Abstract Conceptualization Mode

It may further be observed from Table 4.6(a) that SC, ST and OBC arts students differed significantly on preference for active experimentation mode of learning (F=6.417, p<.01, df 2/262). The result of ‘t’ test given in Table 4.6(b) shows that SC arts students had grater preference for active experimentation than OBC arts students ('t'=2.332, p<.05, df 152) but no significant difference was found for this mode of learning between SC arts and ST arts students, as well as ST arts students and OBC arts students because concerned ‘t’ value did not reach the level of significance.
Table 4.6(a) further shows that F-ratio (7.558) obtained for diverger learning style, came out to be highly significant (P<.01, df 2/262). The 'F'-ratio corresponds to the comparison of SC, ST and OBC arts students. It implies that the three groups of students differed significantly with respect to their preference for diverger learning style. Table 4.6(b) reveals that ST and OBC arts students had greater preference for diverger learning style than schedule caste (SC) arts students. As the mean differences were found in favour of OBC arts students and 't' values were significant at .01 level. However, no significant difference was found between ST and OBC arts students on diverger learning style.
Analysis and Interpretation of Data

Figure 4.20(b) : Showing the Difference in Preference of SC and OBC Arts Students for Diverger Learning Style

It may be seen in Table 4.6(a) that 'F-ratios' in case of assimilator, converger and accommodator learning style fell short of significance. This implies that SC, ST and OBC students of arts stream had more or less the similar preference for assimilator, converger and accommodator learning styles. Any difference in the mean score of the three groups on these styles may be attributed due to chance factor.

4-7 COMPARISON OF SCIENCE AND ARTS STUDENTS WITHIN SC, ST AND OBC GROUPS ON LEARNING MODES AND LEARNING STYLES

It may be observed in Table 4.7 that within SC group science and arts students did not differ in their preference for any learning mode and any learning style except concrete experience mode. This implies that SC, ST and OBC arts students preferred to use three learning modes and four learning styles with the same intensity while within SC group science students preferred concrete experience more than arts students (M=35.14>M=32.92).

Table 4.7 further shows that ST group, students of science and arts did not tend to show any significant difference for any learning mode or any learning style. The same picture was found in OBC group. There also science and arts students exhibited the similar preference for each of the learning mode and learning style. These results are supported by non-significant 't' values.
### Table 4.7

Summary of t-tests for Learning Modes and Learning Styles in Respect of Science and Arts Students within SC, ST and OBC Groups

<table>
<thead>
<tr>
<th>Caste/Stream Modes/Styles</th>
<th>SC Science N=29</th>
<th>Arts N=79</th>
<th>ST Science N=24</th>
<th>Arts N=111</th>
<th>OBC Science N=34</th>
<th>Arts N=75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Experience</td>
<td>35.14 32.92</td>
<td></td>
<td>33.58 33.94</td>
<td></td>
<td>34.15 33.95</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>t</em>=2.317**</td>
<td></td>
<td><em>t</em>=0.329NS</td>
<td></td>
<td><em>t</em>=0.205NS</td>
<td></td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>30.1 30.06</td>
<td></td>
<td>31.33 31.92</td>
<td></td>
<td>32.53 32.88</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>t</em>=0.045NS</td>
<td></td>
<td><em>t</em>=0.528NS</td>
<td></td>
<td><em>t</em>=0.45NS</td>
<td></td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>30.1 30.06</td>
<td></td>
<td>31.33 31.92</td>
<td></td>
<td>32.53 32.88</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>t</em>=0.045NS</td>
<td></td>
<td><em>t</em>=0.528NS</td>
<td></td>
<td><em>t</em>=0.45NS</td>
<td></td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>25.1 26.99</td>
<td></td>
<td>27.17 26.75</td>
<td></td>
<td>27.53 28.37</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>t</em>=1.85NS</td>
<td></td>
<td><em>t</em>=0.4NS</td>
<td></td>
<td><em>t</em>=0.73NS</td>
<td></td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>30.07 30.01</td>
<td></td>
<td>28.63 28.63</td>
<td></td>
<td>26.65 27.64</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>t</em>=0.043NS</td>
<td></td>
<td><em>t</em>=0.005NS</td>
<td></td>
<td>7.194 5.876</td>
<td></td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>65.24 62.99</td>
<td></td>
<td>64.92 65.86</td>
<td></td>
<td>66.68 66.83</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>t</em>=1.552NS</td>
<td></td>
<td><em>t</em>=0.557NS</td>
<td></td>
<td><em>t</em>=0.123NS</td>
<td></td>
</tr>
<tr>
<td>Assimilation Learning Style</td>
<td>55.21 57.05</td>
<td></td>
<td>58.5 58.67</td>
<td></td>
<td>60.06 61.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>t</em>=1.679NS</td>
<td></td>
<td><em>t</em>=0.146NS</td>
<td></td>
<td>6.839 7.784</td>
<td></td>
</tr>
<tr>
<td>Converger Learning Style</td>
<td>55.17 57</td>
<td></td>
<td>55.79 55.38</td>
<td></td>
<td>54.18 56.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>t</em>=1.145NS</td>
<td></td>
<td><em>t</em>=0.265NS</td>
<td></td>
<td>7.55 8.031</td>
<td></td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>65.21 62.94</td>
<td></td>
<td>62.21 62.57</td>
<td></td>
<td>60.79 61.59</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>t</em>=1.999NS</td>
<td></td>
<td><em>t</em>=0.295NS</td>
<td></td>
<td>6.343 7.435</td>
<td></td>
</tr>
</tbody>
</table>

