CHAPTER 5
RESULTS
CHAPTER 5: RESULTS

Data on content, context, personal variables and the academic satisfaction were factor analyzed using the Principal Component method of Hotelling (1959) to revalidate underlying factor structures. The obtained factor matrix was rotated using Kaiser's (1958) varimax criterion - items having a loading of .30 or more were considered meaningful for interpretation, with some rare exceptions.

5.1 FACTORS IN THE CONTENT DOMAIN

The unrotated and rotated factor matrices for content items had been included in Tables 1 and 2 respectively.
<table>
<thead>
<tr>
<th>ITEMS</th>
<th>FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Confidence in solving problems</td>
<td>15</td>
</tr>
<tr>
<td>2 Opportunity for independent thinking and action</td>
<td>18</td>
</tr>
<tr>
<td>3 Learning of academic skills</td>
<td>37</td>
</tr>
<tr>
<td>4 Success in obtained academic results</td>
<td>34</td>
</tr>
<tr>
<td>5 Successful completion of tasks in routine academic work</td>
<td>36</td>
</tr>
<tr>
<td>6 Living up to expectations of teachers and peers</td>
<td>37</td>
</tr>
<tr>
<td>7 Decision to join college due to personal reasons</td>
<td>26</td>
</tr>
<tr>
<td>8 Decision to join college due to social reasons</td>
<td>26</td>
</tr>
<tr>
<td>9 Challenge in course content</td>
<td>34</td>
</tr>
<tr>
<td>10 Creative and enjoyable experiences</td>
<td>-21</td>
</tr>
<tr>
<td>11 A sense of being able to do something useful in society</td>
<td>-29</td>
</tr>
<tr>
<td>12 Praise/criticism for course work by teachers</td>
<td>19</td>
</tr>
<tr>
<td>13 Praise/criticism for course work by students</td>
<td>41</td>
</tr>
<tr>
<td>14 Praise/criticism for work other than course by teachers</td>
<td>-37</td>
</tr>
<tr>
<td>15 Praise/criticism for work other than course by students</td>
<td>-44</td>
</tr>
<tr>
<td>16 Appreciation for course work by teachers</td>
<td>32</td>
</tr>
<tr>
<td>17 Appreciation for course work by students</td>
<td>15</td>
</tr>
<tr>
<td>18 Appreciation for any other work by teachers</td>
<td>24</td>
</tr>
<tr>
<td>19 Appreciation for any other work by students</td>
<td>-32</td>
</tr>
<tr>
<td>20 Intellectual competence of teachers</td>
<td>-12</td>
</tr>
<tr>
<td>ITEMS</td>
<td>FACTORS</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>21. Intellectual level of fellow students</td>
<td>44</td>
</tr>
<tr>
<td>22. Method of instruction</td>
<td>40</td>
</tr>
<tr>
<td>23. Distribution of course load</td>
<td>-30</td>
</tr>
</tbody>
</table>

| EIGENVALUE       | 5.08 2.31 1.96 1.37 1.26 1.04 |
| PERCENTAGE OF VARIANCE | 26% 5.4% 3.9% 1.9% 1.6% 1.2% |

* Decimals have been omitted for factor loadings
### TABLE 5.2: ROTATED FACTOR MATRIX FOR CONTENT ITEMS

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>FACTORS</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>1</td>
</tr>
<tr>
<td>1. Confidence in solving problems</td>
<td>35</td>
</tr>
<tr>
<td>2. Opportunity for independent thinking and action</td>
<td></td>
</tr>
<tr>
<td>3. Learning of academic skills</td>
<td></td>
</tr>
<tr>
<td>4. Success in obtained academic results</td>
<td></td>
</tr>
<tr>
<td>5. Successful completion of targets in routine academic work</td>
<td></td>
</tr>
<tr>
<td>6. Living upto expectations of teachers and peers</td>
<td></td>
</tr>
<tr>
<td>7. Decision to join college due to personal reasons</td>
<td></td>
</tr>
<tr>
<td>8. Decision to join college because of social reasons</td>
<td></td>
</tr>
<tr>
<td>9. Challenge in course content</td>
<td></td>
</tr>
<tr>
<td>10. Creative and enjoying experiences</td>
<td></td>
</tr>
<tr>
<td>11. A sense of being able to do something useful in society</td>
<td></td>
</tr>
<tr>
<td>12. Praise/criticism for course work by teachers</td>
<td></td>
</tr>
<tr>
<td>13. Praise/criticism for course work by students</td>
<td></td>
</tr>
<tr>
<td>14. Praise/criticism for work other than course by teachers</td>
<td></td>
</tr>
<tr>
<td>15. Praise/criticism for work other than course by students</td>
<td></td>
</tr>
<tr>
<td>16. Appreciation for course work by teachers</td>
<td></td>
</tr>
<tr>
<td>17. Appreciation for course work by students</td>
<td></td>
</tr>
<tr>
<td>18. Appreciation for any other work by teachers</td>
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</tr>
<tr>
<td>19. Appreciation for any other work by students</td>
<td></td>
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<tr>
<td>20. Intellectual competence of teachers</td>
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</table>

108
<table>
<thead>
<tr>
<th>ITEM</th>
<th>FACTORS</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>21. Intellectual level of fellow students</td>
<td></td>
</tr>
<tr>
<td>22. Method of instruction</td>
<td></td>
</tr>
<tr>
<td>23. Distribution of course load</td>
<td></td>
</tr>
</tbody>
</table>

* Decimals have been omitted for factor loadings
Results of factor analysis revealed six factors implicit in the content domain explaining 38% of the total variance. Items of learning of academic skills; success in obtained academic results; successful completion of targets in routine academic work; living up to the expectations of teachers and peers; decision to join college due to social reasons; challenge in course content; and intellectual level of fellow students contributed to factor 1. Most of these items attained higher factor loadings in the rotated matrix but remained in the same quadrant. The eigenvalue for this factor was 5.08, explaining little over 25% of the total variance. These items emphasized students' learning and success in academic work. The factor might be identified as 'Cognitive skills'.
Factor 2 contained items of praise/criticism for work other than course by teachers; praise/criticism for work other than course by students; appreciation for any other work by teachers; and appreciation for any other work by students. After rotation, the factor loadings for most items had changed from negative to positive and to high. These items laid importance on proper rewarding of students' efforts in extracurricular activities like sports, etc. This factor explained about 5.4% of variance and had been interpreted as 'Non-cognitive skills'.

The two items: creative and enjoying experiences; and a sense of being able to do something useful in society contributed to factor 3. The two items had negative factor loadings in both the unrotated and rotated matrices although on rotation values changed to significant. In the rotated matrix the item appreciation course work by teacher got excluded. Both the items were related to the content of education itself as the importance was on providing meaningful and rich educational experiences to students. This factor accounted for approximately 3.9% of the variance and might be interpreted as 'Education itself'.
Items of intellectual competence of teachers; method of instruction; and distribution of course load emerged in the form of another independent factor. Item of intellectual competence of teachers had changed from low insignificant loading in the unrotated matrix to high significant loading in the rotated matrix. Item of method of instruction, not included in factor 4 in the unrotated matrix was included on rotation. These items were concerned with teacher competence and the way they imparted instruction. This factor had an eigenvalue of 1.37 and might be named as 'Teacher competence'.

Confidence in solving problems; opportunity for independent thinking and action; and decision to join college due to personal reasons clustered under one factor. After rotation these three items changed to high significant factor loadings. The enhancement of students' personal development appeared to be the crux and the factor might be interpreted as 'Personal growth'. The eigenvalue for this factor was 1.26, explaining little over 1% of variance.

Factor 6 emerged from items: praise/criticism for course work by teachers; praise/criticism for course work by students; appreciation for course work by teachers; and appreciation for course work by students.
Except one item (appreciation for course work by teachers), all other items had changed on rotation from insignificant to high significant factor loadings. Even the item appreciation for course work by teachers was grouped under factor 6, as logically all these items measured recognition given to students in their academic tasks. This factor had an eigenvalue of 1.04 and might be labelled as 'Recognition'.

5.2 FACTORS IN THE CONTEXT DOMAIN

Factor analysis of items in the context domain saw the emergence of five factors accounting for approximately 36% of variance. The unrotated and rotated factor matrices had been presented in Tables 3 and 4 consecutively.
### TABLE 5.3c: UNROTATED FACTOR MATRIX FOR CONTEXT DOMAIN

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Adjustment in college</td>
<td>-14</td>
</tr>
<tr>
<td>2. Learning of social skills</td>
<td>-25</td>
</tr>
<tr>
<td>3. Participation in admission policy</td>
<td>57</td>
</tr>
<tr>
<td>4. Participation in evaluation policy</td>
<td>74</td>
</tr>
<tr>
<td>5. Participation in financial policy</td>
<td>73</td>
</tr>
<tr>
<td>6. Participation in implementation of admission policy</td>
<td>58</td>
</tr>
<tr>
<td>7. Participation in implementation of evaluation policy</td>
<td>73</td>
</tr>
<tr>
<td>8. Participation in implementation of financial policy</td>
<td>70</td>
</tr>
<tr>
<td>9. Study space</td>
<td>39</td>
</tr>
<tr>
<td>10. Library facilities</td>
<td>44</td>
</tr>
<tr>
<td>11. Rank of college</td>
<td>51</td>
</tr>
<tr>
<td>12. Facilities for extra curricular activities</td>
<td>41</td>
</tr>
<tr>
<td>13. Overall environmental conditions</td>
<td>36</td>
</tr>
<tr>
<td>14. Position in class in relation to class work perceived by students</td>
<td>-16</td>
</tr>
<tr>
<td>15. Position in class in relation to class work perceived by teachers</td>
<td>-18</td>
</tr>
<tr>
<td>16. Status in terms of membership/participation in social groups</td>
<td>31</td>
</tr>
<tr>
<td>17. Freedom given by the department in planning course work</td>
<td>12</td>
</tr>
<tr>
<td>18. Social interaction with fellow students</td>
<td>-27</td>
</tr>
<tr>
<td>ITEMS</td>
<td>FACTORS</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>19. Social interaction with teachers</td>
<td>-51</td>
</tr>
<tr>
<td>20. Social interaction with administrative staff</td>
<td>-39</td>
</tr>
<tr>
<td>21. Job opportunities with general training</td>
<td>60</td>
</tr>
<tr>
<td>22. Job opportunities with specific training</td>
<td>59</td>
</tr>
</tbody>
</table>

**EIGENVALUE**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td></td>
<td>4.90</td>
<td>2.07</td>
<td>1.74</td>
<td>1.54</td>
<td>1.05</td>
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</tbody>
</table>

**PERCENTAGE OF VARIANCE**

|         | 24%  | 9.3% | 3.0% | 2.4% | 1.1% |

*Decimals have been omitted for factor loadings*
## Table 5.4: Rotated Factor Matrix for Context Domain

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Adjustment in college</td>
<td>33</td>
</tr>
<tr>
<td>2. Learning of social skills</td>
<td>-20</td>
</tr>
<tr>
<td>3. Participation in admission policy</td>
<td>34</td>
</tr>
<tr>
<td>4. Participation in evaluation policy</td>
<td>88</td>
</tr>
<tr>
<td>5. Participation in financial policy</td>
<td>37</td>
</tr>
<tr>
<td>6. Participation in implementation of admission policy</td>
<td>35</td>
</tr>
<tr>
<td>7. Participation in implementation of evaluation policy</td>
<td>87</td>
</tr>
<tr>
<td>8. Participation in implementation of financial policy</td>
<td>38</td>
</tr>
<tr>
<td>9. Study space</td>
<td>41</td>
</tr>
<tr>
<td>10. Library facilities</td>
<td>65</td>
</tr>
<tr>
<td>11. Rank of college</td>
<td>67</td>
</tr>
<tr>
<td>12. Facilities for extra-curricular activities</td>
<td>56</td>
</tr>
<tr>
<td>13. Overall environmental conditions</td>
<td>28</td>
</tr>
<tr>
<td>14. Position in class in relation to class work perceived by students</td>
<td>-61</td>
</tr>
<tr>
<td>15. Position in class in relation to class work perceived by teachers</td>
<td>-71</td>
</tr>
<tr>
<td>16. Status in terms of membership/participation in social groups</td>
<td>-38</td>
</tr>
<tr>
<td>17. Freedom given by the department in planning course work</td>
<td>-49</td>
</tr>
<tr>
<td>18. Social interaction with fellow students</td>
<td>-36</td>
</tr>
</tbody>
</table>
### Table: Factors

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. Social interaction with teachers</td>
<td>-65</td>
</tr>
<tr>
<td>20. Social interaction with administrative staff</td>
<td>-57</td>
</tr>
<tr>
<td>21. Job opportunities with general training</td>
<td>85</td>
</tr>
<tr>
<td>22. Job opportunities with specific training</td>
<td>36</td>
</tr>
</tbody>
</table>

* Decimals have been omitted for factor loadings
An itemwise comparison of Table 3 and Table 4 showed that rotation has led to shift in the position of few items. The factor loadings on items of participation in admission policy; participation in financial policy; participation in implementation of admission policy; participation in implementation of financial policy; overall environmental conditions; and job opportunities with specific training had been reduced in rotated factor matrix though remaining in the same quadrant. The position of one item, learning of social skills had made shift of group from factor 4 to factor 5.

