

**EXPLORING THE INTERPLAY BETWEEN CRITICAL THINKING AND
ARGUMENTATIVE WRITING SKILLS PURSUING THE BACHELOR DEGREE
STUDENTS OF GOVERNMENT COLLEGE UNIVERSITY FAISALABAD**

RIMSHA PARVEEN

Mphil Scholar Government College university Faisalabad

rimshaparveenok007@gmail.com

DR. SYED KAZIM SHAH

Assistant Professor, Department Applied Linguistics,

Government College University Faisalabad, Pakistan. kazim.shah@gcuf.edu.pk

ZEENAT RUBAB

Mphil Scholar Government College university Faisalabad

Email. Zeenatrubab199@gmail.com

SHUMAILA AISH BAHADUR

Comsat University, Lahore

shumailaish123456@gmail.com

Abstract

The concept of critical thinking is arduous and complex, its nature is difficult to define and challenging for those students who come from Western or non-native backgrounds, who often encounter difficulties in incorporating a critical aspect into their writing. Both qualitative and quantitative methods were employed to explore the relationship between critical thinking and argumentative writing skills. Through convenient sampling, information from 105 individuals with majors in applied linguistics, international relations, and psychology departments was obtained for this study. To assess participants' writing and critical thinking skills, the study used a critical thinking questionnaire that was developed totally based on the 'Delphi Consensus statement of Critical Thinking' collectively formulated by a panel of forty six CT experts and an argumentative writing essay for scoring argumentative essays VSTEP rubric (Vietnamese Standardized test of English skill ability, 2014) was used. Three stages made up the data gathering process: piloting the questionnaire, disseminating it, and giving the writing exam, which demonstrated high reliability (Cronbach's Alpha=0.87). The study found a weakly positive association between the capacity to write persuasively and critical thinking (multiple R = 0.1188). However, only 1.41% of the variance in writing scores could be assigned to critical thinking (R Square = 0.0141), indicating that critical thinking had a poor ability to predict writing performance. Although critical thinking may influence writing abilities, the ANOVA results did not provide statistical significance for critical thinking as a predictor of writing skills, suggesting that it may not be a strong or reliable predictor in this particular situation.

Keywords: *Criticalthinking (CT), Writing, Proficiency, ANOVA, Mixed method*

Introduction

Critical thinking and argumentative writing skills are vital components of better training that play a critical role in shaping students' academic and intellectual development (Andrews 2003, p.120). The interplay among these two skills is of good-sized interest to educators and researchers because it influences students' potential to analyze, examine, and assemble excellently-reasoned arguments. This research aims to discover the relationship among critical thinking and argumentative writing abilities among bachelor degree students of Government College University Faisalabad. Critical thinking refers back to the capacity to suppose analytically, verify statistics, and make reasoned judgments based on evidence and logical reasoning. It includes being open-minded, questioning assumptions, and comparing arguments severely (Ennis, 1987). Alternatively, argumentative writing includes the construction of persuasive arguments supported by proof and sound reasoning. It calls for students to organize their mind coherently, present evidence effectively, and count on counterarguments (Toulmin, 1958). Expertise the interaction among important thinking and argumentative writing capabilities is important for boosting college students' educational performance and usual cognitive abilities. As college students' progress via their instructional journey, they're required to engage in argumentative writing tasks, together with essays, studies papers, and presentations. The improvement of strong critical thinking skills is critical for generating well-dependent and compelling arguments. While preceding studies have explored vital thinking and argumentative writing skills in my review, there is studies gap in investigating their interrelationship among bachelor degree students in Government College University Faisalabad. The context of better training in Pakistan offers specific demanding situations and opportunities for nurturing these competencies, and this have a look at pursuits to address this gap.

For the cause of undertaking this study the researcher used a mixed-method approach, which includes each quantitative and qualitative method. Surveys based questionnaire and standardized Argumentative writing test utilized to measure critical thinking and argumentative writing abilities. This study will make contributions to the existing literature on the relationship among critical thinking and argumentative writing abilities among bachelor degree students. The findings will help educational institutions to layout powerful pedagogical strategies that sell the integration of these abilities within the curriculum, leading to greater capable and proficient graduates. The exploration of the interaction between critical thinking and argumentative writing abilities among bachelor degree students at government college university Faisalabad holds widespread implications for instructional practices and pupil results. Through knowledge the dynamics of these abilities, educators can better equip college students with the tools important for fulfillment in academia and beyond. This study aspires to shed light on this essential aspect of students' cognitive improvement, enriching the academic network with valuable insights and recommendations.