* *=Significant at .05 level, ** *=Significant at .01 level, NS= Not-significant at .05 level

df for SC Science Vs SC Arts =106, df for ST Science Vs ST Arts =133, df for OBC Science Vs OBC Arts =107

**Figure 4.21**: Showing the Difference in Preference of SC Science and SC Arts Students for Concrete Experience Mode
4-8 COMPARISON OF SC, ST AND OBC STUDENTS HAVING HIGH LEVEL OF ACADEMIC STRESS ON LEARNING MODE AND LEARNING STYLE

Summary of one-way analysis of variance with regard to scores of learning modes and learning styles is given in Table 4.8.

Table 4.8
Summary of ONE-WAY-ANOVA in Respect of Learning Modes and Learning Styles of SC, ST and OBC Students Having High Level of Academic Stress

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concrete Experience</strong></td>
<td>1.907</td>
<td>2</td>
<td>0.954</td>
<td>0.025 NS</td>
</tr>
<tr>
<td><strong>Reflection</strong></td>
<td>47.294</td>
<td>2</td>
<td>23.647</td>
<td>1.194 NS</td>
</tr>
<tr>
<td><strong>Abstract Conceptualization</strong></td>
<td>16.351</td>
<td>2</td>
<td>8.175</td>
<td>0.225 NS</td>
</tr>
<tr>
<td><strong>Active Experimentation</strong></td>
<td>8.334</td>
<td>2</td>
<td>4.167</td>
<td>0.166 NS</td>
</tr>
<tr>
<td><strong>Diverger Learning Style</strong></td>
<td>33.738</td>
<td>2</td>
<td>16.869</td>
<td>0.721 NS</td>
</tr>
<tr>
<td><strong>Assimilator Learning Style</strong></td>
<td>109.882</td>
<td>2</td>
<td>54.941</td>
<td>1.281 NS</td>
</tr>
<tr>
<td><strong>Converger Learning Style</strong></td>
<td>3.842</td>
<td>2</td>
<td>1.921</td>
<td>0.046 NS</td>
</tr>
<tr>
<td><strong>Accommodator Learning Style</strong></td>
<td>16.122</td>
<td>2</td>
<td>8.061</td>
<td>0.163 NS</td>
</tr>
</tbody>
</table>

NS= Not Significant at .05 level

Table 4.8 shows that all the eight 'F-ratios' turned out to be non-significant (p>.05, df 2/46). It means that SC, ST and OBC groups of students with high level of academic stress did not differ significantly with respect to their preference for learning through concrete experience, reflective observation, abstract conceptualization and active experimentation learning modes and diverger, assimilator, converger and accommodator learning styles. Any apparent
difference in the mean scores of any learning mode or learning style could be attributed due to chance factor or sampling fluctuation.

4-9 COMPARISON OF SC, ST AND OBC STUDENTS HAVING LOW LEVEL ACADEMIC STRESS ON LEARNING MODES AND LEARNING STYLES

Summary of One-Way-ANOVA with regard to mean scores of learning modes and learning styles is given in Table 4.9.

Table 4.9
Summary of ONE-WAY-ANOVA in Respect of Learning Modes and Learning Styles of SC, ST and OBC Students Having Low Level of Academic Stress