In the rotated factor matrix, the factor 1 included items namely participation in formulating of admission, evaluation and financial policy; and participation in implementation of admission, evaluation and financial policy. Two items relating to the participation in formulating and implementing of evaluation policy occupied relatively higher factor loadings, as compared to loadings on items relating to admission and financial policy. Although all those items emphasized opportunities for students' participation in different college policies and practices, but evaluation was of specific concern. This factor explained approximately 24% of variance and might be identified as 'College policies and practices'. 
Items of study space; library facilities; rank of college; facilities for extra-curricular activities; and overall environmental conditions clustered into an independent factor. Items of library facilities; rank of college; and facilities for extra-curricular activities occupied higher factor loadings on rotation, but the value for study space did not change much. The items focused on facilities for different activities. This factor had an eigenvalue of 2.07 and might be interpreted as 'College environment'.

Two items of job opportunities with general training and job opportunities with specific training, contributed positively to one separate factor. The factor loading of the item job opportunities with general training increased significantly in the rotated matrix, whereas, item job opportunities with specific training showed a reverse trend. The items concerned with the availability of employment for graduates had resulted in eigenvalue of 1.74. This factor had been named as 'Job opportunities'.

Items of adjustment in the college: position in the class in relation to class work perceived by students; position in the class in relation to class work perceived by teachers; and status in terms of membership/
participation in social groups were found grouped as one factor. Except one item adjustment in college, this factor was a composite of negative factor loadings. Items in this category emphasized social activities of students in the different social groups. This factor might be identified as 'Status'.

Factor 5 had an eigenvalue of 1.05 explaining approximately 1% of variance emerged from items like learning of social skills; freedom given by the department in planning course work; social interaction with fellow students; social interaction with teachers; and social interaction with administrative and supportive staff. All items had negative factor loadings even in this category. The factor loadings for most of these items in the rotated matrix had changed to higher ones. One item the learning of social skills was grouped with factor 4 in unrotated factor matrix, had shifted to the factor 5 in the rotated matrix. Although this item had a low factor loading, logically it was closer to other items of factor 5. The items focused on the interpersonal relationships of students at different levels. This factor might be interpreted as 'Interpersonal relationships'.

The factor-analysis results revalidated the hypothesized dimensions of content and context as measurable
entities. Both the set of factors constituted the homogenous grouping of content-context factors in factorial sense and operated in academic settings. The results, thus, provided cross-validity to dimensions illustrated by Herzberg et al. (1959); Davis and Allen (1970), Rao. (1973), and Dyer and Parker. (1975) in industrial setting. Content factors related to the content of education, whereas context factors related to the environment.

5.3 INTERRELATIONSHIPS AMONG CONTENT AND CONTEXT FACTORS

How much distinct were the factors of content-context within and between was tested by computing correlations among factors of content and context. The results of correlational analysis had been included in Tables 5, 6 and 7.
TABLE 5.5: INTERCORRELATIONS AMONG CONTENT FACTORS

<table>
<thead>
<tr>
<th></th>
<th>CS</th>
<th>NCS</th>
<th>EI</th>
<th>TC</th>
<th>PG</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCS</td>
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<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EI</td>
<td>.29</td>
<td>.41</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC</td>
<td>.23</td>
<td>.25</td>
<td>.18</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PG</td>
<td>.33</td>
<td>.28</td>
<td>.24</td>
<td>.20</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.29</td>
<td>.30</td>
<td>.24</td>
<td>.13</td>
<td>.26</td>
<td>1.00</td>
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</tbody>
</table>

CS = Cognitive skills  
NCS = Non-cognitive skills  
EI = Education itself  
TC = Teacher competence  
PG = Personal growth  
R = Recognition  

* r is significant above 5 per cent level.

The correlations among content factors indicated significant correlational values among many of the factors, except low correlation of recognition suggesting interdependence.
### TABLE 5.6: INTERCORRELATIONS AMONG CONTEXT FACTORS

<table>
<thead>
<tr>
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<th>CE</th>
<th>JO</th>
<th>S</th>
<th>IR</th>
</tr>
</thead>
<tbody>
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<td>CP</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE</td>
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<td>1.00</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>JO</td>
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<td>.08</td>
<td>1.00</td>
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</tr>
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<td>S</td>
<td>.02</td>
<td>.03</td>
<td>.03</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>IR</td>
<td>.26</td>
<td>.08</td>
<td>.14</td>
<td>.03</td>
<td>1.00</td>
</tr>
</tbody>
</table>

CP = College policies and practices  
CE = College environment  
JO = Job opportunities  
S = Status  
IR = Interpersonal relationships

* * is significant above 5 per cent level.

It appeared from correlations among context factors that only interpersonal relationships and college policies had high correlation, whereas all other context factors were having very low correlation values, suggesting independence of context factors.
TABLE 5.7: INTERCORRELATIONS BETWEEN CONTENT AND CONTEXT FACTORS

<table>
<thead>
<tr>
<th></th>
<th>CS</th>
<th>NCS</th>
<th>EI</th>
<th>TC</th>
<th>PG</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.19°</td>
<td>.18°</td>
<td>.11</td>
<td>.16</td>
<td>.24°</td>
</tr>
<tr>
<td>CE</td>
<td>.09</td>
<td>.06</td>
<td>.11</td>
<td>.03</td>
<td>.05</td>
<td>.02</td>
</tr>
<tr>
<td>JD</td>
<td>.06</td>
<td>.04</td>
<td>.03</td>
<td>.02</td>
<td>.02</td>
<td>.05</td>
</tr>
<tr>
<td>S</td>
<td>.36°</td>
<td>.41°</td>
<td>.29°</td>
<td>.25°</td>
<td>.47°</td>
<td>.28°</td>
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<tr>
<td>IR</td>
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<td>.29°</td>
<td>.25°</td>
<td>.24°</td>
<td>.20°</td>
<td>.26°</td>
</tr>
</tbody>
</table>

CP = College policies and practices
CE = College environment
JD = Job opportunities
S = Status
IR = Interpersonal relationships
CS = Cognitive skills
NCS = Non-cognitive skills
EI = Education itself
TC = Teacher competence
PG = Personal growth
R = Recognition

* r is significant above 5 per cent level.

The correlations between content and context factors indicated that factors of college policies and practices; status; and interpersonal relationships in the context domain had high correlations with content factors of cognitive skills; non-cognitive skills; education itself; teacher competence; personal growth; and recognition. This did not confirm the distinct nature of content and context factors.
5.4 FACTORS IN THE PERSONAL DOMAIN

The data on various scales in the personal domain—demographic characteristics, achievement values and personality orientation were factor analyzed separately.

5.4.1 DEMOGRAPHIC CHARACTERISTICS

The unrotated factor matrix for the scale measuring demographic characteristics yielded 2 factors presented in Table 8.

**TABLE 5.8: UNROTATED FACTOR MATRIX ON DEMOGRAPHIC CHARACTERISTICS SCALE**

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<th>Factors</th>
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</thead>
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</tr>
<tr>
<td>2. Mother's education</td>
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<tr>
<td>3. Father's income</td>
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</tr>
<tr>
<td>4. Father's occupation</td>
<td></td>
</tr>
<tr>
<td>5. Mother's occupation</td>
<td>70</td>
</tr>
<tr>
<td>6. Mother's income</td>
<td>69</td>
</tr>
</tbody>
</table>

| EIGENVALUE           | 2.40    | 1.67    |
| PERCENTAGE OF VARIANCE| 6%     | 3%      |

* Decimals have been omitted for factor loadings.
Father's education; mother's education; mother's occupation and mother's income, occupied high positive factor loadings on first factor. The eigenvalue for this factor was 2.4, explaining approximately 6% of the variance.

Father's income and occupation acquired negative but significant factor loadings on the second factor. The eigenvalue for this factor was 1.67 and accounted for nearly 3% of total variance. The two factors together explained approximately 9% of the variance implicit in the personal domain.

The rotated factor matrix had been included in Table 9.

<table>
<thead>
<tr>
<th>TABLE 5.9: ROTATED FACTOR MATRIX ON DEMOGRAPHIC CHARACTERISTICS SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>1. Father's education</td>
</tr>
<tr>
<td>2. Mother's education</td>
</tr>
<tr>
<td>3. Father's income</td>
</tr>
<tr>
<td>4. Father's occupation</td>
</tr>
<tr>
<td>5. Mother's occupation</td>
</tr>
<tr>
<td>6. Mother's income</td>
</tr>
</tbody>
</table>

* Decimals have been omitted for factor loadings.
In the rotated factor matrix, the item factor structure remained invariant. Factor 1 was labelled as the parent's educational status; and the factor 2 as 'Father's occupation and income status'.

5.4.2 FACTORS IN ACHIEVEMENT VALUES

The unrotated factor matrix for achievement values scale had been included in Table 10.
### TABLE 5.10: UNROTATED FACTOR MATRIX ON ACHIEVEMENT VALUES SCALE

