UNDERSTANDING THE ROLE OF METACOGNITIVE SKILLS IN FOSTERING CRITICAL THINKING AMONG STUDENTS IN HIGHER EDUCATION AT UNIVERSITY OF AGRICULTURE, FAISALABAD

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ABSTRACT

This research paper aims to explore the significance of metacognitive skills in fostering critical thinking among students in higher education. It highlights the importance of metacognitive training as a means to empower students with the necessary cognitive tools for academic success and lifelong learning. Critical thinking is crucial competency in the current knowledge-based economy and universities play a pivotal role in developing this skill in their students. This paper was analyzed the existing literature on the subject, discussed the theoretical framework and proposed practical strategies for educators to incorporate metacognitive practices in teaching methodologies to nurture critical thinking in higher education. For this purpose, 135 participants were conveniently selected out of 432 from M.Phil. (Education (weekend) program in University of Agriculture Faisalabad. A well-structured, valid and pretested questionnaire was used to collect data. The data were analyzed with the help of SPSS. Arithmetic Mean, standard deviation and percentages were being calculated to explain the results. While bivariate analysis through chai-square test was taken to check the correlation of variables. Increase the collaboration between students and teachers, increase understanding, develop confidence for explanation of topic, increase the multi linguistic skills, increase active participation of the students, enhance students' knowledge and skills and develop thinking skills in students to attain maximum grades were the major points as perceived by the respondents. According to the findings, metacognition, the ability to monitor, regulate and direct one's own thinking processes, had been identified as an essential factor in enhancing critical thinking capabilities. So, the collaboration between students and teacher is very important to improve the metacognitive skills in students. The institutions and administrators also take the responsibility for this process.

Keywords: Extent, conveniently, enhance, collaboration, determined

INTRODUCTION

Metacognitive skills play a crucial role in fostering critical thinking in higher Education. Critical thinking is the ability to analyze, evaluate and synthesize information in a thoughtful and reasoned manner. It goes beyond memorizing facts and requires students to engage in higher-order cognitive processes to solve complex problems and make informed decisions. It is one of the primary topics in educational organizations, conversations, research, seminars or university policies (Baskerville, 2023). The goals of critical thinking include issue comprehension and resolution, alternative assessment and decision-making. It also entails self-evaluation and careful consideration before making decisions (Bezanilla *et al.*, 2023). Metacognition helps students to become more aware of their thinking patterns, strengths and weaknesses. By understanding their cognitive processes, they can

identify biases, assumptions and gaps in their reasoning. This self-awareness is crucial for developing a more objective and rational approach to critical thinking. The primary characteristic of the many strategies for fostering critical thinking in the classroom is that it ought to be learner-centered rather than teacher-centered. Therefore, for the students' spectacular and long-lasting learning, as well as for its easy transfer to other real-world circumstances, the part of the learning process that they engage in is crucial (Adam, 2020). Metacognitive skills enable students to regulate their cognitive activities. They can plan, organize and monitor their thinking strategies when approaching complex problems or academic tasks. It would be useful to take into account what higher education students say about their own abilities to think critically when it comes to solving complicated issues, critically examining ideas and weighing benefits and drawbacks in various contexts. The influence of effective approaches to foster critical thinking should be examined despite the paucity of research based on the viewpoints of students (Elfeky et al., 2020). The ability to think critically may improve learning methods, time management and creativity. In addition to thinking within the confines of the rules and regulations, critical thinking also refers to the capacity to apply one's abilities to actual, non-content-based challenges in the real world. Any individual may get a thorough awareness of himself via the use of critical thinking. It will provide a chance to be impartial, less tender and more open-minded as anybody learns to value the thoughts and perspectives of others (Christie et al., 2023). Metacognitive skills encourage students to reflect on their learning experiences, analyze their successes and failures and evaluate their understanding of the subject matter. This reflective process leads to deeper insights and a deeper understanding of complex concepts, which is at the core of critical thinking. It is a domain-general thinking skill that desperate people to think clearly in every field of life specially while making important decisions. Critical thinking is not limited to a specific class of people or specific profession; it is useful and valuable for any career (Turner, 2020). Metacognitive skills encourage students to reflect on their learning experiences, analyze their successes and failures and evaluate their understanding of the subject matter. This