<table>
<thead>
<tr>
<th>Source</th>
<th>Between SS</th>
<th>df</th>
<th>Within SS</th>
<th>df</th>
<th>Total SS</th>
<th>df</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Experience</td>
<td>55.609</td>
<td>2</td>
<td>1467.248</td>
<td>60</td>
<td>1522.857</td>
<td>62</td>
<td>27.804 1.137NS</td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>36.276</td>
<td>2</td>
<td>1142.327</td>
<td>60</td>
<td>1178.603</td>
<td>62</td>
<td>18.138 0.953NS</td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>131.969</td>
<td>2</td>
<td>1811.745</td>
<td>60</td>
<td>1943.714</td>
<td>62</td>
<td>65.984 2.185NS</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>173.736</td>
<td>2</td>
<td>2962.582</td>
<td>60</td>
<td>3136.318</td>
<td>62</td>
<td>86.868 1.759NS</td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>137.634</td>
<td>2</td>
<td>2280.303</td>
<td>60</td>
<td>2417.937</td>
<td>62</td>
<td>68.817 1.811NS</td>
</tr>
<tr>
<td>Assimilator Learning Style</td>
<td>274.509</td>
<td>2</td>
<td>3141.903</td>
<td>60</td>
<td>3416.412</td>
<td>62</td>
<td>137.255 2.621NS</td>
</tr>
<tr>
<td>Converger Learning Style</td>
<td>224.837</td>
<td>2</td>
<td>2909.576</td>
<td>60</td>
<td>3134.413</td>
<td>62</td>
<td>112.419 2.318NS</td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>50.752</td>
<td>2</td>
<td>4002.327</td>
<td>60</td>
<td>4053.079</td>
<td>62</td>
<td>25.376 0.38NS</td>
</tr>
</tbody>
</table>

NS= Not-significant at .05 level

Table 4.9 shows that all the eight ‘F-ratios’ were found to be non-significant (p > .05 df 2/60). It means that SC, ST and OBC groups of students with low level of academic stress did not differ significantly with respect to their preference for learning through concrete experience, reflective observation, abstract conceptualization and active experimentation learning modes and diverger, assimilator, converger and accommodator learning styles. Apparent difference in the mean scores of any learning mode or learning style could be attributed due to chance factor or sampling fluctuation.
### 4-10 COMPARISON OF SC, ST AND OBC STUDENTS HAVING HIGH AND LOW LEVELS OF ACADEMIC STRESS ON LEARNING MODES AND LEARNING STYLES

Summary of ‘t’ values computed for significance of difference in mean scores of learning modes and learning styles in respect of SC, ST and OBC students possessing high levels and low levels of academic stress is given in Table 4.10.

#### Table 4.10

<table>
<thead>
<tr>
<th>Cast/Variable</th>
<th>SC HAS (N=15)</th>
<th>SC LAS (N=17)</th>
<th>ST HAS (N=24)</th>
<th>ST LAS (N=16)</th>
<th>OBC HAS (N=25)</th>
<th>OBC LAS (N=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Experience</td>
<td>6.092</td>
<td>5.265</td>
<td>4.853</td>
<td>6.065</td>
<td>4.797</td>
<td>5.005</td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>5.227</td>
<td>4.457</td>
<td>5.935</td>
<td>4.706</td>
<td>5.935</td>
<td>4.706</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>6.052</td>
<td>6.054</td>
<td>5.741</td>
<td>4.13</td>
<td>5.741</td>
<td>4.13</td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>6.29</td>
<td>65.5</td>
<td>67.52</td>
<td>67.1</td>
<td>67.52</td>
<td>67.1</td>
</tr>
<tr>
<td>Assimilation Learning Style</td>
<td>4.797</td>
<td>5.935</td>
<td>7.626</td>
<td>6.26</td>
<td>7.626</td>
<td>6.26</td>
</tr>
<tr>
<td>Converger Learning Style</td>
<td>6.685</td>
<td>5.385</td>
<td>6.758</td>
<td>5.315</td>
<td>6.758</td>
<td>5.315</td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>6.801</td>
<td>7.371</td>
<td>7.654</td>
<td>5.518</td>
<td>7.654</td>
<td>5.518</td>
</tr>
</tbody>
</table>

**NS= Not-significant at .05 level,**

**df for HAS (SC) Vs LAS (SC) =30**

**df for HAS (ST) Vs LAS (ST) =38,**

**df for HAS (OBC) Vs LAS (OBC) =44**

It is seen in the Table 4.10 that none of the ‘t’ values for comparison of mean scores of learning modes or learning styles of high and low level of academic stress groups came out to be significant even at .05 level of confidence. This means that SC, ST and OBC students with high and low levels
of academic stress did not differ significantly with respect to their preference for learning through concrete experience, reflective observation, abstract conceptualization and active experimentation learning modes and diverger, assimilator, converger and accommodator learning styles. Apparent difference in the mean scores of any learning mode or learning style could be attributed due to chance factor or sampling fluctuation.

4-11 COMPARISON OF SC, ST AND OBC STUDENTS HAVING HIGH LEVEL OF ACADEMIC MOTIVATION ON LEARNING MODES AND LEARNING STYLES

Summary of univariate analysis of variance with regard to scores of learning modes and learning styles is given in Table 4.11.

