CRITICAL THINKING AND SOCIAL MATURITY
OF SECONDARY SCHOOL STUDENTS

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ABSTRACT
The present study was conducted to investigate the relationship between Critical thinking and Social Maturity of secondary school students. Survey method was adopted for the study. 100 Secondary school students in Mysore formed the sample for data collection. Critical thinking Test, constructed by the investigator and Nalini Rao’s Social Maturity Scale were used as tools for collection of data. t-test and Pearson Product Moment Correlation Techniques were used for analysis of the data. The result showed that male and female secondary school students do not differ significantly with respect to Critical Thinking. No significant difference was found between male and female students with respect to Social Maturity, There is no significant relationship existing between Critical Thinking and Social Maturity of Secondary school students.

KEY WORDS: Critical thinking and Social Maturity , t-test and Pearson Product Moment Correlation Techniques.

1. INTRODUCTION
The present education system is aiming at preparing students to live in a modern, technological and globalized world. Educators in this digitalized era are concentrating on enhancing higher order thinking skills in adolescent students. As students move to secondary and higher secondary school, they need to apply the information they have stored on their day to day life. The students as they grow into adults need to solve daily life problems and require higher order thinking skills to lead a quality life. Hence the objectives of teaching in secondary school clearly propagates the development of critical thinking among students. Various methods of teaching are being promulgated to enhance critical thinking skills among students.

Since children have to live in the society with other fellow beings, they should learn to communicate and coexist with them. This needs them to acquire social skills and exhibit socially mature behavior and it is the responsibility of our educators to imbibe these social behaviours in children at an early age. This could be conceivable if appropriate strategies of teaching are adopted to teach various subjects in schools. Hence NCERT in its National Curriculum Framework 2005 insists on adoption of social constructivist strategies on secondary schools to develop social skills.

1.1 Critical thinking: is thinking on a level that is higher than memorizing facts or recalling and repeating exactly the information he has stored in his brains without having to think about it. The students need to do understand the facts and information he receives, infer from them, connect them to other facts and concepts, categorize them, and apply them as he seeks new solutions to new problems. Whatever be the area of work, be it education, or day to day activities it is obvious that children need to think critically to solve problems they face in day to day life.
Critical thinking is purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation and inference as well as explanation of the evidential, conceptual, methodological or contextual considerations upon which that judgment is based. Critical thinking is the ability to recognize problems, to find workable means for meeting those problems, understand the importance of prioritization and order of precedence in problem solving, gather relevant information, interpret data to appraise evidence and evaluate arguments, recognize the existence (or non-existence) of logical relationships between propositions, draw warranted conclusions and generalizations, put to test the conclusions and generalizations at which one arrives and render accurate judgments about specific things and qualities in everyday life. Critical thinking is, ‘reasonable, reflective thinking that is focused on deciding what to believe or do’ (Norris & Ennis, 1989).

1.2 Social Maturity: Socially mature behavior has been the chief determining factor of success in work and personal life of individuals. Social maturity enable individuals to communicate effectively and maintain better interpersonal relationships for a healthy life. Research findings from a Study in Pennsylvania University have stated that youth scoring higher on social skills were four times more likely to graduate. They would have a superior ability to respond and resolve conflicts in social situations.

Social Maturity is taken to be the level of social skills and awareness that an individual has achieved relative to particular norms of the society in which he is a member. It is a measure of the competence of an individual with regard to interpersonal relations, behavior appropriateness, social problem solving and judgment. Social maturity encompasses attainments in several domains, including independent functioning, effective interpersonal communication, interaction and responsibility that contributes to the well-being of society.

Gender differences are expected in thinking abilities and social maturity levels of teenage students due to the impact of the differences in their upbringing and stereotyped roles expected of them in the family and society.

2. NEED AND IMPORTANCE OF THE STUDY

The importance of teaching children to think critically and behave in a socially mature way is gaining momentum in this technological era since they have to be prepared to live in the highly competitive 21st century. The citizens of the 21st century need to face a world characterized by high conflict and competition. It is the educator who has to envisage the role of teaching higher-order thinking skills to prepare young men and women to live in the future world. Parents and Children concentrating on rote learning and memorizing of information are the cause of concern to today’s education system.

Educators are realizing the importance of teaching children to think critically and teaching them to solve problems creatively in a socially acceptable way. Anderson, Krathwohl et al (2001) opine that the important goal of education is to promote retention of what students have learned and to make sense of what they have learned and be able to use what they have learned in new social situations. According to Brookhart (2010) the thinking that applies to life outside of school is characterised by ‘a series of transfer opportunities (rather) than a series of recall assignments to be done’. Children with high critical thinking can apply wise judgment in social situations.

Since it is proved that ways of thinking can be taught, the educational curriculum has started concentrating on equipping students to make sound decisions and exercise reasoned judgment by thinking critically in social situations. Each child, with his individual personality needs to interact with others in the outside world. Since teenagers who posses well developed social skills and those who are socially mature are more capable of handling social situations successfully, they are more prone to success in their future life. Hence educationists, psychologists and social workers are devising various strategies for improving critical thinking and social maturity of young individuals.
At this juncture the researcher felt the need to find whether similar strategies could be planned for improving critical thinking and social maturity among both male and female secondary school students. Thus it becomes more important to find if male and female secondary students differ in their critical thinking ability and their social maturity levels. It is all the more significant to find if there exists a correlation between critical thinking and social maturity.

3. **STATEMENT OF THE PROBLEM**
The study has been entitled as, “A Study of Critical thinking and Social Maturity of Secondary school students of Mysore city”.

