

## **Effects of Critical thinking on Students learning at Public Schools in District Mianwali: A Quantitative Perspective Study**

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### **Abstract**

*Critical thinking is an effective teaching strategy that facilitate teachers in classroom settings. The objectives of the present study were to find the satisfaction level of students on learning through critical thinking and to assess general understanding on a subject learning through critical thinking moreover, to explore the acceptance of a new point of view through critical thinking and to explore students learning achievements through critical thinking. All the female teachers of higher secondary schools in Mianwali were population of the study. Stratified random technique was used for the selection of sampling of female secondary school teachers in Chashma Mianwali City. Total 25 female students were selected. Self-developed and validated questionnaire was used for collection of data. The data analysis techniques, percentage, mean and standard deviation, t-test and z-score were used. The findings of the study revealed that the effects of critical thinking on students' learning revealed that developing critical thinking skills significantly enhances students' academic performance and overall learning outcomes. Students engaged in activities that promoted analysis, evaluation, and problem-solving demonstrated a deeper understanding of subject matter and improved ability to apply knowledge in real-life contexts. The study found that critical thinking fosters independent learning, creativity, and better decision-making. Moreover, learners trained in critical thinking showed higher levels of motivation, confidence, and engagement in classroom discussions. Teachers are integrated critical thinking strategies into their instruction observed improvements in students' comprehension, reasoning, and communication skills*

**Key words:** Critical Thinking (CT), Students Learning (SL), and Higher Secondary Stage (HSS).

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## **Introduction**

The strategies and approaches of teaching and learning activities that instructors implement should arise from their teaching way of life, reflect the overall curriculum and promote the achievement of learning objectives. The instructors to provide an informational framework that places the teaching resources and student work within this context. (MoE, 2016).

The critical thinking is an approach where the instructor acts as the primary knowledge giver. The instructor typically stands for the students and used a visual aid, such as a PowerPoint presentation. (Costin, 2021).

The problem to be considered was related to be “Effects of Critical thinking on Students learning at Public Schools in District Mianwali: A Quantitative Perspective Study”. In this level the teacher provides the environment for the students to think critically. Hence the study is opted to carry out the effects of critical thinking on students learning at public schools in District Mianwali.

## **Objectives of the current study**

The current study objectives were;

- To find satisfaction level of students through critical thinking.
- To assess general understanding of critical thinking.
- To explore the acceptance of a new point of view through critical thinking.
- To explore students learning achievements through critical thinking.

This study may be generated vital information on factors contributing to excess use of the critical thinking in teaching learning process among female schools. The findings of this study may be useful to teacher educators, educational administrators. The study will be helpful for future research work in this field of teaching strategies and terminologies. The study will be helpful for researcher’s students and teachers for understanding of different features that effect on critical thinking at classroom level.

## **Research design of the Study**

The descriptive research type was used for the present study. Moreover, it will be a survey type of study.

## **Delimitation of the study**

The present study was delimited to:

- One public secondary school
- Female students
- Only District Mainwali City Chashma

## **Operational definition**

### **Critical Thinking:**

Critical thinking is the procedure of dynamically and skillfully examining, evaluating, and manufacturing information to form reasoned conclusions and make informed decisions.

### **Secondary stage:**

Secondary education ordinarily take place in secondary school, taking place after primary education.

Critical thinking is a kind of thinking in which you question, analyze, interpret, evaluate and make a judgement about what you read, hear, say, or write. The term critical comes from the Greek word *kritikos* meaning “able to judge or discern”. Good critical thinking is about making reliable judgements based on reliable information. Critical thinking is that mode of thinking - about any subject, content, or problem - in which the thinker improves the quality of his or her thinking by skillfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them.

1. **Clarify** your rational resolution and framework
2. **Question** your foundations of material
3. **Identify** influences
4. **Analyze** foundations and influences
5. **Evaluate** the arguments of others and
6. **Create** or **synthesis** your own advices.
7. A well cultivated critical thinker, raises vital questions and problems, formulating them clearly and precisely, gathers and assesses relevant information, using abstract ideas to interpret it effectively comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards, thinks open-mindedly within alternative systems of thought,

recognizing and assessing, as need be, their assumptions, implications, and practical consequences; and communicates effectively with others in figuring out solutions to complex problems.

