

# An investigation of students based on their critical thinking dispositions and self efficacy

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**Abstract - This article is about an investigation of students based on their critical thinking dispositions and self efficacy. The population of the present study comprises all the higher secondary commerce students studying in standard XI in Government, Government Aided and Private schools. From the population, the investigator had taken 810 higher secondary commerce students through random sampling technique. Findings of the study: (i) The levels of Critical Thinking Dispositions and its dimensions namely Engagement, Maturity and Innovativeness as perceived by higher secondary students are average in nature. (ii) The levels of Self-efficacy and its dimensions namely Academic, Emotional and Social Self-efficacy of higher secondary students are average in nature.**

**Key words: critical thinking dispositions and self efficacy**

## I. INTRODUCTION

Critical thinking is a rich concept that has been developing throughout the past 2500 years. The term ‘critical thinking’ has its roots in the mid-late 20th century. We offer here overlapping definitions, together which form a substantive, trans-disciplinary conception of critical thinking. Additionally, critical thinking is an educational component because of the competence, it provides for living a productive life, which involves being able to think and reason about many different areas, for one cannot know all of the content that they should know at the start of a task. Critical thinking involves certain disposition, which refers to a habit or tendency an individual has toward critical thinking and is “the attitudinal basis for the internal motivation to think critically”. Only with the development of critical thinking dispositions, students can succeed in school and throughout their lives (Halpern, 1998). When a learner does poorly on a thinking test, the educator needs a way to know if the poor performance is due to a lack of abilities or dispositions (Ennis and Norris, 1990). Only then, educators can decide on how to help the learners (Giancarlo, Blohm and Urdan, 2004). Critical thinking disposition have been shown to be associated with critical thinking skills.

Self-efficacy beliefs have a considerable position in different aspects of our today’s life (Maddux, 2002) and an important role in individual’s decision-making process, thinking modes and problems solving approaches (Dweck, 1988). It is conceived as a differentiated set of self-beliefs specific to different areas of functioning and is therefore considered as a domain-specific concept (Bandura, 1997; Maddux, 1995; Valentine, Dubois and Cooper, 2004). Students with a strong sense of efficacy are more likely to challenge themselves with difficult tasks and be intrinsically motivated. Self-efficacious students also

recover quickly from setbacks, and ultimately are likely to achieve their personal goals and it is influenced by different environments and significant relationships with others including parents, teachers, and peers. The student’s perceived self-efficacy predicted the social studies grades they hoped for expected and actually achieved. Students’ goals were influenced by their parents’ goal for them, but students’ beliefs about their own abilities seemed more important.

### Objectives of the Study

1. To find out the levels of Critical Thinking Dispositions and its dimensions namely Engagement, Maturity and Innovativeness.
2. To find out the levels of Self-Efficacy and its dimensions namely Academic, Emotional and Social Self-Efficacy.

### Hypotheses of the Study

1. The levels of Critical Thinking dispositions and its dimensions namely Engagement, Maturity and Innovativeness of higher secondary students are not high.
2. The levels of Self-Efficacy and its dimensions namely Academic, Emotional and Social Self-Efficacy of higher secondary students are not high.

## II. METHODOLOGY

### Method Selected

The investigator selected descriptive survey method for the study.

### Population and Sample for the study

The population of the present study consisted of higher secondary commerce students studying in standard XI in

Government, Government Aided and Private Schools. From the population, the investigator has taken 810 higher secondary commerce students through random sampling technique.

**Tool for the Study**

1. Critical Thinking Disposition Assessment developed by **John C. Ricketts (2003)**
2. The Self-Efficacy Questionnaire constructed and validated by **Peter Muris (2001)**

**Pilot Study**

Pilot study was conducted in the month of June 2012 on 60 XI Grade Commerce Students drawn from each school selected randomly from the whole sample to establish reliability and validity of the various tools used in the study. For establishing reliability of the scales, the investigator used test-retest method. The two scales, (1) Critical Thinking Dispositions Assessment, (2) Self-Efficacy Questionnaire were first administered to a sample of 60 higher secondary commerce students selected from the population. After an interval of 10 days, the same tools were administered to the same sample.

**III. STATISTICAL ANALYSIS AND INTERPRETATION**

The collected data were analyzed using the relevant statistical procedures, the details of which are given in the following tables.

**Categories of students based on their Critical Thinking Dispositions**

From the critical thinking dispositions along with its dimensions scores obtained through the use of **John C. Ricketts** Critical Thinking Dispositions Inventory, following the norms in the manual, the sample of students are categorized into three levels of Critical Thinking Dispositions and its dimensions viz. low, moderate and high, the details as described in Table 1.