reflective process leads to deeper insights and a deeper understanding of complex concepts, which is at the core of critical thinking. Critical thinking ability is the ability which is started and processed by the left side of brain. Critical thinking is the higher order thinking process that can be used in the shaping of student's mental level. Critical thinking is sensible and thoughtful ability that focuses on decision making what to believe or do. Moreover, critical thinking skills are part of the logical thinking (Charles et al., 2019). Critical thinking helps students to develop strong analytical skills by enabling them to evaluate information objectively, identify patterns and make logical connections between ideas. This skill is crucial for interpreting complex academic texts, conducting research and analyzing data. Higher-level education often involves tackling complex problems and challenges. Critical thinking fosters a systematic and rational approach to problem-solving, enabling students to break down problems into manageable parts, consider alternative solutions and make informed decisions (Cotter et al., 2019). Critical thinking is an essential skill in higher education as it empowers students to think critically and independently, challenging assumptions and engaging with complex ideas. Metacognitive skills, on the other hand, are the self-regulatory processes that allow students to monitor and manage their cognitive activities. The link between metacognition and critical thinking has garnered increasing attention in educational research due to its potential to improve learning outcomes and enhance students' overall cognitive abilities. Critical thinking instills a curiosity and a desire for intellectual growth. It encourages students to ask questions, seek deeper understanding and continuously engage in critical inquiry throughout their lives (Ennis, 2023).

METHODOLOGY

Research might be described by the way of "the organized or systematic approach/method to obtain and confirm new knowledge that is reliable. Research is a procedure that starts through a problem and hush-up with the problem whichever address and resolution. A study is not regularly decisive; somewhat, it receipts the construction of a twisting, as it goes to present new difficulties or areas of consideration (Handley, 2017).

Research motivates additional research and cannot be measured as a once-off, linear, or a still act. Talking from an extensive context, there are four interactive phases of the research, the conceptual phase, it is phase in which planning and thinking takes place or done, the criterion aspect in this phase is the investigate problem. The experiential phase, this phase is the action or doing phase, or is the investigate plan phase. The interpretive phase, it is the phase in which the research engages with the study meanings and the last phase which is the communication phase or can be said that in which research report writing is done (Hirsch, 2019).

Study Area

The University of Agriculture, Faisalabad, was established in 1906 as the Punjab Agriculture College and Research Institute. It gained university status in 1961 and was renamed U.A.F. It has a strong emphasis on research and innovation. It has numerous research centers and institutions dedicated to conducting research in different areas. In the 21st century, U.A.F plays a crucial role in providing agricultural extension services to farmers and rural communities. U.A.F has established itself as a prominent institution in the field of agriculture and related sciences, contributing to the development of the agricultural sector in Pakistan.

In a knowledge-driven economy, universities play a crucial role in innovation systems as both a source of human capital and new information and ideas based on research. The goal of the vision 2023 Strategic Framework is to design an action plan that would raise UAF's status as one of the top research institutions in the world and a resource for Pakistan's agricultural and rural development. It offers the broad themes for more specific plans based on the pressing issues of the day that would guide strategic thought across the relevant planning cycles in the next years (http://web.uaf.edu.pk/#team). Postgraduate students at UAF's Institute of Agricultural Extension, Education and Rural Development (IAEERD) are the focus of this study.

Target Population

The term "population" refers to the group of individuals to whom we wished to apply our findings (Jennifer, 2016).

Target population is a large group of people which have same characteristics. Population is a set of grouping of all probable examination weather limited or endless applicable to some individuality of concentration. So, due to limited resources such as time, money and transportation, it is difficult for researcher to collect data from all population (Muhammad Kamal, 2017).

The study was descriptive in nature. The population of research work was considered as male and female students of M.Phil (Education) from weekend program. This figure of population was drawn from official website of UAF. Two sections had been selected randomly. This study included the data of two sections (A & B) from the department.

Sample Size and Sampling Technique

Sampling is a method that may be used to get reliable and accurate information from the universe at a minimum expenditure in terms of both time and energy. It reduces the amount of time and money needed to conduct the research significantly. This is a scaled-down representation of the whole population or the entire cosmos. A relatively small sample of the total population of representatives is chosen for the purposes of observation and research (Gay, 2022).

The study was undertaken with particular goals in mind, such as determining the function and impact of critical thinking. Sampling is technique utilize in statistical analysis wherein a re-arranged quantity of clarification is taken from a large population. All the students of M. Phil Education from weekend program were considered as the target population which is 432. The sample size of the study were 135 with the confidence interval 7% and confidence level 95% that is determine by using software i.e.; www.surveysystem.com. The sample of 135 students was selected through convenient sampling technique. The quantitative data were collected from the selected students through questionnaire keeping in view the study objectives. Collected data were analyzed by using statistical package for social sciences (SPSS).