8. Critical thinking is, in short, self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities and a commitment to overcome our native egocentrism and sociocentrism.

## **Research methodology**

### **Research Design**

This study was descriptive in nature. Which dealt to the study effects of critical thinking on students learning at public schools in district Mianwali.

Population of the study was only twelve (10) female secondary schools in district Mianwali city chashma. There were one 1200 female students in secondary schools in Mianwali City.

### **Population of the study**

Population of the study consisted all the female secondary school students in the city Chashma district Mianwali. There were total 1100 female students in secondary schools in the city Chashma district Mianwali.

### **Sampling of the study**

Sample of the study were selected from 10 female Secondary Schools in Mianwali City. Total 65 female students were selected through the stratified random sampling technique.

*Sampling and Sample Size of the study*

Sr. No	Target groups	Sample size
1.	Female students	65
2.	Female schools	10
<b>Total</b>		

### **Instrument of the Study**

Researcher was used one questionnaire that has 30 items on the basis of review of related literature. The item was developed keeping in view the objectives of the study.

## Pilot Testing of Research Instrument

The questionnaire was validated through expert opinion of five professionals of department of Education for the validation. After getting the feedback of expert's opinion the 30 items were finalized for the questionnaire.

### Validation of the instruments

The validity and reliability of the questionnaire was improved and measured through experts, opinion and pilot testing.

### Procedure of Current Study

The researcher visited the schools personally for data collection. All the data were collected personally with the passage of time frame.

### Data analysis techniques

All the data was entered which gathered through the questionnaires and then find the percentage, mean and standard deviation respectively. T-test and z-score analysis was also applied for further results.

## INTERPRETATION OF DATA FOR RESULTS

The data was analyzed through descriptive and inferential statistics.

Table 1

*Descriptive statistics of age/ subjects*

Age/Subjects	Frequency	%
21-25	100	100.0
Arts	35	55%
Science	30	45%
Total	65	100.0

Table 1 shows that respondents' age was 21-25. Therefore, 55% respondents 'subjects were arts and 45% respondent's subjects were science.

Table 2

*Descriptive statistics of level*

Level	Frequency	%
11 <sup>th</sup>	45	45.0
12 <sup>th</sup>	55	55.0
Total	100	100.0

Table 2 shows that 45% respondents' level were 11<sup>th</sup> and 55% respondents were 12<sup>th</sup>. Majority of the respondents' class level were 12<sup>th</sup>.

Table 3

*Descriptive statistics of gender*

Gender	Frequency	Percent
Female	100	100.0

Table 3 shows all were the female students in the sample for the study.

Table 4

*Practices of Critical Thinking*

Scale	Frequency	%	Mean	SD
Strongly Disagree	1	1.0		
Disagree	4	4.0		
Neutral	1	1.0	4.64	.785
Agree	18	18.0		
Strongly Agree	76	76.0		
Total	100	100.0		

Table 4 explains that 76% respondents were strongly agreed that critical thinking, 18% respondents were agreed, 01% respondents were strongly disagreed, 04% participants were disagreed, 01% participants were not answered to statement. Most of the participants strongly agree with this statement ( $M=4.64$ ;  $SD=.785$ )

Table 5

*Taking interest in lecture through critical thinking*

Scale	Frequency	%	Mean	S.D
Strongly Disagree	1	1.0		
Disagree	5	5.0		
Neutral	5	5.0	4.54	.881
Agree	17	17.0		
Strongly Agree	72	72.0		
Total	100	100.0		

Table 5 explains that 72% respondents were strongly agreed that Taking interest through critical thinking, 17% respondents were agreed, 01% respondents were strongly disagreed, 5% participants were disagreed and 5% participants were remained unable to response. Most of the participants strongly agree to the statement ( $M=4.54$ ;  $SD=.881$ ).