Table 4.11
Summary of ONE-WAY-ANOVA in Respect of Learning Modes and Learning Styles of SC, ST and OBC Students Having High Level of Academic Motivation

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Experience</td>
<td>Between</td>
<td>11.724</td>
<td>2</td>
<td>5.862</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>1613.385</td>
<td>61</td>
<td>26.449</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1625.109</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>Between</td>
<td>63.831</td>
<td>2</td>
<td>31.915</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>1108.607</td>
<td>61</td>
<td>18.174</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1172.438</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>Between</td>
<td>21.691</td>
<td>2</td>
<td>10.846</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>1782.793</td>
<td>61</td>
<td>29.226</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1804.484</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>Between</td>
<td>45.357</td>
<td>2</td>
<td>22.678</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>2328.393</td>
<td>61</td>
<td>38.17</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2373.75</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>Between</td>
<td>31.178</td>
<td>2</td>
<td>15.589</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>2854.932</td>
<td>61</td>
<td>46.802</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2886.11</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Assimilator Learning Style</td>
<td>Between</td>
<td>86.436</td>
<td>2</td>
<td>43.218</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>2597.173</td>
<td>61</td>
<td>42.577</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2683.609</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Converger Learning Style</td>
<td>Between</td>
<td>10.959</td>
<td>2</td>
<td>5.479</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>3202.4</td>
<td>61</td>
<td>52.499</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3213.359</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>Between</td>
<td>50.276</td>
<td>2</td>
<td>25.138</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>3512.958</td>
<td>61</td>
<td>57.589</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3563.234</td>
<td>63</td>
<td></td>
</tr>
</tbody>
</table>

NS= Not-significant at .05 level
Table 4.11 shows that all the eight 'F-ratios' turned out to be non-significant (p > .05 df/61). It simply means that SC, ST and OBC groups of students with high level of academic motivation, did not differ significantly with respect to their preference for learning through concrete experience, reflective observation, abstract conceptualization and active experimentation learning modes and diverger, assimilator, converger and accommodator learning styles. Thus, apparent difference in the mean scores of any learning mode or learning style could be attributed due to chance factor or sampling fluctuation.

4.12 COMPARISON OF SC, ST AND OBC STUDENTS HAVING LOW LEVEL OF ACADEMIC MOTIVATION ON LEARNING MODES AND LEARNING STYLES

Summary of One-Way-ANOVA with reference to scores of learning modes and learning styles and summary of 't' values (in case of significant 'F' ratio have been provided in Table 4.12(a) and Table 4.12(b) respectively.

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Experience</td>
<td>44.139</td>
<td>2</td>
<td>22.069</td>
<td>0.752NS</td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>161.944</td>
<td>2</td>
<td>80.972</td>
<td>5.239**</td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>84.885</td>
<td>2</td>
<td>42.442</td>
<td>2.199NS</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>540.755</td>
<td>2</td>
<td>270.378</td>
<td>8.668**</td>
</tr>
<tr>
<td>Diverger Learning Style</td>
<td>131.642</td>
<td>2</td>
<td>65.821</td>
<td>1.473NS</td>
</tr>
<tr>
<td>Assimilator Learning Style</td>
<td>371.192</td>
<td>2</td>
<td>185.596</td>
<td>5.821**</td>
</tr>
<tr>
<td>Converger Learning Style</td>
<td>250.755</td>
<td>2</td>
<td>125.378</td>
<td>3.399*</td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>569.352</td>
<td>2</td>
<td>284.676</td>
<td>8.177**</td>
</tr>
</tbody>
</table>

NS= Not-Significant at .05 level, *= Significant at .05 level, **= Significant at .01 level
Table 4.12(b)  
**Summary of t-tests for Learning Modes and Learning Styles in Respect of SC, ST and OBC Students Having Low Level of Academic Motivation**

<table>
<thead>
<tr>
<th>Caste Mode/Style</th>
<th>SC (N=17)</th>
<th>ST (N=16)</th>
<th>OBC (N=21)</th>
<th>Comparison</th>
<th>df</th>
<th>'t' Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective Observation</td>
<td>M=28.65</td>
<td>M=32.63</td>
<td>M=32.14</td>
<td>1&amp;2</td>
<td>31</td>
<td>2.795**</td>
</tr>
<tr>
<td></td>
<td>SD=3.49</td>
<td>SD=4.58</td>
<td>SD=3.75</td>
<td>1&amp;3</td>
<td>36</td>
<td>2.964**</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>M=32.0</td>
<td>M=27.38</td>
<td>M=24.43</td>
<td>1&amp;2</td>
<td>31</td>
<td>2.094*</td>
</tr>
<tr>
<td></td>
<td>SD=6.614</td>
<td>SD=6.06</td>
<td>SD=4.13</td>
<td>1&amp;3</td>
<td>36</td>
<td>4.114**</td>
</tr>
<tr>
<td>Assimilator Learning Style</td>
<td>M=53.88</td>
<td>M=58.19</td>
<td>M=60.1</td>
<td>1&amp;2</td>
<td>31</td>
<td>2.388*</td>
</tr>
<tr>
<td></td>
<td>SD=4.23</td>
<td>SD=6.94</td>
<td>SD=6.26</td>
<td>1&amp;3</td>
<td>36</td>
<td>3.641 NS</td>
</tr>
<tr>
<td>Converger Learning Style</td>
<td>M=57.24</td>
<td>M=52.94</td>
<td>M=52.38</td>
<td>1&amp;2</td>
<td>31</td>
<td>1.901 NS</td>
</tr>
<tr>
<td></td>
<td>SD=7.43</td>
<td>SD=5.39</td>
<td>SD=5.32</td>
<td>1&amp;3</td>
<td>36</td>
<td>2.267*</td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>M=66.71</td>
<td>M=60.25</td>
<td>M=59.38</td>
<td>1&amp;2</td>
<td>31</td>
<td>2.984**</td>
</tr>
<tr>
<td></td>
<td>SD=4.67</td>
<td>SD=7.38</td>
<td>SD=5.52</td>
<td>1&amp;3</td>
<td>36</td>
<td>4.433**</td>
</tr>
</tbody>
</table>