Literature Review

Undergraduate students have recently shown a growing interest in researching the connection between critical thinking and academic writing abilities. With a particular focus on students enrolled at Government College University Faisalabad, this literature review attempts to analyze the recent research done between 2018-2023 on the interaction between critical thinking and argumentative writing abilities among bachelor degree students. The review looks at how critical thinking may improve argumentative writing skills and emphasizes where we still aren't completely familiar with this connection. According to Putri (2018), in the second year of an Islamic Senior High School in Palembang, South Sumatera, Indonesia, this literature study focuses on examining the relationship between critical thinking abilities and persuasive writing abilities. The Cornell Critical Thinking Test (CCTT) and an argumentative writing test were used in the study, which included a sample of sixty students. The data were analyzed using regression analysis and the Pearson Product Moment Correlation Coefficient. With a correlation value of .695, the findings showed a statistically significant and favorable association between the students' critical thinking abilities and their argumentative writing abilities. The strength of the link was further demonstrated by the p-value, which was found to be (.000), which was lower than the selected significance threshold (.000 .005). Regression analysis was used to determine how many the students' critical thinking abilities contributed to their ability to write persuasively, and the results showed a substantial 48.4% influenced (Putri, 2018, p. 144-153).

According to Marni and Harsiati (2019), their study focused on examining the critical thinking patterns of first-year students in argumentative essays to examine how students used critical thinking skills when writing argumentative essays, as well as to describe and examine the critical components of the students' arguments. In this study, the content analysis approach was used. Data were gathered from argumentative essays that first-year Brawijaya University students taking Indonesian Language courses had authored. There were 90 postings in the complete dataset. The gathering of data was done through assignments and interviews. The six stages of Cresswell's data analysis procedures—preparation and organization, data exploration, use of codes, representation of results, creation of interpretations, and validation of the veracity of the findings were used to analyze the acquired data. Three critical thinking patterns—pattern I (inference-evaluation), pattern II (analysis-evaluation), and pattern III (interpretation-evaluation)—were identified via the study of the students' writings. While patterns I and III each featured just one pattern, pattern II had four variants. The study's conclusions showed that the students' critical thinking techniques were mostly analytical in nature. This included examining diverse phenomena and providing support and justification in order to draw logical conclusions.

In order to help their students, improve their critical thinking abilities, writing professors in higher education might use the patterns that have been established as a useful resource. By recognizing these tendencies, teachers may create instructional techniques that will encourage and improve students' capacity for analytical writing in academic contexts (Marni & Harsiati, 2019).

Another research conducted by Samanhudi and Linse (2019) investigated critical thinking-related challenges faced by Indonesian postgraduate students at a UK University in the context of

academic writing. The study investigated the opinions of Indonesian students on the difficulties they faced when composing critical academic essays at a UK university. The study used a qualitative approach to gather data and identified four main problems that prevented students from applying critical thinking to their essay writing: unclear ideas, insufficient critical analysis, insufficient critical evaluation, and imprecision. The study also discovered three significant characteristics that are responsible for these difficulties in students' critical thinking growth throughout essay writing. These included differences in academic standards between the Indonesian and British educational systems, a lack of critical awareness, and a poor comprehension of critical thinking principles. The study's conclusions are highly noteworthy because they provide useful suggestions for strengthening curricula and writing training to enhance critical thinking abilities among overseas Indonesian students at the university level. The study's goals include improving critical thinking pedagogy in this particular educational setting and attending to students' unique requirements (Samahudi & Linse, 2019).

Islamiyah and Fajri's research from 2020 sought to understand how Indonesian master's students thought about critical thinking in academic writing at a British university. Despite its contentious nature, critical thinking was highly regarded as an essential talent for university graduates, particularly in the context of academic writing, which served as the main way of assessment. However, it was frequently difficult for overseas students from "non-Western" backgrounds to articulate critical ideas in their writing. Four Indonesian Master's students were interviewed as part of the study to learn about their ideas on critical thinking, determine what influences how it is used in academic writing, and assess its evolution. The results of the analysis showed that despite having different cultural and educational backgrounds, the participants had a sufficient grasp of critical thinking and were eager to learn more about it. Despite the importance of their cultural and educational experiences on their writing styles, they also demonstrated adaptation to new discourses. However, they had trouble categorizing concepts, retaining grammatical competency, and synthesizing and analyzing information. Based on the study's findings, it was advised that colleges and tutors reexamine their writing guidelines, putting more emphasis on writing techniques, and thinking about changing the traditional essay style to allow for a larger variety of original emotions. These modifications would better benefit overseas students in developing their academic writing and critical thinking skills. Pages 440–4422 of *The Qualitative Report's* volume 25, issue 12 include the study's findings. Previously,