Table 6

*With oral communication and usage of objects in classroom through critical thinking*

Scale	Frequency	%	Mean	SD
Strongly Disagree	4	4.0		
Disagree	5	5.0		
Neutral	18	18.0	4.02	1.082
Agree	31	31.0		
Strongly Agree	42	42.0		

Total	100	100.0
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The table 6 shows that 42% participants were strongly agreed that with oral communication and usage of objects in classroom through critical thinking, 31% respondents were agreed, 4% respondents were strongly disagreed, 5% participants were disagreed and 18% participants were not answered. Most of participants strongly agree with this statement (M=4.02; SD=1.082)

Table 7

*Use verbal understanding through critical thinking*

Scale	Frequency	%	Scale	Mean	SD
Strongly Disagree		6	6.0		
Disagree		2	2.0		
Neutral		11	11.0	4.19	1.107
Agree		29	29.0		
Strongly Agree		52	52.0		
Total		100	100.0		

Table 7 defines that 52% participants were strongly agreed that Use verbal understanding through critical thinking, 29% respondents were agreed, 6% respondents were strongly disagreed, 2% participants were disagreed and 11% participants were neutral. Most of the participants strongly agree (M=4.19; SD=1.107)

Table 8

*Use A.V aids in classroom through critical thinking*

Scale	Frequency	%	Scale	Mean	SD
Strongly Disagree		14	14.0		
Disagree		3	3.0		
Neutral		14	14.0	3.85	1.410

Agree	22	22.0
Strongly Agree	47	47.0
Total	100	100.0

In table 8 the results define that 47% participants were strongly agreed that Use A.V aids in classroom through critical thinking, 22% participants were agreed, 14% respondents were strongly disagreed, 3% participants were disagreed and 14% participants were not answered. Most of respondents were strongly agree (M=3.85; SD=1.410)

Table 9

*By with wide subject knowledge through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	2	2.0		
Disagree	2	2.0		
Neutral	17	17.0	4.27	.952
Agree	25	25.0		
Strongly Agree	54	54.0		
Total	100	100.0		

Table 9 presents that 54% participants were strongly agreed that with wide subject knowledge through critical thinking, 25% respondents were agreed, 2% respondents were strongly disagreed, 2% participants were disagreed and 17% participants were remained not answered. Most of participants strongly agree (M=4.27; SD =.952).

Table 10

*Keep mentally active and present minded in classroom through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	2	2.0		
Disagree	4	4.0		
Neutral	16	16.0	4.24	.996
Agree	24	24.0		
Strongly Agree	54	54.0		
Total	100	100.0		

Table 10 determines that 54% participants were strongly agreed that Keep mentally active and present minded in classroom through critical thinking, 24% participants were agreed, 2% participants were strongly disagreed, 4% participants were disagreed and 16% participants were not answered. Most of respondents strongly agree (M=4.24; SD =.996).

Table 11

*The use of lecture method to stimulate to pay attention through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	7	7.0		
Disagree	4	4.0		
Neutral	16	16.0	4.04	1.205
Agree	24	24.0		
Strongly Agree	49	49.0		
Total	100	100.0		

The table 11 describes that 49% participants were strongly agreed that use of lecture method to stimulate to pay more attention through critical thinking, 24%

participants were agreed, 7% participants were strongly disagreed, 4% participants were disagreed and 16% participants were not answered. Most of participants strongly agree (M=4.04; SD =1.205).

Table 12

*The effort that teacher put into the module through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	3	3.0		
Disagree	5	5.0		
Neutral	7	7.0	4.33	1.016
Agree	26	26.0		
Strongly Agree	59	59.0		
Total	100	100.0		

Table 12 defines that 59% respondents were strongly agreed that effort that teacher put into the module through critical thinking, 26% respondents were agreed, 3% respondents were strongly disagreed, 5% participants were disagreed and 7% participants were remained unable. Most of participants strongly agree (M=4.33; SD =1.016).

Table 4.13

*With teacher's approachable and oral presentation through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	4	4.0		
Disagree	1	1.0		
Neutral	12	12.0	4.20	.974
Agree	37	37.0		
Strongly Agree	46	46.0		
Total	100	100.0		

Table 13 illustrates that 46% participants were strongly agreed that teacher's approachable and oral presentation through critical thinking, 37% respondents were agreed, 4% respondents were strongly disagreed, 1% participants were disagreed and 12% participants were not answered. Most of respondents strongly agree ( $M=4.20$ ;  $SD=.974$ ).