NS= Not-Significant at .05 level  
*= Significant at .05 level  
**= Significant at .01 level

Table 4.12(a) shows that F-ratio (.752) for concrete experience turned out to be non-significant (P>.05). This implies that SC, ST and OBC students with low academic motivation did not differ significantly with respect to their preference for learning through concrete experience mode.

Table 4.12(a) depicts that F-ratio (5.239) comparing mean scores of Reflective observation came out to be highly significant (p<.01 df 2/51). It means that with 99% confidence it can be said that SC, ST and OBC students with low academic motivation had difference in preference for learning through reflective observation mode. The results given in Table 4.12(b) reveals that there was significant difference in mean scores of group 1 (SC) and group 2 (ST) and mean difference favoured group 2. This leads to the inference that ST students with low academic motivation had greater preference for learning through reflective observation mode than their counterparts SC students having low academic motivation (t=2.795, p<.01).
The second 't' value (2.964) comparing SC and OBC students with low academic motivation also came out to be significant at .01 level. It means that both the groups differed significantly with reference to their preference for learning through reflective observation mode. Mean difference of the two groups indicates that OBC with low academic motivation had greater preference for this mode than SC students with low academic motivation (M=32.14>M=28.65). The third 't' value conveys the message that ST and OBC students with low academic motivation were at par with regard to their preference for reflective observation mode.

**Figure 4.22(a) : Showing the Difference in Preference of SC and ST Students of Low Academic Motivation for Reflective Observation Mode**

**Figure 4.22(b) : Showing the Difference in Preference of SC and OBC Students of Low Academic Motivation for Reflective Observation Mode**
It may further be gleaned from Table 4.12(a) that on abstract conceptualization mode of learning SC, ST and OBC students with low academic motivation did not differ significantly as 'F-ratio' of 2.199 did not reach the level of significance (p>.05 df 2/51) Table 4.12(a) also shows that for active experimentation, 'F-ratio' was obtained as 8.668 which is highly significant (p < .01 df 2/51). From this it may be inferred that there exists a significant difference in preference for active experimentation mode of SC, ST and OBC students with low level of academic motivation. Further a glance of 't' results given in Table 4.12(a) reveals that group 1 (SC) and group 2 (ST) and group 1 (SC) and group 3 (OBC) had significant difference. On the basis of mean values it may be stated that SC students with low academic motivation had stronger preference for Active experimentation than ST and OBC students with low academic motivation. But group 2 (ST) and group 3 (OBC) had similar preference for active experimentation mode of learning (t=1.673, p>.05, df 35).

Figure 4.23(a) : Showing the Difference in Preference of SC and ST Students of Low Academic Motivation for Active Experimentation Mode
Analysis and Interpretation of Data

Figure 4.23(b) : Showing the Difference in Preference of SC and OBC Students of Low Academic Motivation for Active Experimentation Mode

As regards preference for learning styles are concerned Table 4.12(a) depicts that 'F-ratio' (1.473) corresponding to diverger learning style came out to be non-significant (p>.05 df 2/57). It implies that SC, ST and OBC students with low academic motivation had similar preference for learning through diverger learning style. However, in case of Assimilator, Converger and Accommodator learning styles, significant difference appeared to exist as the 'F' ratio (5.821, 3.999 and 8.177) were significant at .01, .05 respectively in post-hoc analysis given in Table 4.12(b) supports these findings. In case of Assimilator learning style group 2 (ST) and group 3 (OBC) with low academic motivation had significantly greater preference than group 1 (SC) students with low academic motivation. However group 2 (ST) and group 3 (OBC) had similar preference for Assimilator learning style.