4. **OBJECTIVES OF THE STUDY**
The following are the objectives of the study:
1. To find whether there is any significant difference between male and female students with respect to Critical Thinking.
2. To find whether there is any significant difference between male and female students with respect to Social Maturity.
3. To examine the relationship between Critical thinking and Social Maturity of Secondary school students.

5. **HYPOTHESES OF THE STUDY**
In pursuance with the objectives of the study following hypotheses were framed:
- There is no significant difference between male and female students with respect to Critical Thinking.
- There is no significant difference between male and female students with respect to Social Maturity.
- There is no relationship between Critical thinking and Social Maturity of Secondary school students.

6. **VARIABLES OF THE STUDY**
Main variables: Critical Thinking and Social Maturity.
Background Variable: Gender

7. **METHODOLOGY**
Survey method was adopted for this study. The sample of the study were administered two tools related to the main variables of the study and the data was collected for analysis.

8. **SAMPLE OF THE STUDY**
The sample of the study comprised of hundred students of secondary schools in Mysuru city. The students were selected by using simple random sampling technique.

9. **TOOLS USED FOR THE STUDY**
The following tests were used as the tools to collect the data for the study:
- **Critical Thinking Test:** Critical thinking test was designed and constructed by the Investigator was used to collect the data. The Critical thinking Test consisted of 35 Multiple Choice Questions covering eight areas namely Analysis, Applying standards, Information seeking, Logical reasoning, Transforming knowledge, Inference, Decision making and Discrimination. A correct answer for each item obtained a score of one thus making the maximum total score equal to 35. Thus the total score ranges from 0 to 35.
- **Social Maturity Scale:** Social Maturity scale constructed and standardized by Dr. Nalini Rao was used. The Social Maturity level of the selected secondary school students was measured using this tool. This scale consisted of 90 items including both positive and negative items. Each item was given four preferences i.e, Strongly agree(SA), Agree(A), Disagree(D), Strongly Disagree(SD). Positive items were
given a score of 4, 3, 2, and 1 respectively. The negative items were given a score of 1, 2, 3, and 4 respectively. Scores of each item were summed up to get total scores of each individual student.

10. COLLECTION OF DATA
The investigator approached the heads of schools and got permission for data collection. The investigator personally administered the Critical thinking test and Social Maturity scales to the students.

11. STATISTICAL TECHNIQUES EMPLOYED
t-test and Person Product Moment Correlation technique were used to analyse the collected data.

12. ANALYSIS AND INTERPRETATION OF DATA

Hypothesis 1:
There is no significant difference between male and female students with respect to Critical Thinking.

Table No. 1: Summary table of ‘t’ test of Critical Thinking of male and female students.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>‘t’ value</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>50</td>
<td>31.3400</td>
<td>1.95469</td>
<td>0.66</td>
<td>98</td>
<td>NS</td>
</tr>
<tr>
<td>Female</td>
<td>50</td>
<td>31.5800</td>
<td>1.66709</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table No.2 reveals that the obtained ‘t’ value 0.66 is less than the tabled value at 0.05 level. Hence, the null hypothesis 1 is accepted and it is concluded that there is no significant difference between male and female students with respect to Critical Thinking.

Hypothesis 2:
There is no significant difference between male and female students with respect to Social Maturity.

Table No.2: Summary table of ‘t’ test of Social Maturity of male and female students.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>‘t’ value</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>50</td>
<td>196.46</td>
<td>2.47609</td>
<td>0.12</td>
<td>98</td>
<td>NS</td>
</tr>
<tr>
<td>Female</td>
<td>50</td>
<td>196.52</td>
<td>2.52530</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table No.2 reveals that the obtained ‘t’ value 0.12 is less than the tabled value at 0.05 level of significance. Hence, the null hypothesis 2 is accepted and it is concluded that there is no significant difference between male and female students with respect to Social Maturity.

Hypothesis 3:
There is no significant relationship between Critical Thinking and Social Maturity of Secondary school students.

Table No 3: Table showing variables, N, df, co-efficient of correlation and the level of significance between Critical Thinking and Social Maturity of Secondary school students.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>df (N-2)</th>
<th>R</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking</td>
<td>100</td>
<td>98</td>
<td>0.16</td>
<td>NS</td>
</tr>
<tr>
<td>Social Maturity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The data in table No. 3 shows that obtained ‘r’ value is 0.16 which is not significant. Hence it is concluded that there is a positive but insignificant relationship between Critical Thinking and Social Maturity of Secondary school students.

13. FINDINGS OF THE STUDY
The following are the findings of the study:
- There is no significant difference between male and female secondary school students with respect to Critical Thinking.
- There is no significant difference between male and female secondary school students with respect to Social Maturity.
- There is a positive but insignificant relationship between Critical Thinking and Social Maturity of Secondary school students.

14. CONCLUSION
Critical thinking has been debated since early Greek philosophers such as Plato and Socrates and is still a subject of debate and discussion even today. Since individuals with critical thinking abilities can reason, learn actively, engage in reflective and independent thinking, identify and solve problems systematically and justify their beliefs and values they are the most sought after in the society today. These abilities need to be unveiled in a world in a socially acceptable manner where he needs to coexist with his fellow beings. In this context, Social maturity becomes more important. In today’s technological world where egoism and individualistic pursuits are dominating, children need to be trained to achieve their excellence in life leading to holistic competence. Socially mature individuals can contribute to the establishment of an euphoric society. It is good news for educators that Critical thinking and social maturity can be developed and taught to children at their formal operational stage.