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I like to do my best in whatever work I undertake</td>
<td>12</td>
</tr>
<tr>
<td>2. In accomplishing a task, I like to do it much better than others</td>
<td>34</td>
</tr>
<tr>
<td>3. I wish I could have always been successful in doing difficult jobs</td>
<td>37</td>
</tr>
<tr>
<td>4. When working in groups, I desire to excel others in similar tasks</td>
<td>16</td>
</tr>
<tr>
<td>5. My aim of life is to make long records of successful achievements</td>
<td>24</td>
</tr>
<tr>
<td>6. I often desire to be successful in doing something very significant</td>
<td>30</td>
</tr>
<tr>
<td>7. I am of the opinion that for pleasure and happiness one must enrich the records of one's achievement</td>
<td>30</td>
</tr>
<tr>
<td>8. I want to know how I can be successful to whatever I undertake</td>
<td>23</td>
</tr>
<tr>
<td>9. I like to think of my future career</td>
<td>10</td>
</tr>
<tr>
<td>10. I believe that it is possible for me to be recognized authority</td>
<td>24</td>
</tr>
<tr>
<td>11. I frequently desire to do something of great significance</td>
<td>35</td>
</tr>
<tr>
<td>12. I am very serious about being great man in my job or profession</td>
<td>32</td>
</tr>
<tr>
<td>13. I consider myself better than those who do not have any aim in life</td>
<td>14</td>
</tr>
<tr>
<td>Items</td>
<td>Factors</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>14. I will be very happy if I can do something very valuable</td>
<td>21</td>
</tr>
<tr>
<td>15. I like to praise those who have earned a reputation in their own field</td>
<td>11</td>
</tr>
<tr>
<td>16. In whatever work I undertake I like to do my very best</td>
<td>30</td>
</tr>
<tr>
<td>17. I often desire to be successful in doing something very significant</td>
<td>-30</td>
</tr>
<tr>
<td>18. I like to be a great authority in some job</td>
<td>34</td>
</tr>
<tr>
<td>19. I am always keen to fight for noble cause</td>
<td>37</td>
</tr>
<tr>
<td>20. I feel best when I am assigned a difficult job</td>
<td>38</td>
</tr>
<tr>
<td>21. I frequently aspire to be a man with wonderful achievements</td>
<td>31</td>
</tr>
<tr>
<td>22. I am happiest when successful in my work</td>
<td>30</td>
</tr>
<tr>
<td>23. I often think of accomplishing something great</td>
<td>44</td>
</tr>
<tr>
<td>24. I like to be able to do things better than others</td>
<td>21</td>
</tr>
<tr>
<td>25. I feel unhappy when I fail to do my best in the examination</td>
<td>31</td>
</tr>
<tr>
<td>26. My secret ambition in life is to establish a glorious record of achievement</td>
<td>38</td>
</tr>
<tr>
<td>27. I like to do something which others hardly do</td>
<td>29</td>
</tr>
<tr>
<td>28. It gives me great satisfaction to undertake very difficult task</td>
<td>34</td>
</tr>
<tr>
<td>29. In most social situations I try to seek other's attention</td>
<td>11</td>
</tr>
<tr>
<td>Items</td>
<td>Factors</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>30. What I want most in my life is to do something requiring efforts</td>
<td>30</td>
</tr>
<tr>
<td>31. I like others to think of me as industrious</td>
<td>34</td>
</tr>
<tr>
<td>32. In judging my merit, I believe that my grades were not a fair index of my work</td>
<td>08</td>
</tr>
<tr>
<td>33. I wish the atmosphere in my home were more congenial to study</td>
<td>30</td>
</tr>
<tr>
<td>34. I am quite punctual and never late for work, school, appointment, etc.</td>
<td>16</td>
</tr>
<tr>
<td>35. I am always careful to do my best in whatever I undertake</td>
<td>16</td>
</tr>
<tr>
<td>36. I have a great tendency to continue a work till it is finished</td>
<td>16</td>
</tr>
<tr>
<td>37. Before starting a difficult task I would plan its details</td>
<td>35</td>
</tr>
<tr>
<td>38. I am anxious to do something of great significance</td>
<td>01</td>
</tr>
<tr>
<td>39. In general I might be described as optimistic</td>
<td>16</td>
</tr>
<tr>
<td>40. I take pains to overcome obstacles and attain a high standard</td>
<td>42</td>
</tr>
<tr>
<td>41. I am often tempted to undertake very difficult task</td>
<td>32</td>
</tr>
<tr>
<td>42. I am sure that after ten years I will be recognized authority in my field</td>
<td></td>
</tr>
<tr>
<td>43. I am morally upright person</td>
<td>37</td>
</tr>
<tr>
<td>44. I enjoy a long spell of continuous activity to solve difficult problem</td>
<td></td>
</tr>
<tr>
<td>Items</td>
<td>factors</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>45. I feel happy when I have finished successfully a difficult task</td>
<td>-47</td>
</tr>
<tr>
<td>46. I prefer difficult task to easy ones</td>
<td>31</td>
</tr>
<tr>
<td>47. I avoid those situations which are not competitive</td>
<td>22</td>
</tr>
<tr>
<td>48. I feel upset when I fail to reach my desired goal</td>
<td>-41</td>
</tr>
<tr>
<td>49. I believe that my future depends upon my doing some notable work</td>
<td>33</td>
</tr>
<tr>
<td>50. I would like to solve very difficult puzzles and quizzes</td>
<td>-38</td>
</tr>
</tbody>
</table>

**EIGENVALUE**  
5.05 3.15 2.27 1.63 1.57 1.45 1.40

**PERCENTAGE OF VARIANCE**  
25.5% 10% 5.2% 2.6% 2.5% 2.0% 2.0%

* Decimals have been omitted for factor loadings
The factor analysis of achievement values showed that 7 factors emerged and this explained 50 per cent of variance. Items like punctuality; tendency to continue work; tendency to be optimistic; avoiding uncompetitive situations; to feel happy in doing something valuable; liking for doing things better than others; to be recognized authority; to do best in task; desire to excel others in similar tasks; desire to know to be successful in tasks; thinking of future career; to make records of successful achievements; praise for reputed persons; to consider better than others those who do not have aim in life; try to seek other's attention; to believe that grades were unfair means for judgement of work; and anxious to do something of great significance did not contribute significantly to factors of achievement values. Table 11 included the rotated factor matrix of achievement values scale.
TABLE 5.11: ROTATED FACTOR-MATRIX ON ACHIEVEMENT VALUES SCALE

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I like to do my best in whatever work I undertake</td>
<td>51</td>
</tr>
<tr>
<td>2. In accomplishing a task, I like to do it much better than others</td>
<td>38</td>
</tr>
<tr>
<td>3. I wish I could have always been successful in doing difficult jobs</td>
<td>15</td>
</tr>
<tr>
<td>4. When working in groups I desire to excel others in similar tasks</td>
<td>71</td>
</tr>
<tr>
<td>5. My aim of life is to make long records of successful achievements</td>
<td>32</td>
</tr>
<tr>
<td>6. I often desire to be successful in doing something very significant</td>
<td>44</td>
</tr>
<tr>
<td>7. I am of the opinion that for pleasure and happiness one must enrich the records of one achievement</td>
<td>65</td>
</tr>
<tr>
<td>8. I want to know how much I can be successful to whatever I undertake</td>
<td>21</td>
</tr>
<tr>
<td>9. I like to think of my future career</td>
<td>56</td>
</tr>
<tr>
<td>10. I believe that it is possible for me to be recognized authority</td>
<td>12</td>
</tr>
<tr>
<td>11. I frequently desire to do something of great significance</td>
<td>30</td>
</tr>
<tr>
<td>12. I am very serious about being great man in my job or profession</td>
<td>14</td>
</tr>
<tr>
<td>Items</td>
<td>Factors</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>13. I consider myself better than those who do not have any aim in life</td>
<td>27</td>
</tr>
<tr>
<td>14. I will be very happy if I can do something very valuable</td>
<td>48</td>
</tr>
<tr>
<td>15. I like to praise those who have earned a reputation in their own field</td>
<td>48</td>
</tr>
<tr>
<td>16. In whatever work I undertake I like to do my very best</td>
<td>53</td>
</tr>
<tr>
<td>17. I often desire to be successful in doing something very significant</td>
<td>14</td>
</tr>
<tr>
<td>18. I like to be a great authority in some job</td>
<td>19</td>
</tr>
<tr>
<td>19. I am always keen to fight for noble cause</td>
<td>30</td>
</tr>
<tr>
<td>20. I feel best when I am assigned a difficult job</td>
<td>25</td>
</tr>
<tr>
<td>21. I frequently aspire to be (a man with wonderful achievements)</td>
<td>23</td>
</tr>
<tr>
<td>22. I am happiest when successful in my work</td>
<td>50</td>
</tr>
<tr>
<td>23. I often think of accomplishing something great</td>
<td>39</td>
</tr>
<tr>
<td>24. I like to be able to do things better than others</td>
<td>61</td>
</tr>
<tr>
<td>25. I feel unhappy when I fail to do my best in the examination</td>
<td>30</td>
</tr>
<tr>
<td>26. My secret ambition in life is to establish a glorious record of achievement</td>
<td>48</td>
</tr>
<tr>
<td>27. I like to do something which others hardly do</td>
<td>24</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>28.</td>
<td>It gives me great satisfaction to undertake very difficult tasks</td>
</tr>
<tr>
<td>29.</td>
<td>In most social situations I try to seek other's attention</td>
</tr>
<tr>
<td>30.</td>
<td>What I want most in my life is to do something requiring effort</td>
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<td>I like others to think of me as industrious</td>
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<tr>
<td>32.</td>
<td>In judging my merit, I believe that my grades were not an index of my work</td>
</tr>
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<td>33.</td>
<td>I wish the atmosphere in my home were more congenial to study</td>
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<td>I am quite punctual and never late for work, school, appointment, etc.</td>
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<td>I am always careful to do my best in whatever I undertake</td>
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<td>36.</td>
<td>I have a great tendency to continue a work till it is finished</td>
</tr>
<tr>
<td>37.</td>
<td>Before starting a difficult task I would plan its details</td>
</tr>
<tr>
<td>38.</td>
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</tr>
<tr>
<td>39.</td>
<td>In general I might be described as optimistic</td>
</tr>
<tr>
<td>40.</td>
<td>I take pains to overcome obstacles and attain a high standard</td>
</tr>
<tr>
<td>Items</td>
<td>Factors</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>41. I am often tempted to undertake very difficult tasks</td>
<td>56</td>
</tr>
<tr>
<td>42. I am sure that after ten years I will be recognised authority in my field</td>
<td>37</td>
</tr>
<tr>
<td>43. I am morally upright person</td>
<td>-65</td>
</tr>
<tr>
<td>44. I enjoy a long spell of continuous activity to solve a difficult problem</td>
<td>62</td>
</tr>
<tr>
<td>45. I feel happy when I have finished successfully a difficult task</td>
<td>-57</td>
</tr>
<tr>
<td>46. I prefer difficult tasks to easy ones</td>
<td>53</td>
</tr>
<tr>
<td>47. I avoid those situations which are not competitive</td>
<td>27</td>
</tr>
<tr>
<td>48. I feel upset when I fail to reach desired goal</td>
<td>-39</td>
</tr>
<tr>
<td>49. I believe that my future depends upon my doing some notable work</td>
<td>-39</td>
</tr>
<tr>
<td>50. I would like to solve very difficult puzzles and quizzes</td>
<td>15</td>
</tr>
</tbody>
</table>

* Decimals have been omitted for factor loadings*
In the rotated factor matrix not only the factor loadings changed, but the position of some of the items shifted from one group of items to another. Factor 1 emerged from items to feel best when assigned a difficult task; to be punctual; to be optimistic; taking pains to overcome obstacles; temptation to undertake difficult tasks; enjoyment in continual tasks; preference for difficult tasks and avoiding uncompetitive situations. Items to feel best when assigned difficult task; to be punctual; to be optimistic; avoiding uncompetitive situations, did not contribute significantly. The factor loadings on items temptation to undertake difficult tasks; enjoyment in continual tasks and preference for difficult tasks had relatively higher significant values in rotated factor matrix. Item taking pains in overcoming obstacles contributed significantly in both rotated as well as unrotated factor matrix. These items reflected an individual's involvement and commitment to work, and might be identified as 'Sense of devotion to work'.

This factor was somewhat similar to Mukherjee's factor 5 in that there was similarity of some items in the two factors (items of punctuality, to under-
take difficult tasks; preference for difficult tasks; and enjoyment in continual work), but differed in the sense that it included items to feel beat when assigned difficult tasks; optimistic tendency; taking pains to overcome difficult tasks and avoiding uncompetitive situations.

Items to be successful in work; to feel unhappy in doing something valuable; morally upright; to feel happy in finishing successful and difficult tasks; and to believe that future depends upon doing notable work contributed to factor 2. Items to be successful in work and to feel unhappy in doing something valuable did not contribute significantly in unrotated as well as rotated factor matrix. Except one item (to be successful in work), this factor had group of negative items. The factor loadings on two items to be morally upright; and to feel happy in finishing successful and difficult tasks, had changed from low to high factor loadings on rotation. These items concerned with pleasure an individual derived from different things. This factor had been interpreted as 'Determination vs. fantasy'.

This factor had little similarity to factor 7 of Mukherjee as it contained 2 common items to feel un-
HA happy in doing something valuable and to believe that future depends upon doing notable tasks. Some other items included in the present analysis were desire to know how to be successful; to be morally upright person; and happiness in doing difficult tasks which indicated students' desire for happiness.

Items of desire to be successful in doing difficult jobs; to be successful in doing something very significant; to be recognized authority; to do something of great significance; to fight for noble cause; to feel happy in successful work; thinking of accomplishing something; like to do things better than others; to feel unhappy when fail to do best in the examination; like to do something which others hardly do; to be industrious; and to solve difficult puzzles were included in factor 3.