Figure 4.24 : Showing the Difference in Preference of SC and ST Students of Low Academic Motivation for Assimilator Learning Style

In case of converger learning style group 1 (SC) with low academic motivation had stronger preference than group 3 (OBC) with low academic motivation.
Contrary to this there was no difference between group 1 (SC) and group 2 (ST) and group 2 (ST) and group 3 (OBC) on this style. On Accommodator learning style. The 't' analysis vide Table 4.12(b) indicates that SC students with low academic motivation had more preference than ST and OBC students. However, OBC and ST students with low academic motivation had similar preference for accommodator learning style.
**4-13 COMPARISON OF SC, ST AND OBC STUDENTS HAVING HIGH AND LOW ACADEMIC MOTIVATION ON LEARNING MODES AND LEARNING STYLES**

Summary of 't' values computed for significance of difference in mean scores of learning modes and learning styles in respect of SC, ST and OBC students possessing high and low levels of academic motivation is given in Table 4.13.

<table>
<thead>
<tr>
<th>Caste</th>
<th>Mode/Style</th>
<th>SC HAM (N=15)</th>
<th>SC LAM (N=17)</th>
<th>ST HAM (N=24)</th>
<th>ST LAM (N=16)</th>
<th>OBC HAM (N=25)</th>
<th>OBC LAM (N=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Experience</td>
<td>M=34.6</td>
<td>M=34.71</td>
<td>M=35.38</td>
<td>M=32.88</td>
<td>M=34.44</td>
<td>M=34.95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD=6.092</td>
<td>SD=5.27</td>
<td>SD=4.86</td>
<td>SD=6.07</td>
<td>SD=4.797</td>
<td>SD=5.005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'t'=0.052 NS</td>
<td>'t'=1.32 NS</td>
<td>'t'=0.32 NS</td>
<td>'t'=1.32 NS</td>
<td>'t'=0.352 NS</td>
<td>'t'=0.352 NS</td>
</tr>
<tr>
<td>Reflective</td>
<td>Observation</td>
<td>M=31.27</td>
<td>M=28.65</td>
<td>M=30.92</td>
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NS= Not-significant at .05 level
df for HAM (SC) Vs LAM (SC) =30
df for HAM (ST) Vs LAM (ST) =38
df for HAM (OBC) Vs LAM (OBC) =44
It is quite evident in the Table 4.13 that none of the 't' values comparing mean scores of learning modes and learning styles of high and low academic motivated students within SC group came out to be significant even at .05 level of significance. It leads to the conclusion that scheduled caste students with high and low level of academic motivation did not differ in their preference for any learning modes or learning style. In other words, academic motivation was not found to be significant factor in differentiating between preferences of scheduled caste students for learning through various learning modes or learning styles with high and low academic motivation.

In context of scheduled tribe (ST) students also, no 't' value emerged to be significant (p>.05, df=28). It means that scheduled tribe students with high and low level of academic motivation did not differ markedly in their preference for learning through concrete experience, reflective observation, abstract conceptualization and active experimentation modes and diverger, assimilator, converger and accommodator learning styles. It is clear in Table 4.13 that in context of OBC group also, academic motivation was not found to be differentiating factor for learning modes and learning styles as all the obtained 't' values were non-significant (p > .05 df .44). Thus OBC students with high and low level of academic motivation had similar preference for learning modes (concrete experience, reflective observation, abstract conceptualization and active experimentation) and learning styles (converger, assimilator, diverger and accommodator).

4-14 COMPARISON OF EDUCATIONALLY DISADVANTAGED AND EDUCATIONALLY ADVANTAGED STUDENTS ON LEARNING MODES AND LEARNING STYLES

Summary of 't' values for learning modes and learning styles in respect of educationally disadvantaged and educationally advantaged students has been given in Table 4.14.
Table 4.14

Summary of 't'-Tests for Learning Modes and Learning Styles in Respect of Educationally Disadvantaged and Educationally Advantaged Students

<table>
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<td>Concrete Experience</td>
<td>M=33.81 SD=5.155</td>
<td>M=31.9 SD=4.779</td>
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<td>4.43**</td>
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<td>Reflective Observation</td>
<td>M=31.58 SD=4.519</td>
<td>M=29.78 SD=4.824</td>
<td>560</td>
<td>4.38**</td>
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<td>Active Experimentation</td>
<td>M=28.66 SD=6.134</td>
<td>M=31.08 SD=6.023</td>
<td>560</td>
<td>4.585**</td>
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<tr>
<td>Divergent Learning Style</td>
<td>M=65.38 SD=6.979</td>
<td>M=61.68 SD=6.393</td>
<td>560</td>
<td>8.42**</td>
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<tr>
<td>Assimilator Learning Style</td>
<td>M=58.69 SD=6.705</td>
<td>M=57.61 SD=7.101</td>
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<td>1.78NS</td>
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<tr>
<td>Convergent Learning Style</td>
<td>M=55.77 SD=7.444</td>
<td>M=58.92 SD=7.579</td>
<td>560</td>
<td>4.799**</td>
</tr>
<tr>
<td>Accommodator Learning Style</td>
<td>M=62.45 SD=6.607</td>
<td>M=62.99 SD=8.744</td>
<td>560</td>
<td>0.898NS</td>
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</table>