Research Instrument Development

Research instrument development is the process of designing and creating tools or measures that are used to collect data in research studies. These

instruments can take various forms, such as questionnaire, surveys, interviews, observational protocols or experimental measures. It often requires multiple rounds of refinement and validation to ensure the instrument's reliability and validity. Instrumentation refers to changes in the calibration of a measuring instrument, observers or scorers used and can produce changes in the obtained measurements (Taherhood, 2016).

All the items were closely related with the objectives of research. The whole questionnaire was evaluated with the supervisory committee and the required subject matter experts to make sure that the research instrument seems to be valid on its face. The open-ended questions in the qualitative questionnaire included both critical thinking and the effects of this strategy on the education given at that post-graduate level.

Reliability of the Instrument

In the social sciences, the reliability of scales is evaluated using Cronbach's alpha. How strongly something is related to another, determines how consistent something is internally. It serves as a standard for something's dependability. It proves that the index entries have a common experience or point of view. In this specific study, Cronbach's alpha was used. The need that the scale items be similar in some way is stressed by this strategy. This technique coefficient gives the same signal as previously and illustrates how objects are form-fitting in size. The number that Cronbach suggests is 0.70 (George and Mallery, 2013).

By pre-testing the questionnaire (research instrument) on 20 M.Phil Edu students using Cronbach Alpha, the reliability of the instrument was evaluated and enhanced. The questionnaire (research instrument) had high reliability, according to the reliability test results. After pre-testing, items' uncertainty and complexity were removed to make them more comprehensible and dependable.

The Cronbach Alpha Coefficient was used in order to evaluate the instrument's level of internal consistency as well as its reliability. The value of the Cronbach Alpha Coefficient for the 20 items was shown to be 0.865 in the table that was shown earlier. The findings demonstrated that the research instrument was reliable.

DATA COLLECTION

It is information derived from direct fieldwork not from someone's work. The researcher themselves collects it during their own research. It can be taken by quantitative forms. It is the genuine form of collecting first-hand knowledge. It can be collected in different ways like surveys, interviews, observation and experiments. It is time-consuming and quite expensive form of data collection (Neil, 2010).

After research tool administering the data were collect by the researcher from selected students from M.Phil Edu. The researcher briefed the respondents on the objective of the study. This enabled them to explain certain items on the questionnaire so that the questionnaire would be properly filled. The questionnaire was administered by the researcher through online process from the respondents and collected the data. This method ensured the correct completion and high percentage return of completed questionnaire.

A well-structured questionnaire was developed to the collection of primary data. It was pretested on 20 students who were not included in respondents to determine the validity of the questionnaire. The necessary amendments were made in the well-structured questionnaire on the result of pretest. The researcher tried best to create a friendly and amicable atmosphere to collect the original information during data collection.

FINDINGS
Research Question 1
To identify the demographic characteristic of respondent.
Demographic attributes of the respondents
In this section, the detailed socio-economic characteristics of the respondents are explained. The major demographic characteristics included the age of respondents, gender, educational level, professional qualification and monthly income of the

Reliability Statistics

Cronbach's Alpha	N of Items
.865	19

respondents. It was obligatory to explore the demographic condition of respondents because it could have an association with the causes and effects of the critical thinking (Robards, 2019).

Consequently, socioeconomic characteristics of the respondent's family became an independent variable in the study.

Table 1
Socio-economic characteristics of the respondents

Age of respondents	Frequency (*f*)	Percentage (%)
20-25	27	20.0
26-30	38	28.1
31-35	25	18.5
Up to 35	45	33.3
Gender	**Frequency (*f*)**	**Percentage (%)**
Male	82	60.7
Female	53	39.3
Educational level	**Frequency (*f*)**	**Percentage (%)**
M. Phil Education	135	100.0
Professional Qualification	**Frequency (*f*)**	**Percentage (%)**
B.Ed.	76	56.3
M.Ed.	59	46.7
Monthly Income	**Frequency (*f*)**	**Percentage (%)**
Less than 50,000	54	40.0
50,000-100,000	21	5.6
100,000-150,000	18	13.3
More than 150,000	42	1.1