Item to be successful in doing difficult jobs had changed from high significant in unrotated to low insignificant value in the rotated matrix. The factor loading of item accomplishing something significant changed from high to low significant value in rotated factor matrix. There was shift in position of items to do things better than others; and to solve difficult problems from one group of items to another. The factor loadings of items desire to be successful in
doing something significant; to do difficult tasks and to do things better than others had changed from low values in unrotated matrix to high significant in rotated factor matrix. All these items emphasized an individual's desire to become a successful authority, and might be identified as 'Identification with successful authority'.

This factor was similar to Mukherjee's factor 1. The common items in the two analyses were items of desire to be successful in doing difficult tasks; to feel happy in doing difficult jobs; thinking of accomplishing something significant; and to do better than others. All these items referred to an individual's desire to be successful authority by doing something significant and to do better than others.

Factor 4 included items of desire to be successful in doing something very significant; to establish a record of achievement; satisfaction in undertaking difficult tasks; to do something requiring efforts; to do best in activities; and to be recognized authority. Except one item, desire to be successful in doing something very significant, all other items contributed significantly to factor 4. The value of this item was significant in the unrotated factor matrix.
The position of items to be recognized authority had shifted from factor 6 in the unrotated matrix to factor 4 in the rotated factor matrix. The factor loadings on items - to do best in activities and to be recognized authority had changed from low to high significant factor loadings after rotation. All these items emphasized the desire to gain self respect by establishing record of achievement. This factor might be named as 'Maintenance for self-respect'.

This factor was similar to Mukherjee's factor 6(b). The common items were the aim of life to establish a record of achievements and to be recognized authority.

Items of doing things better than others; desire to excel others; to think of future and wish to have congenial atmosphere to study at home were found clustered under one factor. The factor loadings of items of desire to excel others; and to think of future had changed from low in the unrotated matrix to high significant in rotated factor matrix. There was a shift in item wish to have congenial atmosphere to study at home from factor 6 in unrotated factor matrix to factor 5 in the rotated factor matrix. This factor might be interpreted as 'Conscious fear of failure'.

This factor was similar to Mukherjea's factor 6(a), even though the only item common to both the analysis was wish to have congenial atmosphere to study at home. Items of doing best in work; to make long records of successful achievements; to enrich the records of one's achievements; to be great man; to feel happy in doing valuable work; to praise for reputed person; to be great authority; aspire to be man with wonderful achievements; and tendency to continue a work till it is finished, crystallized in one independent factor. Items to do best in work; to make long records of successful achievements; to enrich the records of achievements; and to praise reputed person contributed significantly to factor 6. Items to do best in work; to make records of successful achievements; to enrich the records of one's achievement; to do valuable tasks; to praise reputed person had significant factor loadings in the rotated matrix. These items largely focussed on sentiments and feelings. This factor had been interpreted as 'Ego ideals'.

This factor had similarity to Mukherjea's factor 2. Two items (to do best in work; and desire to be great authority) were common. Different from Mukherjea's analysis included items to have records of achievements; to be great man; to praise for reputed person; aspiration
for wonderful achievements and tendency to continue work till it is finished.

Factor 7 was completely different from Mukherjee.

This emerged from items - to consider better than those who do not have aim in life; to do best in work; to seek other's attention; to believe that grades were not fair index to judge one's work; to plan the work; and anxious to do something of great significance.

Items to do best in work; to believe that grades were not fair index to judge one's work; to plan the work; and anxious to do something of great significance contributed significantly to this factor. Items to believe that grades were not a fair index to judge one's work and anxious to do something of great significance in unrotated matrix had changed from low values in unrotated matrix to significant ones in rotated factor matrix. The position of item to plan the work shifted from factor 4 to factor 7 though remained significant.

An individual's desire to do better than others and successful completion of tasks emerged as the crux of items. This factor might be identified as 'Success in achievement'.

An overall view of the factor analysis of achievement values indicated that out of 46 items in the scale only 14 items were similar to Mukherjee's analysis, in
order of appearance under different factors. In Mukherjee's analysis 9 items did not appear at all.

3.4.3 FACTORS IN PERSONALITY ORIENTATION

The factor analysis of Machiavellian scale of personality orientation resulted into 5 factors against four factors in Geis analysis. Those factors together explained 40% of total variance. Only one item, generally speaking men would not work hard unless and they are forced to do so did not contribute significantly. The unrotated factor matrix had been included in Table 12.
TABLE 5.12: THE UNROTATED MATRIX FOR PERSONALITY ORIENTATION SCALE

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Most men forget more easily the death of their father than the loss of their property</td>
<td>50</td>
</tr>
<tr>
<td>2. People suffering from incurable diseases should have the choice of being put painlessly to death</td>
<td>46</td>
</tr>
<tr>
<td>3. Never tell anyone the real reason you did something unless it is useful to do so</td>
<td>39</td>
</tr>
<tr>
<td>4. The best way to handle people is to tell them what they want to hear</td>
<td>30</td>
</tr>
<tr>
<td>5. Most people are basically good and kind</td>
<td>41</td>
</tr>
<tr>
<td>6. Most people who get ahead in the world lead clean moral lives</td>
<td>32</td>
</tr>
<tr>
<td>7. When you ask someone to do something, it is best to give the real reasons for wanting it rather than giving reasons which might carry more weight</td>
<td>49</td>
</tr>
<tr>
<td>8. One should take action only when sure it is morally right</td>
<td>35</td>
</tr>
<tr>
<td>9. It is wise to flatter important people</td>
<td>53</td>
</tr>
<tr>
<td>10. The biggest difference between most criminals and other people is that criminals are stupid enough to get caught</td>
<td>31</td>
</tr>
<tr>
<td>11. All in all, it is better to be humble and honest than to be important and dishonest</td>
<td>44</td>
</tr>
<tr>
<td>12. There is no excuse for lying to someone else</td>
<td>31</td>
</tr>
<tr>
<td>Items</td>
<td>Factors</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>13. Generally speaking, men would not work hard unless they are forced to do so</td>
<td>28</td>
</tr>
<tr>
<td>14. Most men are brave</td>
<td>42</td>
</tr>
<tr>
<td>15. It is hard to get ahead without cutting corners here and there</td>
<td>44</td>
</tr>
<tr>
<td>16. Honesty is the best policy in all cases</td>
<td>46</td>
</tr>
<tr>
<td>17. It is possible to be good in all respects</td>
<td>57</td>
</tr>
<tr>
<td>18. Barnum was probably right when he said that there is at least one sucker born every minute</td>
<td>33</td>
</tr>
<tr>
<td>19. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance</td>
<td>45</td>
</tr>
<tr>
<td>20. Anyone who completely trusts anyone else is asking for trouble</td>
<td>51</td>
</tr>
</tbody>
</table>

**EIGENVALUE**

| 4.56 | 2.63 | 2.08 | 1.80 | 1.41 |

**PERCENTAGE OF VARIANCE**

| 21.8% | 7.0% | 5.3% | 3.6% | 2.0% |

*Decimals have been omitted for factor loadings*
The rotated matrix shown below indicated that few items had changed position after rotation. Some of the low values in unrotated matrix had changed into high values. Items like biggest difference between most criminals and other people is that criminals are stupid enough to get caught; never tell anyone the real reason unless it is important to do so; the best way to handle people is to tell them what they want to hear; and it is hard to get ahead without cutting corners here and there, did not contribute significantly.
**TABLE 5.13 ROTATED FACTOR MATRIX FOR PERSONALITY ORIENTATION SCALE**

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Most men forget more easily the death of their father than</td>
<td>49</td>
</tr>
<tr>
<td>the loss of their property</td>
<td></td>
</tr>
<tr>
<td>2. People suffering from incurable diseases should have the choice</td>
<td>61</td>
</tr>
<tr>
<td>of being put painlessly to death</td>
<td></td>
</tr>
<tr>
<td>3. Never tell anyone the real reason you did something unless it is</td>
<td>27</td>
</tr>
<tr>
<td>useful to do so</td>
<td></td>
</tr>
<tr>
<td>4. The best way to handle people is to tell them what they want to</td>
<td>27</td>
</tr>
<tr>
<td>hear</td>
<td></td>
</tr>
<tr>
<td>5. Most people are basically good and kind</td>
<td>36</td>
</tr>
<tr>
<td>6. Most people who get ahead in the world lead clear, moral lives</td>
<td>47</td>
</tr>
<tr>
<td>7. When you ask someone to do something, it is best to give the real</td>
<td>64</td>
</tr>
<tr>
<td>reason for wanting it rather than giving reasons which might carry</td>
<td></td>
</tr>
<tr>
<td>more weight</td>
<td></td>
</tr>
<tr>
<td>8. One should take action only when sure it is morally right</td>
<td>92</td>
</tr>
<tr>
<td>9. It is wise to flatter important people</td>
<td>51</td>
</tr>
<tr>
<td>10. The biggest difference between most criminals and other people</td>
<td>22</td>
</tr>
<tr>
<td>is that criminals are stupid enough to get caught</td>
<td></td>
</tr>
<tr>
<td>11. All in all, it is better to be humble and honest than to be</td>
<td>70</td>
</tr>
<tr>
<td>important and dishonest</td>
<td></td>
</tr>
<tr>
<td>12. There is no excuse for lying to someone else</td>
<td>46</td>
</tr>
<tr>
<td>Items</td>
<td>Factors</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>13. Generally speaking, men would not work hard unless they are forced to do so</td>
<td>50</td>
</tr>
<tr>
<td>14. Most men are brave</td>
<td>61</td>
</tr>
<tr>
<td>15. It is hard to get ahead without cutting corners here and there</td>
<td>17</td>
</tr>
<tr>
<td>16. Honesty is the best policy in all cases</td>
<td>42</td>
</tr>
<tr>
<td>17. It is possible to be good in all respects</td>
<td>49</td>
</tr>
<tr>
<td>18. Barnum was probably right when he said that there is at least one sucker born every minute</td>
<td>35</td>
</tr>
<tr>
<td>19. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance</td>
<td>67</td>
</tr>
<tr>
<td>20. Anyone who completely trusts anyone else is asking for trouble</td>
<td>68</td>
</tr>
</tbody>
</table>

* Decimals have been omitted for factor loadings
The first factor had items like most men forget more easily the death of their father than the loss of their property; people suffering from incurable diseases should be put painlessly to death; most people who get ahead in the world lead clear, moral lives; and the biggest difference between the most criminals and other people is that criminals are stupid enough to get caught. Item the best way to handle people is to tell them what they want to hear included in the unrotated matrix was excluded after rotation. One more item, biggest difference between people and criminals is that criminals are stupid enough to get caught contained in rotated matrix under factor 1 contributed significantly. This particular item was close logically to other items of factor 1. These items characterized the trait of irrational and rebellious orientations toward conventional and societal norms. This factor explained approximately 22% of variance and might be interpreted as 'Traditional-moralism'.

This factor contained only one item common to factor 4 of Geis (item of people suffering from incurable disease should be put to death painlessly).

Factor 2 emerged from items it is hard to get ahead without cutting corners here and there; honesty
is the best policy in all cases; it is possible to be good in all respects; it is safest to assume that all people have a vicious streak and it will come out when they are given a chance; and anyone who completely trusts anyone else is asking for trouble. Except one item it is hard to get ahead without cutting corners here and there, all other items contributed significantly. This particular item had significant value under factor 2 in unrotated matrix. These items appeared to emphasize weak ego controls of persons coupled with an ill structured cognitive orientation toward social issue. This factor might be interpreted as 'Affirmative-negativism'.

This factor was similar to factor 2 of Geis in that it contained common items - it is hard to get ahead without cutting corners here and there; to believe that people have vicious streak; and anyone who completely trusts others asking for trouble. This factor did not include some of the items (included by Geis) like men would not work unless they are forced to do so; stupidity of criminal behaviour; never tell anyone the real reason unless it is useful to do so; and most men forget the death of their father than loss of their property.

Items never tell anyone the real reason unless it is useful to do so; the best way to handle people
is to tell them what they want to hear; most people are basically good and kind; it is best to give real reasons for wanting it rather than giving reasons which might carry more weights; and it is wise to flatter important people were grouped under this factor. Two items: never tell anyone the real reason unless it is useful to do so and the best way to handle people is to tell them what they want to hear had significant values in factor 1 and factor 3 in unrotated matrix. One more item one should take action only when sure it is morally right appearing in unrotated factor matrix was excluded after rotation. These items emphasized interpersonal candor or lack of it. Therefore, this factor might be named as 'Duplicity'.