NS= Not-Significant at .05 level
*= Significant at .05 level
**= Significant at .01 level

Table 4.14 indicates that the obtained 't' value (4.43) was significant at .01 level of significance and mean of educationally disadvantaged group (33.81) was greater than mean of educationally advantaged (31.9) group. It means that educationally disadvantaged group had more preference for concrete experience mode than educationally advantaged group.
The second 't' value (4.38 df = 560) was also highly significant at the level of significance and mean score of educationally disadvantaged group (31.58) was greater than mean score of educationally advantaged (29.78) group. On reflective observation mode. It shows that educationally disadvantaged students had stronger preference for reflective observation mode than educationally advantaged students.

Figure 4.27: Showing the Difference in Preference of Educationally Disadvantaged and Educationally advantaged Students for Concrete Experience Mode

Figure 4.28: Showing the Difference in Preference of Educationally Disadvantaged and Educationally advantaged Students for Reflective Observation Mode
The Table 4.14 also reveals that third ‘t’ value (1.501) for abstract conceptualization mode of preference for educationally disadvantaged and educationally advantaged students was found to be non-significant. It shows that educationally disadvantaged and educationally advantaged students did not differ significantly (P>.05, df 560). In their preference for learning through abstract conceptualization.

Table 4.14 also shows that the fourth 't' value (4.585) with df = 560 in case of educationally disadvantaged and educationally advantaged students for active experimentation mode was found to be highly significant at (P<.01) and mean score of educationally advantaged group (31.08) was greater than mean score of educationally disadvantaged (28.66) group. It means that educationally advantaged group had more preference for learning through active experimentation mode than educationally disadvantaged group.

Figure 4.29 : Showing the Difference in Preference of Educationally Disadvantaged and Educationally Advantaged Students for Active Experimentation Mode

The Table 4.14 shows the 't' value (8.42) with df=560 in case of diverger learning style of educationally disadvantaged and Educationally Advantaged group and mean score (65.38) of educationally disadvantaged group was greater than the mean score (61.68) of educationally advantaged group. It may be said that educationally disadvantaged group had more preference for learning through diverger learning style than their counterparts advantaged students.
Table 4.14 further exhibits that 't'-value (1.78) in case of assimilator learning style of educationally disadvantaged and educationally advantaged group was found to be non-significant (P<.05). It means that educationally disadvantaged and educationally advantaged did not differ significantly in their preference for learning through assimilator learning style.

Table 4.14 also shows that 't' value (4.799) with df=560 for converger learning style of educationally disadvantaged and educationally advantaged groups was highly significant at (P<.01) and mean score (58.92) of educationally advantaged group was greater than the mean score (55.77) of educationally disadvantaged group. It means that educationally advantaged group had more preference for converger learning style than educationally disadvantaged group students.
In case of Accommodator learning style the 't' value (.898) found to be non-significant even at .05 level of significance. It reveals that educationally disadvantaged and educationally advantaged group had similar preference for learning through accommodator learning style.

**DISCUSSION OF RESULTS**

First hypothesis for testing was that there will be no significant differences were found in two learning modes viz. Reflective observation and active experimentation and three learning styles viz. diverger, assimilator and accommodator. No previous research was available to give empirical support to the above findings of the study. It may be said that differences in preference for learning modes and learning styles. But the result of variation in degree of educational disadvantaged among SC, ST and OBC students. The second hypothesis stipulated that there will be significant differences in learning modes and learning styles of three groups of educationally disadvantaged male students (SC, ST and OBC male students). This null hypothesis was not accepted totally as male students belonging to SC and OBC differed significantly in one learning mode viz. Reflective observation and one learning style viz assimilator learning
style. In other three learning modes and three learning styles significant differences found.

The third null hypothesis related to differences in learning modes and learning styles of three groups of educationally disadvantaged (SC, ST and OBC female students) was not accepted. As significant differences emerged among SC, ST and OBC female students on reflective observation and active experimentation modes and diverger, assimilator and accomodator learning styles. No study has been conducted so far on the parallel lines, which could be cited for showing agreement and dis-agreement with the above finding. Again it may be stated that differences in learning modes learning styles of SC, ST and OBC male students and SC, ST and OBC female students. Due to differences in their educational disadvantagedness.

The fourth null hypothesis anticipated that there will no significant gender differences in learning modes and learning styles of SC, ST and OBC students. The obtained results extended partial support to this hypotheses. In case of SC, and ST groups gender differences did not exist with reference to learning modes and learning styles.