DISCUSSION

Above table shows the frequency distribution about age of the respondents. Less than one fifth (20.0 %) of the respondents were belong to 20 to 25 years age. One fourth (28.1%) of the respondents were belong to 26 to 30 years age. Less than one fifth (18.5 %) of the respondents were belong to 31 to 35 years age. Almost one third (33.3 %) of the respondents were belong to above 35 years age. More than half (60.7%) male was observed and the female respondents were less than half (39.3%). More than half (56.3%) of the respondents were belong to B.Ed., where less than half (43.7%) of the respondents were belong to M.Ed. Less than half (40.0 %) of the respondents were taking less than 50,000 rupees. Less than one fifth (15.6%) of the respondents were taking 50,000-100,000 rupees. Less than one fifth (13.3%) of the respondents were taking 100,000-150,000 rupees. One third (31.1%) of the respondents were taking more than 150,000 rupees.

Research Question 2

What is your opinion about the development of critical thinking at postgraduate level?

Attributes of the development of critical thinking at higher level

Critical thinking requires the ability to analyze complex information and break it down into its constituent parts. This involves identifying patterns; evaluate evidence and recognizing logical relationships between ideas or concepts. Higher level critical thinking involves the application of the analytical skills to solve problems effectively. Critical thinking is not limited to analytical and logical reasoning; it also involves creative and innovative approaches to problem-solving. Critical thinkers must be able to communicate their thoughts and ideas clearly and effectively. It is an ongoing process and these attributes not mutually exclusive (McGregor, 2023).

Table 2
Attributes of the development of critical thinking at higher level

Sr	Attributes of critical thinking	Mean	S.D	Remark
1.	Increase multi linguistic skills	3.56	1.77	Agree
2.	Increase active participation of the students	3.51	1.62	Agree
3.	Make students effective learner	3.35	1.62	Neutral
4.	Increase collaboration between students and teachers	3.34	1.54	Neutral
5.	Develop confidence for explanation of topic	2.85	0.79	Neutral
6.	Develop retention power	2.73	0.72	Neutral
7.	Increase memorization	2.67	0.67	Neutral

(Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree)

DISCUSSION

Above table shows depicts the distribution and descriptive statistics for different attributes of critical thinking at higher level, where mean and standard deviation are addressed. Increase the multi linguistic skills ranges from neutral to agree with (Mean=3.56±S.D=1.77) and tended towards agree. Increases active participation of students ranges from neutral to agree with (Mean=3.42±S.D=1.62) and tended towards agree. Make children successful learners ranges from neutral to agree with (Mean=3.35±S.D=1.62) and tended towards neutral. Increase collaboration between teachers and students ranges from neutral to agree with (Mean=3.34±SD=1.54) and tended towards neutral. Develop confidence for explanation of topic ranges from neutral to agree with (Mean=2.85±S.D=0.79) and tended towards neutral. Develop retention power ranges from neutral to agree with (Mean=2.73±S.D=0.72) and tended towards neutral. Increase memorization ranges from neutral to agree with (Mean=2.67±S.D=0.67) and tended towards neutral. The overall results indicate that according to the highest rank of the study, teachers should improve the multilingual skills for the better understanding and development of critical thinking in the students. Whether it's for personal enrichment, career advancement or having a clear goal can motivate throughout the learning process (Chapple *et al.*, 2020). Self-evaluation should be an ongoing process. Regularly assess the progress, make adjustments as needed and keep refining the approach. To gain new insights and experience, must update strategies and goals accordingly. Remember, self-evaluation is a tool for growth and improvement. Embrace the process, be kind to yourself and stay committed to your goals (Arslan *et al.*, 2018).

Research Question 3

What is your opinion about the various factors that involves in developing of critical thinking at postgraduate?

Various factors that involve in developing critical thinking at higher level

Developing critical thinking skills is a valuable asset that helps individuals to analyze information, make informed decisions and solve problems effectively. Several factors contribute to the development of critical thinking. Multiple factors are shown in the following table which was responded by the respondents.