Table 14

*Apply the most important idea that was generated in class discussion through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	3	3.0		
Disagree	1	1.0		
Neutral	3	3.0	4.31	.837
Agree	48	48.0		
Strongly Agree	45	45.0		
Total	100	100.0		

Table 14 describes that 45% participants were strongly agreed that Apply the most important idea that was generated in class discussion through critical thinking, 48% respondents were agreed, 3% participants were strongly disagreed, 1% participants were disagreed and 3% participants were not answered. Most of participants strongly agree statement ( $M=4.31$ ;  $SD=.837$ ).

Table 15

*Explain the concept through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	2	2.0		
Disagree	6	6.0		
Neutral	14	14.0	4.10	.990
Agree	36	36.0		

Strongly Agree	42	42.0
Total	100	100.0

Table 15 shows that 42% participants were strongly agreed that explain the concept through critical thinking, 36% participants were agreed, 2% participants were strongly disagreed, 6% participants were disagreed and 14% participants were not answered. Most of participants strongly agree (M=4.10; SD =.990).

Table 16

*Identify to draw a diagram to illustrate the idea through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	2	2.0		
Disagree	1	1.0		
Neutral	27	27.0	4.11	.973
Agree	24	24.0		
Strongly Agree	46	46.0		
Total	100	100.0		

Table 16 explains that 46% participants were strongly agreed that Identify to draw a diagram to illustrate the idea through critical thinking, 24% participants were agreed, 2% participants were strongly disagreed, 1% participants were disagreed and 27% participants were remained unable to response. Most of the participants strongly agree (M=4.11; SD=.973).

Table 17

*Choose the exact content-specific objectives through critical thinking*

Scale	Frequency	%	Mean	SD
Strongly Disagree	1	1.0		
Disagree	4	4.0		
Neutral	11	11.0	4.34	.901
Agree	28	28.0		
Strongly Agree	56	56.0		
Total	100	100.0		

Table 17 determines that 56% participants were strongly agreed that Choose the exact content-specific objectives through lecture method, 28% respondents were agreed, 1% respondents were strongly disagreed, 4% participants were disagreed and 11% participants were not answered. Most of the participants strongly agree (M=4.34; SD=.901).

Table 18

*Design the opportunity to clarify material and they also provide feedback through critical thinking*

Scale	F	%	Mean	S.D
Strongly Disagree	6	6.0		
Disagree	4	4.0		
Neutral	9	9.0	4.19	1.143
Agree	27	27.0		
Strongly Agree	54	54.0		
Total	100	100.0		

Table 18 describes that 54% participants were strongly agreed that Design the opportunity to clarify material and they also provide feedback through critical thinking, 27% respondents were agreed, 6% participants were strongly disagreed, 4% respondents were disagreed and 9% participants were not answered. Most of respondents strongly agree (M=4.19; SD=1.143).

Table 19

*Lead to deeper understanding of course material through critical thinking*

Scale	F	%	Mean	SD
Strongly Disagree	3	3.0		
Disagree	2	2.0		
Neutral	11	11.0	4.33	.965
Agree	27	27.0		
Strongly Agree	57	57.0		
Total	100	100.0		

Table 19 describes that 57% participants were strongly agreed that Lead to deeper understanding of course material through critical thinking, 27% participants were agreed, 3% participants were strongly disagreed, 2% participants were disagreed and 11% participants were remained unable to response. Most of participants strongly agree.

Table 20

*Identify the objectives of topic through critical thinking*

Scale	F	%	Mean	SD
Strongly Disagree	2	2.0		
Disagree	7	7.0		
Neutral	10	10.0	4.15	.999
Agree	36	36.0		

Strongly Agree	45	45.0
Total	100	100.0

Table 20 describes that 45% respondents were strongly agreed that identify the objectives of topic through critical thinking, 36% respondents were agreed, 2% respondents were strongly disagreed, 7% participants were disagreed and 10% participants were not answered. The value of mean score 4.15 shows that most of participants strongly agree.

