A STUDY OF MATHEMATICAL ATTITUDE OF SECONDARY SCHOOL STUDENTS

Introduction:
Mathematics is an important area in the field of education for the students of secondary level. Mathematics is considered as a major and difficult subject at secondary level. Almost in all walks of life, there is use of mathematics. Students often struggle to see applications of mathematics. It was often seen that, students of secondary level possess a feeling of hatred and dislikes towards mathematics and feel that it is a boring subject.

Review of the Related Literature:
Studies of Hilton and Kolhe (1985), Subrata (2007) found that boys have significantly better and positive attitude towards mathematics. While studies of Sundarajan and Dhandapani (1991), Deepa (2012) found that girls have significantly better and positive attitude towards mathematics. Studies of Desai (1973), Wilson (2008) found no significant gender difference on the variable of attitude towards mathematics. Studies of Mehra (2004) found urban students significantly better than rural students on the variable mathematical attitude or attitude towards mathematics.

Definition of Mathematics attitude:-
According to Good (1973) “Attitude is readiness to react towards or against some situation, person or thing or sentiment to a particular degree of intensity.”

Based on the above definition, mathematical attitude may be defined as set of emotionally toned and a generalized reaction of an individual to act for or against the subject of mathematics. The attitude towards mathematics is just a positive or negative emotional disposition towards mathematics.

Statement of the Problem:-
“A study of mathematical attitude of Secondary School Students of Bageshwar District.”

Objective of the study:-
To study the mathematical attitude of class X students of Secondary Schools on the basis of their sex and social belongingness.

Research hypotheses:-
1. There is no significance difference in mathematical attitude of class X students on the basis of sex.
2. There is no significance difference in mathematical attitude of class X students on the basis of their social belongingness.
3. There is no significance difference in mathematical attitude of class X male students on the basis of social belongingness.
4. There is no significance difference in mathematical attitude of class X female students on the basis of their social belongingness.

Method:-
The descriptive or survey research method was used for present research work.

Population of the study:-
All the students studying in class X of government and private Secondary Schools of Bageshwar District.

Sample and sampling method:-
For the present study a representative sample of 243 students of class X from government and private Secondary Schools in Bageshwar district was selected randomly.

Research tool:-
The research tool developed and standardized by Dr. Ali Imam and Dr. Tahira Khatoon was administered to the students in the present study.

Statistical methods:-
In order to attain the objectives of the study, the investigators used Mean, S.D., and ‘t’-test techniques.

Analysis and interpretations of data:-
Table 1:- Comparison of mean mathematical attitude scores of class X from government and private Secondary Schools of Bageshwar district on the basis of sex.

<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>M</th>
<th>S.D</th>
<th>t-ratio</th>
<th>d.f.</th>
<th>Level Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>116</td>
<td>80.98</td>
<td>15.09</td>
<td>4.04</td>
<td>243</td>
<td>.01</td>
</tr>
<tr>
<td>Female</td>
<td>127</td>
<td>72.22</td>
<td>14.74</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data presented in Table 1 reveals that male student were found significantly higher in their mean mathematical attitude scores than female students. The difference was found statistically significant at .01 level of significance (t=4.04).

The reason for the above results may be due the fact that male students have higher interest and confidence in mathematics as compared to the female students.

Table 2:- Comparison of mean mathematical attitude scores of class X from government and private Secondary Schools of Bageshwar district on the basis of their social belongingness.

<table>
<thead>
<tr>
<th>Social belongingness</th>
<th>N</th>
<th>M</th>
<th>S.D</th>
<th>t-ratio</th>
<th>d.f.</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>180</td>
<td>75.19</td>
<td>15.72</td>
<td>2.19</td>
<td>241</td>
<td>0.05</td>
</tr>
<tr>
<td>Urban</td>
<td>63</td>
<td>79.56</td>
<td>15.75</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data presented in Table 2 reveals that rural and urban student of class X were found to differ in their mean mathematical attitude scale scores. The difference was found statistically significant at .05 level of significance (t=2.19).
The reason may be that urban students have much more and better facilities than provided to rural students.

### Table 2.1:- Comparison of mean mathematical attitude scores of male students of class X from government and private Secondary Schools of Bageshwar district on the basis of their social belongingness.

<table>
<thead>
<tr>
<th>Social Belongingness</th>
<th>N</th>
<th>M</th>
<th>S.D.</th>
<th>t-ratio</th>
<th>d.f.</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural male</td>
<td>89</td>
<td>79.56</td>
<td>15.76</td>
<td>1.59</td>
<td>114</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Urban male</td>
<td>27</td>
<td>84.72</td>
<td>14.24</td>
<td></td>
<td></td>
<td>Significant</td>
</tr>
</tbody>
</table>

Data represented in the Table 2.1 reveals that there exist no significant difference between the mathematical attitude mean scores of rural male and urban male (t=1.21).

### Table 2.2:- Comparison of mean mathematical attitude scores of class X female students on the basis of their social belongingness.

<table>
<thead>
<tr>
<th>Social Belongingness</th>
<th>N</th>
<th>M</th>
<th>S.D.</th>
<th>t-test</th>
<th>d.f.</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural females</td>
<td>91</td>
<td>70.73</td>
<td>14.88</td>
<td>3.76</td>
<td>125</td>
<td>0.05</td>
</tr>
<tr>
<td>Urban females</td>
<td>36</td>
<td>80.05</td>
<td>12.48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data presented in the Table 2.2 reveals that there exists statistically significant difference (t=2.22) between the mathematical attitude mean scores of rural female and urban female students of class X from government and private Secondary Schools in Bageshwar district.

### Findings and conclusions of the study:-

The present study shows that:

1. The male students of class X standard have more positive attitude in mathematics than female students of class X standard.
2. The urban students have more positive attitude in mathematics than rural students.
2.1 The rural male and urban male students of class X have more or less similar in their mathematics attitude.
2.2 The urban female students of class X have better attitude in mathematics than rural female students of class X.

### Educational Implication:-

It is recommended that to develop natural urge among students to lean mathematics and to develop positive attitude towards mathematics. The teachers and parents should give motivation to enhance attitude of students in mathematics.

### References

1. Deepa (2012), Pupils’ achievement and interest in mathematics; Attitude towards computer and mathematics at High school level. Unpublished Thesis of Manonmaniam Sundaranar University, Tirunelveli - 627 012.