This factor was similar to factor 3 of Geis. Common items in the analysis were flattery important people, best way to handle people to tell them what they want to hear; and it is best to give the real reasons for wanting it rather than giving reasons which might carry more weights. Geis additionally included items of honesty is best policy; there is no excuse for telling lies; it is better to be honest and humble; and taking action when it is morally right. Those items did not appear in the present analysis.
The two items it is better to be humble and honest than to be important and dishonest; and most men are brave led to the emergence of this factor explaining over 3% variance. Both the items contributed significantly in the positive direction. Both the items appeared to focus on the trait of distrust among people. This factor might be interpreted as 'Distrust in people'. This factor was close to factor 3 of Geis, in that it had one common item - most men are brave.

Items - one should take action when sure it is morally right; there is no excuse for lying to someone else; generally speaking, men would not work unless they are forced to do so; and Barnum was probably right when he said that there is at least one sucker born after every minute, contributed significantly to factor 5.

Items - one should take action only when sure it is morally right and Barnum was right when he said that there is at least one sucker born after every minute emerged in factor 5 only in the rotated matrix. Items characterised the individual's way of behaving, and it might be labelled as 'Discipline orientation'. This factor did not appear in Geis factor analysis.

In the present analysis only 8 items emerged in the order of Geis. This similarity though little
indicated that whatever congruence between the two factorial structure was noted was because of the two samples being college students. College students may possess some general attitudes. The differences may be attributed largely to the two settings.

5.5 INTERRELATIONSHIPS OF VARIOUS PERSONAL FACTORS

The intercorrelations matrix for factors of demographic characteristics; achievement values and personality orientation were included in Table 14.
<table>
<thead>
<tr>
<th></th>
<th>PES</th>
<th>FOI</th>
<th>DW</th>
<th>DF</th>
<th>IA</th>
<th>MSR</th>
<th>CFF</th>
<th>EI</th>
<th>Ach</th>
<th>TM</th>
<th>AN</th>
<th>D</th>
<th>DP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent's educational status</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father's occupation and income status</td>
<td>.30°</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sense of devotion to work</td>
<td>.05</td>
<td>.01</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determination vs. fantasy</td>
<td>.01</td>
<td>.04</td>
<td>.18°</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification with successful authority</td>
<td>.09</td>
<td>.04</td>
<td>.19°</td>
<td>.16°</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance for self-respect</td>
<td>.04</td>
<td>.01</td>
<td>.21°</td>
<td>.15°</td>
<td>.22°</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conscious fear of failure</td>
<td>.01</td>
<td>.01</td>
<td>.12</td>
<td>.09</td>
<td>.12</td>
<td>.06</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ego ideals</td>
<td>.08</td>
<td>.05</td>
<td>.18°</td>
<td>.01</td>
<td>.34°</td>
<td>.20°</td>
<td>.15°</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sense of achievement</td>
<td>.02</td>
<td>.10</td>
<td>.16°</td>
<td>.08</td>
<td>.12</td>
<td>.17°</td>
<td>.04</td>
<td>.13</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional-moralism</td>
<td>.04</td>
<td>.02</td>
<td>.02</td>
<td>.01</td>
<td>.00</td>
<td>.03</td>
<td>.03</td>
<td>.02</td>
<td>-.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affirmative-negativism</td>
<td>-.03</td>
<td>.08</td>
<td>.13</td>
<td>.06</td>
<td>.07</td>
<td>.11</td>
<td>.06</td>
<td>-.01</td>
<td>.09</td>
<td>.07</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplicity</td>
<td>-.02</td>
<td>.01</td>
<td>.06</td>
<td>.03</td>
<td>.07</td>
<td>.02</td>
<td>.03</td>
<td>.07</td>
<td>-.01</td>
<td>.01</td>
<td>.01</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Distrust in people</td>
<td>-.07</td>
<td>-.00</td>
<td>.04</td>
<td>.04</td>
<td>-.01</td>
<td>-.01</td>
<td>.02</td>
<td>.01</td>
<td>-.00</td>
<td>.13</td>
<td>.00</td>
<td>.01</td>
<td>1.00</td>
</tr>
<tr>
<td>Discipline orientation</td>
<td>.08</td>
<td>.04</td>
<td>.13</td>
<td>.00</td>
<td>.15°</td>
<td>.07</td>
<td>.03</td>
<td>.10</td>
<td>.10</td>
<td>.19°</td>
<td>.08</td>
<td>.05</td>
<td>.12</td>
</tr>
</tbody>
</table>

PES: Parent's educational status; FOI: Father's occupation and income status; DW: Sense of devotion to work; DF: Determination vs. fantasy; IA: Identification with authority; MSR: Maintenance for self-respect; CFF: Conscious fear of failure; EI: Ego ideals; Ach: Sense of achievement; TM: Traditional-moralism; AN: Affirmative-negativism; D: Duplicity; DP: Distrust in people; DS: Discipline orientation.

* r is significant above 5 per cent level.
Results indicated a significant correlation between parent's education and father's occupation and income status, implying that the two affected each other. None of these two factors correlated significantly with factors of achievement values and personality orientation. This was somewhat strange and difficult to interpret in any other way than to say that family's influences decreased by the time students reached college. Correlations among factors of achievement values were positive and significant in many cases, suggesting interdependence. The correlations between ego ideals and determination vs fantasy and achievement and conscious fear of failure were rather low.

The correlations among most of the personality orientation were insignificant. Factor of distrust in people correlated significantly with traditional-moralism and discipline orientation. The factors of discipline orientation and traditional moralism were also interrelated. Some of the factors of achievement values correlated insignificantly with personality orientation and this was expected. One's determination to achieve at a particular level definitely had an impact on his personality.
5.6 FACTORS IN THE SATISFACTION

The factor analysis of satisfaction data indicated that one factor emerged from the five items: overall training in college; overall student life; meeting goals in terms of job or doing further studies; meeting personal and social needs and expectations; and training in specific courses. All the items had high positive factor loadings on one single factor extracted. The eigenvalue for this factor was 1.90 which accounted for only 4% of the variance.

This matrix was not rotated, since it contained only 1 Principal Component. This suggested that satisfaction operated and can be measured in the form of one crystallized variable. Levine and Weitz (1968), and Hubert, Holley and Armanakie (1974) had also observed the overall satisfaction emerging as one single factor.
### TABLE 5.15: FACTOR-MATRIX FOR OVERALL SATISFACTION SCALE

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall training in college</td>
<td>70</td>
</tr>
<tr>
<td>2. Preparation to meet goals either in terms of job and doing further studies</td>
<td>64</td>
</tr>
<tr>
<td>3. Overall student life</td>
<td>65</td>
</tr>
<tr>
<td>4. Meeting personal and social needs and expectations</td>
<td>47</td>
</tr>
<tr>
<td>5. Training in specific course</td>
<td>60</td>
</tr>
</tbody>
</table>

**Eigenvalue**  
1.90

**Percentage of Variance**  
3.6%

*Decimals have been omitted for factor loadings.*
5.7 StePWISE Regression Analysis

Stepwise regression analysis was done to predict academic satisfaction and performance separately, using factors in the content, context and personal domain in various combinations.

5.7.1 DEPENDENT VARIABLE: ACADEMIC SATISFACTION

Table 16 included results of analysis using various factors of content in the regression model.

**Table 5.16: Regression Variables: Factors of Content**

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>( \beta )</th>
<th>( R^2 )</th>
<th>( \Delta R^2 )</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>.41</td>
<td>.17</td>
<td>.00</td>
<td>249.30</td>
<td>11</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC</td>
<td>.51</td>
<td>.26</td>
<td>.09</td>
<td>141.88</td>
<td>1199</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, Po, R</td>
<td>.53</td>
<td>.28</td>
<td>.02</td>
<td>79.54</td>
<td>1199</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CS = Cognitive skills; EI = Education itself; TC = Teacher competence; NCS = Non-cognitive skills; Po = Personal growth; R = Recognition.

The results indicated that cognitive skills alone explained 17% of variance. After two more variables education itself and teacher competence were included in the equation there was significant increase of 3.39 in \( R^2 \). Apparently, the three variables together, cognitive skills, education itself and teacher competence,
had significant impact upon academic satisfaction to the extent of explaining 26% of variance.

When these factors were further entered with factors of non-cognitive skills, personal growth and recognition increase in $R^2$ was negligible. The normalized beta coefficients suggested that the relative contribution of teacher competence was maximum (0.3588) followed by cognitive skills (0.2234) and recognition (0.1478) all significant above 1 per cent. This suggested that the faculty variable was a major factor in promoting students' academic satisfaction. The provision of challenging courses and encouragement by teachers and students emerged as secondary forces in enhancing students' satisfaction.

The use of different sets of context factors in the regression equation revealed that these could explain maximally 26% of variance (Table 17).

**TABLE 5.17: REGRESSION VARIABLES: FACTORS OF CONTEXT**

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$F$</th>
<th>$df$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP</td>
<td>.26</td>
<td>.07</td>
<td>.00</td>
<td>87.48</td>
<td>1199,1</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S</td>
<td>.43</td>
<td>.18</td>
<td>.11</td>
<td>93.68</td>
<td>1199,2</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S, JO, IR</td>
<td>.51</td>
<td>.26</td>
<td>.08</td>
<td>84.50</td>
<td>1199,4</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CP = College policies and practices; CE = College environment; S = Status; JO = Job opportunities; IR = Interpersonal relationships.
College policies and practices explained 7 per cent of variance. When college policies and practices was entered with factors of college environment and status, these accounted for 18 per cent of variance. There was a significant increase in $R^2$ to the extent of .11 when these variables were further entered with interpersonal relationships and job opportunities. These together explained 26 per cent of variance.

The obtained beta coefficients suggested that in terms of the relative contribution of independent variables, interpersonal relationships predicted maximum (.3715) followed by status (.2988), college environment (.2252) and college policies and practices (.1628), all significant above 1 per cent level. The beta coefficient for job opportunities was not significant. This explained a marginal concern of students for their future career, in enhancing their academic satisfaction as compared to healthy interpersonal relationships with teachers and physical setting of college.

The combined entry of factors of content and context revealed a significant improvement in the predictive efficiency of the equation as shown below in Table 18.
TABLE 5.18: REGRSSHON VARIABLES: FACTORS OF CONTENT AND CONTEXT

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>R</th>
<th>R^2</th>
<th>ΔR^2</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS, CP</td>
<td>.45</td>
<td>.20</td>
<td>.03</td>
<td>152.31</td>
<td>1199</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, CP, CE, S</td>
<td>.56</td>
<td>.33</td>
<td>.10</td>
<td>92.48</td>
<td>1199.5</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, MCS, CP, CE, S, J0</td>
<td>.58</td>
<td>.34</td>
<td>.04</td>
<td>76.39</td>
<td>1199.7</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, MCS, PU, R, CP, CE, S, J0, IR</td>
<td>.59</td>
<td>.35</td>
<td>.01</td>
<td>56.45</td>
<td>1199.10</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CS = Cognitive skills; CP = College policies and practices; EI = Education itself; TC = Teacher competence; J0 = Job opportunities; IR = Interpersonal relationships; PU = Personal growth; S = Status; MCS = Non-cognitive skills; R = Recognition; CE = College environment.

Results showed that cognitive skills and college policies explained together the maximum proportion of variance in academic satisfaction. When two more content factors (education itself and teacher competence) and two more context factors (college environment and status) were also entered, R increased significantly and explained 33% of variance. Non-cognitive skills, personal growth, recognition, job opportunities, and interpersonal relationships led to marginal increase in the value of R^2.
The combination of content and context factors revealed that the teacher competence ($\beta = 0.2812$) and college policies and practices ($\beta = 0.2536$) were the most significant predictors of academic satisfaction. It seemed that satisfaction was a function of both content and context factors. Teacher competence could be enhanced by formulating congenial college policies.