Table 21

*Easily understand the teaching style through critical thinking*

Scale	F	%	Mean	SD
Strongly Disagree	6	6.0		
Disagree	4	4.0		
Neutral	9	9.0	4.31	1.169
Agree	15	15.0		
Strongly Agree	66	66.0		
Total	100	100.0		

Table 21 presents that 66% participants were strongly agreed that easily understand the teaching style through critical thinking, 15% respondents were agreed, 6% participants were strongly disagreed, 4% participants were disagreed and 9% participants were remained unable to response. Most of participants strongly agree (M=4.31; SD=1.169).

Table 22

*Able to implement in the absence of a variety learning-teaching materials through critical thinking*

Scale	F	%	Mean	SD
Strongly Disagree	1	1.0		
Disagree	14	14.0		
Neutral	9	9.0	4.17	1.138
Agree	19	19.0		
Strongly Agree	57	57.0		
Total	100	100.0		

Table 22 describes that 57% participants were strongly agreed that Able to implement in the absence of a variety learning-teaching materials through critical thinking, 19% participants were agreed, 1% participants were strongly disagreed, 14% participants were disagreed and 9% participants were not answered. Most of participants strongly agree (M=4.17; SD=1.138).

Table 23

*Easily understand the topic of the course or subject through critical thinking*

Scale	F	%	Mean	S.D
Strongly Disagree	1	1.0		
Disagree	1	1.0		
Neutral	8	8.0	4.41	.767
Agree	36	36.0		
Strongly Agree	54	54.0		
Total	100	100.0		

Table 23 defines that 54% participants were strongly agreed that Easily understand the topic of the course or subject through critical thinking, 36% participants were agreed, 1% participants were strongly disagreed, 1% participants were disagreed and 8% participants were not answered. Most of the participants strongly agree (M=4.41; SD=.767).

Table 24

*Gain new idea of learning through critical thinking*

Scale	F	%	Mean	SD
Strongly Disagree	1	1.0		
Disagree	7	7.0		
Neutral	2	2.0	4.39	.909
Agree	32	32.0		
Strongly Agree	58	58.0		
Total	100	100.0		

Table 24 indicates' that 58% participants were strongly agreed that Gain new idea of learning through critical thinking, 32% participants were agreed, 1% participants were strongly disagreed, 7% participants were disagreed and 2% participants were not answered. Most of the participants strongly agree (M=4.39; SD=.909).

Table 25

*Enhance a new point of creativity through critical thinking*

Scale	Frequency	Percent	Mean	S.D
Strongly Disagree	7	7.0		
Disagree	6	6.0		
Neutral	25	25.0	3.72	1.164
Agree	32	32.0		
Strongly Agree	30	30.0		

Total	100	100.0
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Table 25 describes that 30% respondents were strongly agreed that enhance a new point of creativity through lecture method, 32% respondents were agreed, 7% respondents were strongly disagreed, 6% participants were disagreed and 25% participants were not answered. Most of respondents strongly agree (M=3.72; SD=1.164).

Table 26

*Gain the skills through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	6	6.0		
Disagree	2	2.0		
Neutral	13	13.0	3.93	1.018
Agree	51	51.0		
Strongly Agree	28	28.0		
Total	100	100.0		

Table 26 defines that 28% participants were strongly agreed that gain the skills through lecture method, 51% participants were agreed, 6% respondents were strongly disagreed, 2% participants were disagreed and 13% participants were not answered. Most of participants strongly agree (M=3.93; SD=1.018).

Table 27

*Gain new experiences through critical thinking*

Scale	F	%	Mean	SD
Strongly Disagree	3	3.0		
Disagree	6	6.0		
Neutral	6	6.0	4.02	.932

Agree	56	56.0
Strongly Agree	29	29.0
Total	100	100.0

Table 27 illustrates that 29% participants were strongly agreed that Gain new experiences through lecture method, 56% participants were agreed, 3% participants were strongly disagreed, 6% participants were disagreed and 6% participants were not answered. Most of participants strongly agree (M=4.02; SD=.932).