Table 3

various factors that involve in developing critical thinking at higher level

Sr.	Various factors involves in developing critical thinking	Mean	S.D	Remarks
1.	Increase the multi linguistic skills.	3.56	1.77	Agree
2.	Increases active participation of students.	3.54	1.32	Agree
3.	Increase the collaboration between teachers and students.	3.02	1.61	Neutral
4.	Increase understanding.	2.99	1.15	Neutral
5.	Develop confidence for explanation of topics.	2.85	0.75	Neutral
6.	Develop retention power.	2.73	0.79	Neutral
7.	Increase memorization.	2.69	0.67	Neutral

(Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree)

DISCUSSION

Above table shows the distribution and descriptive statistics regarding encouraging a collaboration approach to problem-solving along with the mean and standard deviation. Increase the multi linguistic skills ranges from neutral to agree with (Mean=3.56±S.D=1.77) and tended towards agree. Increases active participation of students ranges from neutral to agree with (Mean=3.41±S.D=1.32) and tended towards agree. Increase the collaboration between teachers and students ranges from neutral to agree with (Mean=3.02±S.D=1.61) and tended towards agree. Increase understanding ranges from neutral to agree with (Mean=2.99±S.D=1.15) but tended towards neutral. Develop confidence for explanation of themes ranges from neutral to agree with (Mean=2.85±S.D=0.75) and tended towards neutral. Develop retention power ranges from neutral to agree with (Mean=2.73 ± S.D=0.79) and tended towards neutral. Increase memorization ranges from disagree to neutral, with (Mean=2.69± S.D=0.67) and tended towards neutral. The overall results indicate that highest rank of study showed that increase the collaboration between students and teacher can positively effects on the student behaviour as well as learning. So, teacher should create a team with different members from different backgrounds, experiences and areas of expertise. Diverse perspectives can foster innovative thinking, leading to the better critical analysis (Elbyaly, 2021). The highest rank of the study, teachers should

improve the multilingual skills for the better understanding and development of critical thinking in the students. Whether it's for personal enrichment, career advancement or having a clear goal can motivate throughout the learning process (Doyle, 2020).

Research Question 4

What is your opinion about the Effects of critical thinking on students' behaviour about developing a critical thinking at postgraduate level?
Effects of critical thinking on students' behavior
The effects of critical thinking on students are far-reaching and significant. Abrami (2018) highlighted the positive impact of critical thinking skills on academic achievement and cognitive development. It enhances their ability to identify biases, recognize logical fallacies and approach problems with a systematic and evidence-based approach. Critical thinking also cultivates independent and reflective thinking, allowing students to question assumptions, consider alternative perspectives and form well-grounded opinions. Moreover, critical thinking skills are transferable and applicable across various academic disciplines and real-world contexts. Students who possess strong critical thinking abilities are better prepared to succeed academically and navigate the complexities of the modern world (Kaur, 2019). Some positive effects of critical thinking were responded by the respondents in above table.

Table 4

Effects of critical thinking on students' behaviour

Sr.	Effects of critical thinking	Mean	S.D	Remarks
1.	Make them disturbed.	2.81	1.83	High
2.	Reduce the class management ability.	2.54	1.27	High
3.	Deteriorate the communicative skill.	2.52	1.25	High
4.	Increase stress in teachers.	2.45	1.20	Medium
5.	Reduce the confidence.	2.44	1.18	Medium
6.	Reduce the speaking skill.	2.34	1.21	Medium

(Scale: 1=Low, 2=Medium, 3=High)

DISCUSSION

Above table shows the distribution and descriptive statistics about how critical thinking affects pupils, along with mean and standard deviation. Make them disturbed ranges from medium to high with (Mean=2.81±S.D=1.83) and tended towards high.

Reduce the class management ability ranges from low to high, with (Mean=2.54±S.D=1.27) and tended towards high. Deteriorate the communicative skills ranges from low to high with (Mean=2.52±S.D=1.25) and tended towards high. Increase stress in teachers ranges from low to medium and tended towards medium with (Mean=2.45±S.D=1.20). Reduce the confidence ranges from low to medium and tended towards medium with (Mean=2.44±S.D=1.18). The respondents' response about reduce the speaking skills ranges from low to medium and tended towards medium with (Mean=2.34±S.D=1.21). The above results show that critical thinking skills play a crucial role in the intellectual development of students and have both positive and negative effects. Some positive effects of critical thinking on students are: Enhanced problem-solving skills, encourages students to analyze problems from multiple perspectives, identify logical solutions, apply creative problem-solving techniques, improved decision-making abilities, empowers students to evaluate information, weigh different options, consider consequences, make informed decisions based on evidence and reasoning (Waston *et al.,* 2020). Negative effects of critical thinking on students: An overemphasis on critical thinking can sometimes lead to excessive skepticism, causing students to doubt everything without considering the merits or evidence behind the information. This may hinder their ability to trust legitimate sources and make informed decisions, students may become overly analytical and detached when applying critical thinking skills, potentially overlooking emotional aspects and empathy (Hopkins, 2018). So, teachers and educators play a crucial role in guiding students to effectively apply critical thinking while addressing potential limitations and challenges (Hotulainen *et al.*, 2019).