Factors of demographic characteristics, achievement values and personality orientation when entered into regression equation to predict academic satisfaction, showed quite unexpected findings, as presented in Table 19.
Table 19 indicated that no set of personal factors helped to predict academic satisfaction significantly.

The use of combined set of factors of content and person showed an increased predictive efficiency of the regression equation (Table 20).
### Table 5.20: Regression Variables: Personal and Context Factors

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS, EI, TC, NCS, PG, R, PE5, FDI</td>
<td>.54</td>
<td>.29</td>
<td>.00</td>
<td>53.87</td>
<td>1199.7</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, PG, R, PE5, FDI, Dw, DF, IA, 4SR, CFF, EI, Ach</td>
<td>.54</td>
<td>.29</td>
<td>.00</td>
<td>31.98</td>
<td>1199.14</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, PG, R, PE5, FDI, Dw, DF, IA, 4SR, CFF, EI, Ach, TM, AN, J, DP, CO</td>
<td>.54</td>
<td>.29</td>
<td>.00</td>
<td>26.73</td>
<td>1199.7</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, PG, R, PE5, FDI, Dw, DF, IA, 4SR, CFF, EI, Ach, TM, AN, J, DP, CO</td>
<td>.54</td>
<td>.29</td>
<td>.00</td>
<td>25.31</td>
<td>1199.19</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CS = Cognitive skills; EI = Education itself; NCS = Non-cognitive skills; PG = Personal growth; R = Recognition; PE5 = Parent educational status; FDI = Father's occupation and income status; Dw = Sense of devotion to work; DF = Determination vs. fantasy; IA = Identification with authority; 4SR = Maintenance for self-respect; CFF = Conscious fear of failure; EI = Ego ideals; Ach. Sense of achievement; TM = Traditional moralism; AN = Affirmative negativism; J = Duplicity; DP = Distrust in people; CO = Discipline orientation.
Content factors when entered with demographic characteristics explained 29 per cent of variance. This represented an improvement in prediction than when only one set of factors was used. A further addition of factors of achievement values and personality orientation did not cause an increase in $R^2$. In terms of beta coefficients teacher competence contributed maximally ($\beta = 0.3534$), followed by education itself ($\beta = 0.2146$), cognitive skills ($\beta = 0.1886$), all significant above 1 per cent. The beta coefficients for personal factors remained very low.

The combination of set of personal factors along with factors of context did not show any improvement over the predictive efficiency of factors of context (Table 21).
TABLE 5.21: REGRESSION VARIABLES: PERSONAL AND CONTEXT FACTORS

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>R</th>
<th>R²</th>
<th>ΔR²</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP, CE, S, JO, IR, PES, FOI</td>
<td>.51</td>
<td>.26</td>
<td>.00</td>
<td>63.91</td>
<td>1199.6</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S, JO, IR, PES, FOI, DW, DF, IA, 4SR, CFF, EI, Ach</td>
<td>.52</td>
<td>.27</td>
<td>.01</td>
<td>30.60</td>
<td>1199.13</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S, JO, IR, DF, IA, 4SR, CFF, EI, Ach, T4, AN, D, DP, DO</td>
<td>.51</td>
<td>.26</td>
<td>.01</td>
<td>23.72</td>
<td>1199.16</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S, JO, IR, PES, FOI, DW, DF, IA, 4SR, CFF, EI, Ach, T4, AN, D, DP, DO</td>
<td>.52</td>
<td>.27</td>
<td>.01</td>
<td>21.52</td>
<td>1199.18</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CP = College policies and practices; CE = College environment; S = Status; JO = Job opportunities; IR = Interpersonal relationships; PES = Parent's educational status; FOI = Father's occupation and income status; DW = Sense of devotion to work; DF = Determination vs. fantasy; IA = Identification with authority; 4SR = Maintenance for self-respect; CFF = Conscious fear of failure; EI = Ego ideals; Ach = Sense of achievement; T4 = Traditional moralism; AN = Affirmative Negativism; D = Suplicity; DP = Distrust in people; DO = Discipline orientation.

The results showed that context factors when entered with demographic characteristics, these account-
ed for 26 per cent of variance. The contribution of factors of achievement values and personality orientation in increasing $R^2$ was negligible.

In terms of beta coefficients interpersonal relationships had the highest weight (0.4873) followed by status (0.3726), both significant above 1 per cent. This suggested that cooperative relationship among teachers and students and students' participation in social activities were important in determining their satisfaction. Different background orientations did not affect the academic satisfaction.

Table 27 showed that all content, context and personal factors when entered together predicted satisfaction significantly.

**TABLE 5.22: REGRESSION VARIABLES: FACTORS OF CONTENT, CONTEXT AND PERSONAL**

<table>
<thead>
<tr>
<th>Regression variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS, EI, TC, NG, PG,</td>
<td>.60</td>
<td>.36</td>
<td>24.71</td>
<td>1199,24</td>
<td>.01**</td>
</tr>
<tr>
<td>R, P, CE, S, JD, IA, PI, FRI, JF,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EF, IA, WSR, CFF, EI, Ach, T, AN,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J, DP, DO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CS = Cognitive skills; EI = Education itself; TC = Teacher competence; NG = Non-cognitive skills; PG = Personal growth; R = Recognition; CP = College policies and practices; CE = College environment; S = Status; DO = Job opportunities; IA = Interpersonal relationships; PI = Parents educational status; FRI = Father's occupation and income status; J = Sense of devotion to work; EF = Determination vs. fantasy; IA = Identification with authority; WSR = Maintenance for self-respect; CFF = Conscious fear of failure; EI = Cog ideales; Ach. = Sense of achievement; T = Traditional values; AF = Affirmative negativism; J = Duplicity; DP = Distrust in people; I = Discipline orientation.
A combination of three sets of factors accounted for 36 per cent of total variance. \( F \) was found to be significant above 1 per cent. The beta coefficients for the different factors indicated that increased satisfaction resulted mainly from content and context factors as compared to personal factors. The beta coefficients for teacher competence and interpersonal relationships were (0.3981) and (0.3153). Personal factors showed low beta values. This indicated that content factors in the presence of good context promoted more satisfaction irrespective of students background characteristics or personality orientation.

Table 23 included results of regression analysis using factors of content, context and person and performance score (Table 23).
<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>R</th>
<th>R²</th>
<th>ΔR²</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS, EI, TC, NCS, PG, R, P</td>
<td>.53</td>
<td>.28</td>
<td>.00</td>
<td>68.17</td>
<td>1199,6</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S, JO, IR, P</td>
<td>.51</td>
<td>.26</td>
<td>.02</td>
<td>70.36</td>
<td>1199,6</td>
<td>.01**</td>
</tr>
<tr>
<td>PES, FUI, Dw, DF, IA, MSR, CFF, EI, Ach. TM, AN, D, DP, DO, P</td>
<td>.12</td>
<td>.01</td>
<td>.25</td>
<td>1.15</td>
<td>1199,14</td>
<td>N.S.</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, PG, R, CP, CE, S, JO, IR, PES, FOI, Dw, DF, IA, MSR, CFF, EI, Ach. TM, AN, D, DP, DO, P</td>
<td>.59</td>
<td>.35</td>
<td>.34</td>
<td>23.95</td>
<td>1199,25</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CS = Cognitive skills; EI = Education itself; TC = Teacher competence; NCS = Non-cognitive skills; PG = Personal growth; R = Recognition; CP = College policies and practices; CE = College environment; S = Status; JO = Job opportunities; IA = Interpersonal relationships; PES = Parent's educational status; FOI = Father's occupation and income status; Dw = Sense of devotion to work; DF = Determination vs. fantasy; IA = Identification with authority; MSR = Maintenance for self-respect; CFF = Conscious fear of failure; EI = Ego ideals; Ach. = Sense of achievement; TM = Traditional moralism; AN = Affirmative negativism; D = Duplicity; DP = Distrust in people; DO = Discipline orientation; P = Performance.

All content, context and personal factors when entered with performance score predicted satisfaction.
to the same extent as exclusive of performance, even though $F$ was found to be significant above 5 per cent level.

5.7.2 DEPENDENT VARIABLE: STUDENT PERFORMANCE

As expected, the use of student performance as the criterion showed a change in the predictability of factors of content (Table 24).

TABLE 5.24: REGRESSION VARIABLES: FACTORS OF CONTENT

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$R^2$</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>.11</td>
<td>.01</td>
<td>.00</td>
<td>16.43</td>
<td>1199,1</td>
<td>NS</td>
</tr>
<tr>
<td>CS, EI, TC</td>
<td>.13</td>
<td>.02</td>
<td>.01</td>
<td>6.47</td>
<td>1199,2</td>
<td>NS</td>
</tr>
<tr>
<td>CS, EI, TC, PG, NCS, R</td>
<td>.13</td>
<td>.02</td>
<td>.00</td>
<td>3.53</td>
<td>1199,5</td>
<td>NS</td>
</tr>
</tbody>
</table>

CS = Cognitive skills; EI = Education itself; TC = Teacher competence; PG = Personal growth; NCS = Non-cognitive skills; R = Recognition.

Cognitive skills did not predict performance significantly, while it did predict academic satisfaction. When cognitive skills were further entered with factors of education itself and teacher competence $R^2$ showed no significant increase.

Student performance appeared to be relatively better predicted by using factors of context (Table 25).
TABLE 5.25: REGRESSION VARIABLES: FACTORS OF CONTEXT

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>R</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP</td>
<td>.25</td>
<td>.06</td>
<td>.00</td>
<td>82.77</td>
<td>1199</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S</td>
<td>.25</td>
<td>.06</td>
<td>.00</td>
<td>27.59</td>
<td>1199,2</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S, JO, IR</td>
<td>.26</td>
<td>.06</td>
<td>.00</td>
<td>17.46</td>
<td>1199,5</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CP = College policies and practices; CE = College environment; S = Status; JO = Job opportunities; IR = Interpersonal relationships.

College policies and practices alone explained 6 per cent of variance. When college policies and practices were entered with factors of college environment and status $R$ remained almost same. The college policies and practices and job opportunities predicted maximally $\beta = 1.0840$ and $\beta = 0.4832$. This indicated that the evaluation and financial policies prevailing in the college was an important factor in influencing student performance. College policies determined the learning environment.

Table 26 showed that only one content factor (cognitive skills) and one context factor (college policies and practices) predicted performance significantly. These explained 6 per cent of variance. $F$ was found to be significant above 1 per cent level. When all content
and context factors were entered together there was only a negligible increase in $R^2$.

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>R</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS, CP</td>
<td>.26</td>
<td>.06</td>
<td>.00</td>
<td>44.02</td>
<td>1199.1</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, CP, CE, S</td>
<td>.27</td>
<td>.07</td>
<td>.01</td>
<td>15.01</td>
<td>1199.5</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, CP, CE, S, JO</td>
<td>.27</td>
<td>.07</td>
<td>.00</td>
<td>11.86</td>
<td>1199.7</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, PG, R, CP, CE, S, JO, IR</td>
<td>.27</td>
<td>.07</td>
<td>.00</td>
<td>8.74</td>
<td>1199.10</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CS = Cognitive skills; CP = College policies and practices; EI = Education itself; TC = Teacher competence; NCS = Non-cognitive skills; JO = Job opportunities; IR = Interpersonal relationships; PG = Personal growth; R = Recognition; CE = College environment; S = Status.

It appeared from the regression coefficients that when content factors were entered with context, it was context that preceded the content factors. The beta coefficients for college policies was (1.1070), job opportunities (0.4187), education itself (0.3237) and cognitive skills (0.2918). This implied that the effective functioning of content factors depended on
context. If the context was not conducive for learning the skills, students' performance will be adversely affected.

Interestingly, the predictability of personal factors in relation to student performance was noticeable (Table 27).