Table 28

*Can understand the new scientific ways of thinking through critical thinking*

Scale	Frequency	Percent	Mean	SD
Strongly Disagree	2	2.0		
Disagree	13	13.0		
Neutral	20	20.0	3.80	1.092
Agree	33	33.0		
Strongly Agree	32	32.0		
Total	100	100.0		

Table 28 explains that 32% participants were strongly agreed that understand the new scientific ways of thinking through critical thinking, 33% participants were agreed, 2% participants were strongly disagreed, 13% participants were disagreed and 20% participants were not answered. Most of participants strongly agree (M=3.80; SD=1.092).

Table 29

*Interpret reasonable and adjustable pace that balances content coverage through critical thinking*

Scale	F	%	Mean	SD
Strongly Disagree	4	4.0		
Disagree	11	11.0		
Neutral	10	10.0	4.08	1.195
Agree	23	23.0		
Strongly Agree	52	52.0		
Total	100	100.0		

Table 29 explains that 52% participants were strongly agreed that interpret reasonable and adjustable pace that balances content coverage through critical thinking, 23% participants were agreed, 4% participants were strongly disagreed, 11% participants were disagreed and 10% respondents were not answered. Most of participants strongly agree (M=4.08; SD=1.195).

### Results of T-test

Table 30

*T-test on the basis of age*

Age	N	Mean	SD	t-value	Sig.
Age group 21	35	36.32	6.87	1.626	.001
Age group 25	30	34.26	4.88		
Total	65				

Table 30 shows that respondents' age group 21 mean 36.32 and age group 25 mean is 34.26. Therefore, there is significance difference of opinion of age group 1 and age group 2 about the critical thinking.

Table 31  
*T-test on Subject*

Subject	N	Mean	SD	t-value	Sig.
Arts	40	11.00	2.26	1.458	.004
Science	25	11.70	2.53		
Total	65				

Table 31 shows that respondents' arts of mean 11.00 and respondent's science mean is 11.70. Therefore, there is significance difference between the opinion of arts and Science students about the critical thinking.

Table 32  
*T-test on the basis of level*

Level	N	Mean	SD	t-value	Sig.
11 <sup>th</sup>	30	10.36	2.14	1.458	.005
12 <sup>th</sup>	35	11.30	2.68		
Total	65				

Table 32 shows that respondents mean of level 11<sup>th</sup> is 10.36 and respondent's level of 12<sup>th</sup> mean is 11.30. Therefore, there is significance difference between the opinion of level 11<sup>th</sup> and level 12<sup>th</sup> about the critical thinking.

**Result of Z-Score**

Table 33

*T-test on the basis of level*

Level	N	Mean	SD	z-value	p-value
11 <sup>th</sup>	30	10.36	2.14	-1.57	.116
12 <sup>th</sup>	35	11.30	2.68		
Total	65				

Table 33 shows the comparison of respondents based on educational level. The mean score of 11th-grade students was 10.36 (SD = 2.14), while the mean score of 12th-grade students was 11.30 (SD = 2.68). The calculated Z-value was -1.57 with a p-value of .116. Since the p-value is greater than .05, the difference between scores of 11th and 12th-grade students is not statistically significant. There is no significant difference of 11th and 12th-grade students regarding the measured variable.

**Key Findings**

Following were the key findings of the study. The analysis of the study revealed that, 76% respondents' age were 21 years old and 24% respondents were 25 years old and 35% respondents' subjects were arts and 65% respondent's subjects were science. Table 3 shows that 45% respondents' level were 11<sup>th</sup> and 55% respondents were 12<sup>th</sup>. Results also explain that 76% respondents were strongly agreed with critical thinking. The result also shows 72% respondents were strongly agreed that taking interest through critical thinking, 17% respondents were agreed. The results present 42% respondents were strongly agreed that with oral communication and usage of objects in classroom through critical thinking. It is also found that 52% respondents were strongly agreed that Use verbal understanding through critical thinking.

The results define that 47% respondents were strongly agreed that Use A.V aids in classroom through critical thinking. Results presents that 54% respondents were strongly agreed that with wide subject knowledge through critical thinking. Table 11 determines that 54% respondents were strongly agreed that keep mentally active and present minded in classroom through critical thinking. Results of the

study describes that 49% participants were strongly agreed that use of lecture method to stimulate to pay more attention through critical thinking. Analysis also shows that 59% respondents were strongly agreed that effort that teacher put into the module through critical thinking.