**Table 1 Showing the categorization of students into low, average and high critical thinking dispositions and its dimensions**

Critical Thinking Dispositions and its Dimensions	Low		Average		High	
	N	%	N	%	N	%
Engagement	124	15.31	537	66.30	149	18.40
Maturity	113	13.95	585	72.22	112	13.83
Innovativeness	116	14.32	580	71.60	114	14.07
<b>Total</b>	<b>134</b>	<b>16.54</b>	<b>551</b>	<b>68.02</b>	<b>125</b>	<b>15.43</b>

From the above table, it is found that 68.02% of higher secondary students have average level of critical thinking dispositions and its dimensions. Moreover, they have average level of critical thinking dispositions and its dimensions regarding engagement (66.30%), maturity (72.22%) and innovativeness (71.60%).

**Hence, Hypothesis stating that “The levels of critical thinking dispositions and its dimensions namely engagement, maturity and innovativeness of higher secondary students are not high” is accepted.**

**Categories of pupils based on their self-efficacy**

From the self-efficacy along with its dimensions scores obtained through the use of **Peter Muris** Self-efficacy Questionnaire, following the norms in manual, the sample of students are categorized into three groups, as described in Table 2.

**Table 2 Showing the categorization of students into low, average and high self-efficacy and its dimensions**

Self-efficacy and its Dimensions	Low		Average		High	
	N	%	N	%	N	%
Academic	133	16.42	566	69.88	111	13.70
Social	116	14.32	600	74.07	94	11.60
Emotional	125	15.43	545	67.28	140	17.28
<b>Total</b>	<b>130</b>	<b>16.05</b>	<b>589</b>	<b>72.72</b>	<b>91</b>	<b>11.23</b>

It could be seen from Table 2 it is found that 72.72% of higher secondary students have average level of self-efficacy and its dimensions. Moreover, they have average level of academic self-efficacy (69.88%), social self-efficacy (74.07%) and emotional self-efficacy (67.28%).

**Hence, Hypothesis stating that “The levels of self-efficacy and its dimensions namely academic, emotional and social self-efficacy of higher secondary students are not high” is accepted.**

**IV. FINDINGS OF THE STUDY**

1. The levels of Critical Thinking Dispositions and its dimensions namely Engagement, Maturity and Innovativeness as perceived by higher secondary students are average in nature.
2. The levels of Self-efficacy and its dimensions namely Academic, Emotional and Social Self-efficacy of higher secondary students are average in nature.

**V. EDUCATIONAL IMPLICATIONS**

Students have to promote learning skills such as creativity, innovation skills, critical thinking and problem solving skills, communication and collaborative skills in life and career skills such as flexibility and adaptability, initiative, social and cross culture skills productivity and accountability leadership and responsibility in partnership with parents and teachers and school is the essential place of them for achievement, preparation for democratic life and preparation to be successful in 21<sup>st</sup> century workplace. Self-efficacy belief is a main component of behavioral change which effectively predict critical thinking abilities and a good predictor of using high level study organizational climate strategies and creates motivation in academic performance. Critical thinking dispositions, study organizational climate and academic performance are

influenced by self-efficacy. Students with a strong sense of efficacy are more likely to challenge themselves with difficult tasks and be intrinsically motivated. Self-efficacious students also recover quickly from setbacks, and ultimately are likely to achieve their personal goals and it is influenced by different environments and significant relationships with others including parents, teachers, and peers.

## VI. CONCLUSION

More recently, the partnership of 21<sup>st</sup> century skills has identified critical thinking as one of the several learning and innovation skills necessary to prepare students for higher secondary level and work force. Any environmental individual in the 21<sup>st</sup> century can get the ability to think critically about the complex results out of actions or events towards the environment as a crucial skill. The study of relationship between the Critical Thinking Dispositions and self efficacy has proved that students could reach and achieve their individual heights. It also shows us that success of learning commerce lies in reducing achievement inequities, enhancing healthy development and promoting the skills, knowledge and dispositions that provide the foundation for 21<sup>st</sup> century school life. The student's perceived self-efficacy predicted the social studies grades they hoped for expected and actually achieved. Students' goals were influenced by their parents' goal for them, but students' beliefs about their own abilities seemed more important. The message is clear, if parents want their children to do well in school, they must see their have learning experiences that build a belief in their ability to succeed.

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