**Table 5.27: Regression Variables: Personal Factors**

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$F$</th>
<th>$df$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PES, FOI</td>
<td>.15</td>
<td>.02</td>
<td>.03</td>
<td>13.04</td>
<td>1199.1</td>
<td>.NS</td>
</tr>
<tr>
<td>PES, FOI, D</td>
<td>.24</td>
<td>.06</td>
<td>.04</td>
<td>5.37</td>
<td>1199.8</td>
<td>.01**</td>
</tr>
<tr>
<td>DF, IA, FSR, CFF, EI, Ach</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DV, UF, IA, FSR, CFF, EI, Ach, TM, AN, D, DP, DO</td>
<td>.23</td>
<td>.05</td>
<td>.01</td>
<td>5.38</td>
<td>1199.11</td>
<td>.01**</td>
</tr>
<tr>
<td>PES, FOI, TM</td>
<td>.24</td>
<td>.06</td>
<td>.01</td>
<td>10.38</td>
<td>1199.6</td>
<td>.01**</td>
</tr>
<tr>
<td>AN, D, DP, DO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PES, FOI, DV</td>
<td>.25</td>
<td>.06</td>
<td>.00</td>
<td>5.95</td>
<td>1199.13</td>
<td>.01**</td>
</tr>
<tr>
<td>DF, IA, FSR, CFF, EI, Ach</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TM, AN, J, DP, DO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PES = Parents' educational and economic status; FOI = Father's occupation and income status; DV = Sense of devotion to work; DF = Determination vs. fantasy; IA = Identification with authority; FSR = Maintenance for self-respect; CFF = Conscious fear of failure; EI = Ego ideals; Ach. = Sense of achievement; TM = Traditional moralism; AF = Affirmative negativism; D = Duplicity; DP = Distrust in people; DO = Discipline orientation.
Table 27 revealed that demographic characteristics did not predict performance significantly. However, the factors of achievement values when entered with personality orientation explained approximately 5 percent of variance. When these factors were reentered with demographic characteristics, there was a marginal increase in $R^2$. In terms of relative contribution of each personal variable, regression coefficients suggested that factors of conscious fear of failure (achievement value) contributed maximally $\beta = 0.5449$, followed by father's occupation and income (demographic characteristics) $\beta = 0.4775$, and discipline orientation $\beta = 0.4205$, significant above 1 percent. This implied that personal factors were directly responsible for students learning as these constituted the background of it. Academic motivation and home environment determined students' capability to perform successfully.

The inclusion of personal factors along with content improved the predictability of student performance (Table 28).
<table>
<thead>
<tr>
<th>Regression variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$df$</th>
<th>$df$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS, EI, TC, NCS, PG, R, PES, FOI</td>
<td>.20</td>
<td>.04</td>
<td>.00</td>
<td>6.22</td>
<td>1199.7</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, PG, R, PES, FOI, DW, DF, IA, HSR, CFF, EI, Ach.</td>
<td>.24</td>
<td>.05</td>
<td>.01</td>
<td>4.71</td>
<td>1199.14</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, PG, R, DW, DF, IA, HSR, CFF, EI, Ach. TM, AN, D, DP, DO</td>
<td>.25</td>
<td>.06</td>
<td>.01</td>
<td>4.55</td>
<td>1199.7</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, EI, TC, NCS, PG, R, PES, FOI, DW, DF, IA, HSR, CFF, EI, Ach. TM, AN, D, DP, DO</td>
<td>.28</td>
<td>.08</td>
<td>.02</td>
<td>5.11</td>
<td>1199.19</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CS = Cognitive skills; EI = Education itself; TC = Teacher competence; NCS = Non-cognitive skills; PG = Personal growth; R = Recognition; PES = Parent's educational status; FOI = Father's occupation and income status; DW = Sense of devotion to work; JF = Determination vs. fantasy; IA = Identification with authority; HSR = Maintenance for self-respect; CFF = Conscious fear of failure; EI = Ego ideals; Ach. = Sense of achievement; TM = Traditional moralism; AN = Affirmative negativism; D = Lulplicity; DP = Distrust in people; DO = Discipline orientation.

Table 28 indicated that content factors when entered with factors of demographic characteristics explained...
4 per cent of variance. When these factors were re-entered with factors of achievement values and personality orientation there was negligible increase in $R^2$. These accounted for 8 per cent of variance. $F$ was found to be significant above 1 per cent.

The personal factors of sense of achievement and father's occupation and income group predicted performance significantly $\beta = 0.4892$ and $\beta = 0.4816$ significant above 1 per cent. Content factors had lesser contribution as regression coefficients were low. This suggested that students' socio-economic conditions were important factors in determining their desire to learn and personality growth, which regulated their efforts to perform successfully.

Table 29 included results of stepwise regression analysis of student performance using factors of context and person as predictors (Table 29).
**TABLE 5.29: REGRESSION VARIABLES: FACTORS OF PERSON AND CONTEXT**

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP, CE, S, JO, IR, PES, FOI</td>
<td>.26</td>
<td>.07</td>
<td>.03</td>
<td>9.34</td>
<td>1199.6</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S, JO, IR, PES, FOI, DF, IA, RSA, CFF, EI, Ach.</td>
<td>.32</td>
<td>.10</td>
<td>.03</td>
<td>9.34</td>
<td>1199.13</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S, JO, IR, T, AN, D, DP, DO</td>
<td>.33</td>
<td>.11</td>
<td>.01</td>
<td>8.33</td>
<td>1199.16</td>
<td>.01**</td>
</tr>
<tr>
<td>CP, CE, S, JO, IR, PES, FOI, DF, IA, RSA, CFF, EI, Ach. , TM, AN, D, DP, DO</td>
<td>.34</td>
<td>.12</td>
<td>.01</td>
<td>8.25</td>
<td>1199.10</td>
<td>.01**</td>
</tr>
</tbody>
</table>

**CP** = College policies and practices; **CE** = College environment; **S** = Status; **JO** = Job opportunities; **IR** = Interpersonal relationships; **PES** = Parent educational status; **FOI** = Father's occupation and income status; **DF** = Sense of devotion to work; **IA** = Determination vs. fantasy; **RSA** = Identification with authority; **RSA** = Maintenance for self-respect; **CFF** = Sense of achievement; **EI** = Ego ideals; **Ach.** = Sense of achievement; **TM** = Traditional moralism; **AN** = Affirmative negativism; **D** = Duplicity; **DP** = Trust in people; **DO** = Discipline orientation.

The above results showed that context factors when entered with demographic characteristics explained 7 per cent of variance. A further centering of
these variables with factors of achievement values and personality orientation did not result in increased $R^2$.

College policies and job opportunities predicted better as compared to personal factors. The beta weights of college policies and practices; and job opportunities were $\beta = 0.9960$ and $\beta = 0.4875$, whereas traditional moralism and father's occupation and income status had $\beta = 0.3658$ and $\beta = 0.3296$. This indicated that college policies in terms of better procedures and proposals served as a motivational source for better performance.

Table 3.30 indicated that all content, context and personal factors explained 18 per cent of variance in performance. $F$ was found significant above 1 per cent level.

**TABLE 5.30: RESULTS OF STEPWISE REGRESSION ANALYSIS OF CONTENT, CONTEXT AND PERSONAL FACTORS WITH PERFORMANCE AS THE DEPENDENT VARIABLE**

<table>
<thead>
<tr>
<th>Regression variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS, EI, TC, NCS</td>
<td>.43</td>
<td>.18</td>
<td>6.60</td>
<td>1199.24</td>
<td>.01**</td>
</tr>
<tr>
<td>PG, R, CP, CE, S, JO, IR, PES, FOI, [Dw, DF, IA, 15R, CFF, EI, Ach, Tq, AN, D, DP, DO]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CS: Cognitive skills; EI: Education itself; TC: Teacher competence; NCS: Non-cognitive skills; PG: Personal growth; R: Recognition; CP: College policies and practices; CE: College environment; S: Status; JO: Job opportunities; IR: Interpersonal relationships; PES: Parent's educational status; FOI: Father's occupational and income status; Dw: Sense of devotion to work; DF: Determination vs. Fantasy; MSR: Maintenance for self-respect; IA: Identification with authority; CFF: Conscious fear of failure; EI: Ego ideals; Ach: Sense of achievement; Tq: Traditional moralism; AN: Affirmative negativism; D: Duplicity; UP: Distrust in people; DO: Discipline orientation.
The college policies and practices; sense of devotion to work and father's occupation contributed significantly as beta coefficients were (0.9656, 0.5221 and 0.3628). The content factors had insignificant regression weights. It implied that students' personal characteristics in a favourable context affected their performance significantly. The meaningful curriculum had lesser importance as compared to better jobs in determining students' performance.

All content, context, personal factors entered with satisfaction separately and together did not predict performance better than when entered without satisfaction (Table 31).
### Table 9.31: Regression Variables: Factors of Content, Context, Person and Satisfaction

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>R</th>
<th>R²</th>
<th>ΔR²</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS, EI, TC, NCS, PG, R, S</td>
<td>.13</td>
<td>.02</td>
<td>.00</td>
<td>3.05</td>
<td>1199.6</td>
<td>NS</td>
</tr>
<tr>
<td>CP, CE, S, JO IR, S</td>
<td>.26</td>
<td>.06</td>
<td>.04</td>
<td>14.61</td>
<td>1199.6</td>
<td>.01**</td>
</tr>
<tr>
<td>PES, FOI, DW DF, IA, NSR, CFF, EI, Ach, T4, AN, D, DP, DO, S</td>
<td>.26</td>
<td>.07</td>
<td>.01</td>
<td>5.66</td>
<td>1199.14</td>
<td>.01**</td>
</tr>
<tr>
<td>CS, TC, EI, NCS, PG, R, CP, CE, S, JO, IR, PES, FOI, DW, DF, NSR, IA, CFF, EI, Ach, T4, AN, D, DP, DO, S</td>
<td>.35</td>
<td>.12</td>
<td>.11</td>
<td>6.36</td>
<td>1199.25</td>
<td>.01**</td>
</tr>
</tbody>
</table>

CS = Cognitive skills; TC = Teacher competence; EI = Education itself; R = Recognition; PG = Personal growth; NCS = Non-cognitive skills; CP = College policies and practices; CE = College environment; JO = Job opportunities; S = Status; IR = Interpersonal relationships; PES = Parent's educational status; FOI = Father's occupation and income status; DW = Sense of devotion to work; DF = Determination vs. fantasy; NSR = Maintenance for self-respect; IA = Identification with authority; CFF = Conscious fear of failure; EI = Ego ideals; Ach = Sense of achievement; T4 = Traditional moralism; AN = Affirmative negativism; D = Duplicity; DP = Distrust in people; DO = Discipline orientation; S = Satisfaction.

The obtained regression coefficients showed that college policies and practices (0.9738) sense of...
achievement (0.5238) and father's occupation and income (0.3509) predicted performance maximum. Content factors and satisfaction showed low predictive efficiency. This suggested that sound college policies and better job opportunities would motivate students to perform successfully, irrespective of level of satisfaction. Also, personal factors showed better prediction in interaction with context factors.

5.0 SATISFACTION AND PERFORMANCE RELATIONSHIP

The distribution of tested sample on satisfaction-performance dimensions is presented in the form of a 2 x 2 contingency table below.

TABLE 5.32: ACADEMIC SATISFACTION AND PERFORMANCE CONTINGENCIES

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Performance</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>466</td>
<td>141</td>
<td>607</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>424</td>
<td>169</td>
<td>593</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>090</td>
<td>310</td>
<td>1200</td>
<td></td>
</tr>
</tbody>
</table>

\[ x^2 = 4.32 \]

The results indicated that chi-square value was significant above 5 per cent level, implying that those high on satisfaction and performance were to a certain
extent different from low on satisfaction and performance. In the obtained form of distribution, only 39% of the students high on satisfaction were high on performance, whereas 14% of students low on satisfaction were found low on performance. Interestingly, 36% of students low on satisfaction also performed high, and only 11% of the highly satisfied performed low. This demonstrated a U-shaped relationship between satisfaction and performance presented graphically in figure 3.
Graphical Presentation of Satisfaction Performance

Figure 3
Figure 3 suggested that satisfaction and performance showed little interdependence, although the performance was not necessarily a result of satisfaction. Performance and satisfaction did not correlate significantly with each other (r = .06).

5.9 ANALYSIS FOR GROUP HETEROGENEITY

A 3x2x2 analysis of variance on content, context and personal factors, academic satisfaction and performance scores was performed by college type, sex and curriculum. A summary of results of the analysis had been included in Tables 33, 34, 35, 36 and 37.