Results illustrates that 46% respondents were strongly agreed that teacher's approachable and oral presentation through critical thinking. Analysis of the data describes that 45% respondents were strongly agreed that apply the most important idea that was generated in class discussion through critical thinking. Results also revealed that 42% participants were agreed that explain the concept through critical thinking, results also explains that 46% respondents were strongly agreed that identify to draw a diagram to illustrate the idea through critical thinking. Analysis also determines that 56% respondents were strongly agreed that choose the exact content-specific objectives through critical thinking. Results also describes that 54% respondents were strongly agreed that design the opportunity to clarify material and they also provide feedback through critical thinking. Most of participants strongly agree ( $M=4.19$ ;  $SD=1.143$ ). Analysis also describes that 57% respondents were strongly agreed that Lead to deeper understanding of course material through critical thinking. Most of participants strongly agree ( $M=4.33$ ;  $SD=.965$ ). Results also describes that 45% respondents were strongly agreed that identify the objectives of topic through critical thinking. The mean value shows that majority of respondents strongly agree. Results also presents that 66% respondents were strongly agreed.

Analysis describes that 57% participants were strongly agreed that able to implement in the absence of a variety learning-teaching materials through critical thinking. Most of respondents strongly agree ( $M=4.17$ ;  $SD=1.138$ ). analysis defines that 54% respondents were strongly agreed that easily understand the topic of the course or subject through critical thinking. Most of the respondents strongly agree ( $M=4.41$ ;  $SD=.767$ ).

Analysis also indicates' that 58% respondents were strongly agreed that gain new idea of learning through critical thinking. Most of the respondents strongly agree ( $M=4.39$ ;  $SD=.909$ ). analysis describes that 30% respondents were strongly agreed that enhance a new point of creativity through critical thinking. Results defines that 28% respondents were strongly agreed with this statement ( $M=3.93$ ;  $SD=1.018$ ).

Results illustrates that 29% respondents were strongly agreed that gain new experiences through critical thinking. Majority of respondents strongly agree with

this statement ( $M=4.02$ ;  $SD =.932$ ). Table values explains that 32% respondents were strongly agreed. Table 30 explains that 52% respondents were strongly agreed that interpret reasonable and adjustable pace that balances content coverage through critical thinking.

### **Conclusion**

In the light of the analyzed data, it is concluded that critical thinking depends on teaching methodologies. critical thinking also depends on classroom instructions. critical thinking depends on own style of teaching and exposition too. Moreover, critical thinking depends on general information on a subject. Similarly, critical thinking depends on change basic attitude. Likewise, critical thinking depends on teaching a particular skill. critical thinking depends on monitoring the progress. Furthermore, critical thinking depends on achievement of desired goals of the content. Besides, critical thinking on gain acceptance for a new point of view. Additionally, critical thinking on effective presenting the history of subject content.

Teacher should aware of objectives of content syllabus for better critical thinking. Additionally, teacher should teach content according to its nature for better critical thinking. Likewise, teacher should evaluate students according delivery of content for better critical thinking. Similarly, teacher should oral communicate through students for better critical thinking. Likewise, teacher should teach prescribed syllabus can be covered in short time. Equally, teacher should know different methodologies according to nature of subject for better critical thinking. In the same way, teacher should know different A.V aids according to nature of subject for better critical thinking. Moreover, teacher should implement teaching style according to need of classroom environment for better critical thinking. And teacher should motivate instigate and inspire a student for creative thinking. Lastly, teacher should encourage her students to take notes during the lesson.

### **Recommendation**

On the basis of finding and conclusion recommendations were made;

- It is suggested that Government should provide teacher education.
- It is recommended that teacher should focus on that critical thinking in which according to need of classroom management and environment and according to curriculum.

- It is recommended that Government conduct seminars, workshops for teacher to aware the objectives of teaching strategies.
- It is recommended that used in conjunction with active learning through teaching strategy.
- It is recommended that achieve instructional goals through critical thinking.

### **Suggestions for Future Study**

1. Research may be conducted on Teaching Strategies in Public Sector at Higher Level.
2. Future research should be conducted on role of teacher as researcher.
3. Future study has to be conducted, on large scale to compare provisional progress.

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