Therefore in these cases the null hypothesis was accepted. But OBC male students shows stronger preference for the active experimentation mode and accommodator learning style than their female counter part and in case of concrete experience, reflective observation and abstract conceptualization learning modes and diverger, assimilator and converger learning style no gender difference was found, in context of OBC students. Hence, null hypothesis was partially accepted and partially rejected. There was no study available as such which was in agreement or disagreement of the present findings. However a number of studies on general samples traits researches have been miscellaneous type. A majority of the studies (Caskey 1986; Kirk 1986; Keir 1987; Powe 1996; Reistoffar, 1997; Truluck and Countenay 1999; Williams 2001) did not find any gender difference in learning styles and learning modes of the students.
This may also be asserted that in modern era gender differences seems to disappearing in all the fields because of equal educational opportunity available to boys and girls in Indian society. Further there is a lot of change in the roles of girls/women due to modernization and liberalization in academic fields girls are showing performance at least equal to the boys, if not superior. The null hypothesis number five and six related to science and arts stream respectively were accepted and partially rejected as SC, ST and OBC students of science stream differed significantly on assimilator and accommodator learning styles only and significant difference existed in two learning modes (concrete experience, abstract conceptualization) and OBC students of arts stream had more preference for diverger learning styles than SC and ST students of arts. These differences in learning modes and learning styles may be attributed to varying degree of educational disadvantagedness of SC, ST and OBC students of science and arts stream.

Null hypothesis number seven related to stream difference in learning modes and learning styles of SC, ST and OBC students was partially accepted and partially rejected. Because the findings of the present study indicated that SC group science students had more preference for learning through concrete experience than arts students. But in ST and OBC groups, science and arts students had similar preference of all modes and styles of learning. These were no parallel study available to support or contradicts the present findings of the study. However (Grasha 1979; Kirk 1980; Taylor 1986; and Gallajhes 1988) extended the support to the finding related to no stream differences in learning modes and learning styles of SC students. The finding pertaining to stream differences in some modes and styles of science and arts groups may said to be supported in directly by the researchers (Kolb 1981; Verma 1988; 1990; Kozminsky 1988; Wilcoxon and Proasers 1986; and Sood 2000). This is worth mentioning in the study of Wilcoxon and Proasers (1996) arts students showed more preference for learning through concrete experience than science students.
While in the present study science students had more preference for learning through concrete experience than arts students in case of SC group.

Hypothesis 8 and 9 anticipated no significant difference in learning modes and learning styles of three groups of disadvantaged i.e. SC, ST and OBC at high and low level of academic stress. Both the hypothesis were retained. The obtained findings of the present study were not supported by previous researchers as parallel studies were not available. However it may be said that under the condition that high and low academic stress respectively SC, ST and OBC students had similar preference for learning modes and learning styles as stress being psychological phenomenon.

Hypotheses No. 10 stipulated that there will be no academic stress related differences in learning modes and learning styles of three groups of educationally disadvantaged students. This hypotheses was retained. The findings of the present study showing no relationship between academic stress and learning modes and learning styles of the students as seems to contradictory to the result of investigation (Gadzella et al.1998). Who concluded that a stress was related to certain learning strategies. This would be worth while to note that she used Schmecks Inventory of learning processes in place of Kolb’s Learning Style Inventory.

Two studies designed by (Hinkle; 1986 and Kelley; 2004) on the relationship between anxiety level and learning style preference found the similar results wherein anxiety level did not affect the learning style preference.

Hypothesis 11-12 anticipated no significant differences in learning modes and learning styles of SC, ST and OBC students at high and low levels of academic motivation. The results of the study confirmed the hypotheses No.9. but hypotheses No. 10 was not retained.

Null Hypotheses No. 13 was also not confirmed by the obtained findings of the present study for SC, ST and OBC students with high and low levels of academic motivation for learning modes and learning styles. The findings of the present study were supports from the study (Verma; 1996) who explored the
relationship between achievement motivation and learning style using Kolb’s learning style inventory except slight deviation in context of reflective observation mode. Other findings were quite similar. No study could be traced on the association of academic motivation and Kolb’s learning style inventory.

Null Hypotheses No. 14 stated that there will be significant difference in learning modes and learning styles of educationally disadvantaged and educationally advantaged group of students. This hypotheses was not confirmed. In the present study educationally disadvantaged students had more preference for learning through concrete experience, reflective observation modes and diverger learning style. Where as educationally advantaged students were more inclined towards the use of active experimentation learning mode and the converger learning style. Though no previous study was available for defence or contradiction of the present findings. But the results of the present study seems to be quite convincing. SC, ST and OBC students falling in the category of educationally disadvantaged students may like to learn through concrete experience, reflective observation modes and diverger learning style and the students belonging to general higher caste having the advantage of more educational resources at their disposal. May like to learn through active experimentation mode and converger learning style.

REFERENCES