TABLE 5.33: VARIATION'S ON PERCEPTION OF CONTENT FACTORS

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of squares</th>
<th>Degree of Freedom</th>
<th>Mean square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>12608</td>
<td>1189</td>
<td>707,5422</td>
<td></td>
</tr>
<tr>
<td>College type (A)</td>
<td>1495.4375</td>
<td>2</td>
<td>747,7188</td>
<td>.9742</td>
</tr>
<tr>
<td>Sex (B)</td>
<td>259,5000</td>
<td>1</td>
<td>259,5000</td>
<td>.3381</td>
</tr>
<tr>
<td>Curriculum</td>
<td>17,1875</td>
<td>1</td>
<td>17,1875</td>
<td>.0224</td>
</tr>
<tr>
<td>A x B</td>
<td>139,5625</td>
<td>2</td>
<td>69,7813</td>
<td>.0909</td>
</tr>
<tr>
<td>A x C</td>
<td>106.8125</td>
<td>2</td>
<td>54,4003</td>
<td>.0709</td>
</tr>
<tr>
<td>B x C</td>
<td>130.2500</td>
<td>1</td>
<td>130,2500</td>
<td>.1801</td>
</tr>
<tr>
<td>A x B x C</td>
<td>381.2500</td>
<td>2</td>
<td>190,6250</td>
<td>.2484</td>
</tr>
</tbody>
</table>

* P < .05
** P < .01
The results of the analysis of variance on content scores indicated that the main effects as well as interactional effects of college type, sex and curriculum were insignificant. This implied that students selected for inclusion in this study constituted a rather homogeneous group. The aspiration levels of students to learn, to gain knowledge and to develop confidence did not seem to be affected by type of college, Arts and Science courses and their sex.

**TABLE 5.34: VARIATIONS ON PERCEPTION OF CONTEXT FACTORS**

<table>
<thead>
<tr>
<th>Sources</th>
<th>Sum of squares</th>
<th>Degree of Freedom</th>
<th>Mean of squares</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>749474.00</td>
<td>1189</td>
<td>630.3396</td>
<td></td>
</tr>
<tr>
<td>College type (A)</td>
<td>3128.6250</td>
<td>2</td>
<td>1564.3125</td>
<td>2.98*</td>
</tr>
<tr>
<td>Sex (B)</td>
<td>398.8750</td>
<td>1</td>
<td>398.8750</td>
<td>.62</td>
</tr>
<tr>
<td>Curriculum (C)</td>
<td>29.7500</td>
<td>1</td>
<td>29.75</td>
<td>.05</td>
</tr>
<tr>
<td>A x B</td>
<td>276.26</td>
<td>2</td>
<td>138.03</td>
<td>.22</td>
</tr>
<tr>
<td>A x C</td>
<td>61.50</td>
<td>2</td>
<td>30.75</td>
<td>.05</td>
</tr>
<tr>
<td>B x C</td>
<td>49.81</td>
<td>1</td>
<td>49.81</td>
<td>.08</td>
</tr>
<tr>
<td>A x B x C</td>
<td>153.12</td>
<td>2</td>
<td>76.25</td>
<td>.12</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01

Using 3x2x2 analysis of variance factorial design on the context scores, the main effects of college type emerged as significant ($F = 2.98; df = 2$; and $p < .05$). However, the main effects of sex and curriculum were found insignificant. No significant interaction effects
for college type, sex and curriculum were found. This
indicated that colleges differed in terms of intrinsic
and extrinsic facilities provided to students. Insig-
nificant differences by curriculum and sex suggested
the similarity of educational experiences with course
material in similar college environments.

TABLE 5.35: VARIATIONS ON PERCEPTION OF PERSONAL FACTORS

<table>
<thead>
<tr>
<th>Sources</th>
<th>Sum of squares</th>
<th>Degree of Freedom</th>
<th>Mean of squares</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>14663068.0</td>
<td>1189</td>
<td>12352.26</td>
<td></td>
</tr>
<tr>
<td>College type (A)</td>
<td>7453.00</td>
<td>2</td>
<td>3726.50</td>
<td>.30</td>
</tr>
<tr>
<td>Sex (B)</td>
<td>62.00</td>
<td>1</td>
<td>62.00</td>
<td>.01</td>
</tr>
<tr>
<td>Curriculum (C)</td>
<td>1935.00</td>
<td>1</td>
<td>1935.00</td>
<td>.16</td>
</tr>
<tr>
<td>A x B</td>
<td>481.00</td>
<td>2</td>
<td>240.50</td>
<td>.02</td>
</tr>
<tr>
<td>A x C</td>
<td>607.00</td>
<td>2</td>
<td>303.50</td>
<td>.02</td>
</tr>
<tr>
<td>B x C</td>
<td>449.00</td>
<td>1</td>
<td>449.00</td>
<td>.04</td>
</tr>
<tr>
<td>A x B x C</td>
<td>1348.00</td>
<td>2</td>
<td>674.00</td>
<td>.05</td>
</tr>
</tbody>
</table>

* P < .05
** P < .01

The results of the analysis of variance on personal
scores showed that main effects as well as interaction
effects were insignificant. This explained the reduced
variance among student's characteristics because of
selection procedures adopted by colleges at the time of
admission.
### TABLE 5.36: VARIATIONS ON PERCEPTION OF ACADEMIC SATISFACTION

<table>
<thead>
<tr>
<th>Sources</th>
<th>Sum of squares</th>
<th>Degree of freedom</th>
<th>Mean of squares</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>39486.00</td>
<td>1189</td>
<td>33,2094</td>
<td></td>
</tr>
<tr>
<td>College type (A)</td>
<td>178.1719</td>
<td>2</td>
<td>89.0859</td>
<td>2.98*</td>
</tr>
<tr>
<td>Sex (D)</td>
<td>49.5313</td>
<td>1</td>
<td>49.5313</td>
<td>1.49</td>
</tr>
<tr>
<td>Curriculum (C)</td>
<td>16.8594</td>
<td>1</td>
<td>16.8594</td>
<td>.91</td>
</tr>
<tr>
<td>A x D</td>
<td>13.2539</td>
<td>2</td>
<td>6.6270</td>
<td>.20</td>
</tr>
<tr>
<td>A x C</td>
<td>6.4922</td>
<td>2</td>
<td>3.2461</td>
<td>.10</td>
</tr>
<tr>
<td>B x C</td>
<td>16.8359</td>
<td>1</td>
<td>16.8359</td>
<td>.51</td>
</tr>
<tr>
<td>A x B x C</td>
<td>19.8320</td>
<td>2</td>
<td>9.9160</td>
<td>.30</td>
</tr>
</tbody>
</table>

* P < .05
** P < .01

Table 5.36 indicated that academic satisfaction in different colleges differed in a significant way (F = 2.98, df = 2, P < .05). There was slight difference in the perception of academic satisfaction among boys and girls, though insignificant. The curriculum did not lead to significant variation. F ratio's for interaction effects were statistically insignificant. This indicated that students experienced more satisfaction in academically stimulating environment as compared to less challenging and dull environment in average and low colleges. Insignificant curriculum and sex differences suggested the presence of a similar student culture among different colleges.
The results indicated that the main effects of college type ($F = 5.66; p < .01$), and of curriculum ($F = 2.94, df = 1; p = .05$) were significant. The interaction effects were insignificant.

The results confirmed the superiority of good colleges in providing better stimulating environment in enhancing student performance.

5.10 VALIDITY OF THREE DIMENSIONS OF ACADEMIC SATISFACTION

The tested population was dichotomised using high and low scores on content, context and personal factors in order to test if the prediction of academic satisfaction was optimum for students scoring high on all three
dimensions, vie-a-vie, other combinations of dimensions. Results of regression analysis had been included in Table 38.

TABLE 5.38: REGRESSION VARIABLES: FACTORS OF CONTENT, CONTEXT AND PERSON

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>R</th>
<th>R²</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>L₁ L₂ L₃</td>
<td>.34</td>
<td>.12</td>
<td>1.98</td>
<td>49.2</td>
<td>NS</td>
</tr>
<tr>
<td>L₁ L₂ H₃</td>
<td>.24</td>
<td>.06</td>
<td>4.98</td>
<td>245.2</td>
<td>.05</td>
</tr>
<tr>
<td>L₁ H₂ L₃</td>
<td>.26</td>
<td>.06</td>
<td>1.15</td>
<td>51.2</td>
<td>NS</td>
</tr>
<tr>
<td>L₁ H₂ H₃</td>
<td>.29</td>
<td>.08</td>
<td>5.89</td>
<td>202.2</td>
<td>.01</td>
</tr>
<tr>
<td>H₁ L₂ L₃</td>
<td>.38</td>
<td>.14</td>
<td>.98</td>
<td>21.2</td>
<td>NS</td>
</tr>
<tr>
<td>H₁ L₂ H₃</td>
<td>.38</td>
<td>.14</td>
<td>3.72</td>
<td>71.2</td>
<td>NS</td>
</tr>
<tr>
<td>H₁ H₂ L₃</td>
<td>.51</td>
<td>.26</td>
<td>11.72</td>
<td>102.2</td>
<td>.01</td>
</tr>
<tr>
<td>H₁ H₂ H₃</td>
<td>.44</td>
<td>.19</td>
<td>35.76</td>
<td>451.2</td>
<td>.01</td>
</tr>
</tbody>
</table>

L₁ = Low on content; L₂ = Low on context; L₃ = Low on person
H₁ = High on content; H₂ = High on context; H₃ = High on person

Results indicated that students who scored high on content, high on context but low on personal factors experienced optimum satisfaction. The multiple correlation, R, obtained for them accounted for 26 percent of variance significant above 1 percent. Next to them were those who were high on content, high on context and high on personal factors. In their case multiple corre-
lution $R$ explained 19 per cent of variance in academic satisfaction, although significant above 1 per cent. This suggested that content and context factors were crucial in predicting academic satisfaction and reinforced strength of these rested on personal dimensions.

5.11 VALIDITY OF THREE DIMENSIONS OF PERFORMANCE

Students' dichotomy on factors of content, context and person was also utilised for establishing if a high score on factors of content, context and person resulted in better performance via-a-via other combinations (Table 39).

**TABLE 5.39: REGRESSION VARIABLES WITH PERFORMANCE AS THE DEPENDENT VARIABLE**

<table>
<thead>
<tr>
<th>Regression Variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$df$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$L_1 L_2 H_3$</td>
<td>.10</td>
<td>.01</td>
<td>0.75</td>
<td>245.2</td>
<td>NS</td>
</tr>
<tr>
<td>$L_1 H_2 L_3$</td>
<td>.30</td>
<td>.09</td>
<td>1.94</td>
<td>51.2</td>
<td>NS</td>
</tr>
<tr>
<td>$L_1 H_2 H_3$</td>
<td>.29</td>
<td>.08</td>
<td>5.88</td>
<td>202.2</td>
<td>.05*</td>
</tr>
<tr>
<td>$H_1 L_2 H_3$</td>
<td>.21</td>
<td>.04</td>
<td>1.03</td>
<td>71.2</td>
<td>NS</td>
</tr>
<tr>
<td>$H_1 H_2 L_3$</td>
<td>.43</td>
<td>.10</td>
<td>7.35</td>
<td>102.2</td>
<td>.01**</td>
</tr>
<tr>
<td>$H_1 H_2 H_3$</td>
<td>.20</td>
<td>.04</td>
<td>6.23</td>
<td>451.2</td>
<td>.05*</td>
</tr>
</tbody>
</table>

$L_1$: Low on content; $L_2$: Low on context; $L_3$: Low on person; $H_1$: High on content; $H_2$: High on context; $H_3$: High on person.

Results showed that students who were high on content, high on context and low on personal factors...
had shown optimum performance. In their case $R^2 = .18$ accounted for higher proportion of variance in performance. The multiple correlation $R$ was not any higher for those who scored high on content, context and personal factors. This also confirmed the greater predictive efficiency of content and context factors in student performance like academic satisfaction with a limited scope for students' personal background and potential values.