Research Question 5

what is your opinion about relation between factors and effects of critical thinking at post graduate level?
Cross tabulation and statistical results of the relation between factors and effects of critical thinking at post graduate level
In this section, results of all variables are being presented through cross tabulation of each variable separately. Moreover, chai-square test for each

variable is also presented which showing significance of the relationship between dependent and independent variables which lead to the results as well as conclusion of the research. Results are compared with p-value if the p-value is > than 0.05 than the results consider significant otherwise non-significant.

Table 5
Relationship between causes and effects of developing critical thinking in higher education

Sr.	Causes	Effects	p-value
1.	Teachers are not well trained	Low self-esteem	0.015
2.	Students are not serious	Decrease the cooperation ability	0.034
3.	Classroom management is poor	Reduce the speaking skills	0.021
4.	Management cannot motivate teachers	Increase stress in students	0.037
5.	Teachers feel shy	Compatibility the communication skills	0.025
6.	Institution's infrastructure is big hindrance	Make the teacher's student's relationship weak	0.071

DISCUSSION
The above table 5 shows the association between causes and effects of critical thing in higher education. In this comparative study, Chi-square test has been applied to check the significant association between categorical variables and results are compared with p-value, if the p-value is > than 0.05, the results consider significant otherwise non-significant. On the basis of above result, there is significant association between "teachers are not well trained" and "low self-esteem" by Chi-square tests with p-value=0.015. The association between "students are not serious" and "decrease the cooperation ability" can be checked. So, there is significant association indicated between the categorical variables by Chi-square tests with p-value = 0.031. The association between "classroom management is poor" and "reduce the speaking skills" can be checked. So, there is significant association indicated between the categorical variables by Chi-square tests with p-value=0.034. On the basis of above result, there is significant association between "management cannot motivate teachers" and "increase stress in students" and the grades are indicated by Chi-square tests with p-value=0.037. Therefore checked the association between the "teachers feel shy" and "compatibility the communication skills". The above results of "p-value=0.025" show that there is a significant association between the categorical variables. Chi-square test was used to see if there was a significant relationship between the "institution's infrastructure is a big hindrance" and "reduce the class management ability". The results shown above indicate that the categorical variables have a significant relationship by "Chai-square test with p-value=0.041".

CONCLUSION AND RECOMMENDATIONS
The results of the study are concluded that metacognitive skills are integral to development of critical thinking in higher education. By cultivating self-awareness, cognitive regulation, goal-setting and reflection, students can become more proficient critical thinkers and better equipped to succeed academically and in their future careers. It can be defines as an ability of a person to think with logic and use of different tricks that can be apply while dealing with daily life issues. Critical thinking can be defined as problem solving equipment. This research explains the qualities of critical thinking in educational process and its importance in student's life to develop their thinking skills. To develop critical thinking is the important part of modern education system. Students with strong metacognitive skills are more adaptable in their thinking. They can switch between different thinking strategies based on the context and the nature of the problem they are facing, leading to more flexible and well-rounded critical thinking abilities. This research aims to provide a framework for the better understanding about critical thinking and its importance in teaching learning process. So, the government as well as the institutions should take some initial steps for the betterment of education system as well as students. Teacher should be cooperate with students in class rooms in completing the different tasks and also gave feedback of students questioning during class and also appreciate for their questioning. Teacher should be assigned project based assignments to students in this way they utilize new and modern approaches to complete the tasks and check their thinking level. Teachers should be

study the different leaning techniques that help in the development of critical thinking. Teachers should debates, challenge assumptions and ask probing questions to make the students able to gain deeper understanding about subject matter. Students should engage themselves with scholarly articles, research papers and books that present complex ideas and arguments. Critically evaluate the sources and assess their validity, reliability and relevance. Students must be engage in group projects, case studies and problem-solving activities with classmates and encourages critical thinking through discussion and feedback. Critical Thinking is a skill that requires practice and continuous improvement. By applying these recommendations, students can strengthen their critical thinking abilities at the postgraduate level.

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