Using the Cooperative Integrated Reading and Composition (CIRC) technique in Academic Writing courses, Susilo et al. 2021 focused on encouraging EFL students' critical thinking and self-expression. Critical thinking and self-expression were two crucial abilities that helped students write succinct, original academic texts. While the majority of writing programs and studies had previously concentrated on raising students' writing achievement, English as a Foreign Language (EFL) writing classes paid less emphasis to fostering these skills. This article described a classroom-based study that looked at how to improve academic writing skills in EFL students using the Cooperative Integrated Reading and Composition (CIRC) technique. 64 undergraduate English Education majors participated in the study using a participatory qualitative methodology. Data were gathered via participant writing portfolios, teacher responses, and observations. NVivo 12 was then used to organize, categorize, and analyze this data in order to find emergent trends. According to the findings of the qualitative content analysis, it was clear from the participants' writing assignments and student-centered activities

that the CIRC technique had a substantial impact on the participants' critical thinking and self-expression abilities. The participants actively engaged in writing processes that were productive, such as critical reading, taking notes, summarizing, drafting and rewriting compositions, peer reviewing, and other teamwork techniques. The results showed that improving students' critical thinking and self-expression abilities had a favorable effect on the caliber of their academic work (Susilo, et al., 2021).

The study undertaken by Murtadho (2021) in this action research concentrated on the application of meta-cognitive and critical thinking activities to foster the development of argumentative writing abilities among EFL students. To improve the argumentative writing abilities of college students in Indonesia, the functions of writing instruction incorporating meta-cognitive and critical thinking strategies were investigated. A key area of research for college-level writing development has been the improvement of argumentative writing. 88 students from three concurrent classrooms taking a course on writing skill improvement were included in the study. According to the action research paradigm developed by Kemmis and McTaggart (1988, 2014), the study was carried out over the course of one semester using a three-cycle action plan with four stages: problem-solving, keeping track of pupils' educational activities, assessment, and conclusion-making. To improve the students' argumentative writing skills, each cycle of instruction included learning activities that utilized metacognitive and critical thinking strategies. The results showed that the incorporation of metacognitive and critical thinking processes in the instructional treatments led to considerable gains in the students' argumentative writing skills, according to the study utilizing critical skill criteria as a baseline. This demonstrates the crucial function that metacognition plays in writing training as a method for improving college-level writing abilities (Murtadho, F., 2021).

The study by Nguyen and Nguyen (2020) examined the relationship between critical thinking and argumentative writing among Vietnamese students. Particularly in higher education and language instruction, critical thinking has grown to be acknowledged as an essential academic talent in the learning process. This talent was crucial in Vietnamese higher education as well, given the international nature of the digital age. However, critical thinking remained a relatively new notion in the Vietnamese educational system, with few researches studying its relationship with argumentative writing. This was in spite of the increased demand for students to improve their subject-specific knowledge and analytical skills. As a result, the descriptive study examined how Vietnamese EFL (English as a Foreign Language) university students' critical thinking skills connected to their ability to write argumentative essays. A questionnaire and an essay writing test were used to gather information from 126 EFL students at three universities in the Mekong delta of Vietnam. The study discovered no statistically significant correlation between students' critical thinking and their argumentative writing. However, the results showed that Vietnamese EFL university students had a high degree of critical thinking. The findings revealed that Vietnamese EFL instructors' use of educational techniques and exercises in Mekong region universities successfully encouraged students' cognitive growth. Yet, it is found that it also underlined the necessity for EFL teachers and stakeholders to take immediate action in order to discover workable ways to enable students to utilize their cognitive skills successfully in their writing and other language skills. (Nguyen, T. S., & Nguyen, H. B., (2020).

More recently, Suteja and Setiawan's study 2022 examined students' critical thinking and writing abilities in project-based learning and described the connection between such abilities in primary school pupils. Through project-based learning methods, the research's major goal was to describe students' writing and critical thinking abilities. The study used a quantitative strategy and a quasi-experimental design. A nonequivalent pretest-posttest control group design was used in the investigation. 50 students made up the sample, 25 of whom were in the experimental group and 25 of whom were in the control group. Students in 6th grade from a Bandung school were chosen for the study. An assignment test was used to gauge students' writing abilities for persuasive writings, and a description test was used to gauge their critical thinking. To ascertain the connection between critical thinking and students' writing abilities, the study used an ANOVA. The T-test was also utilized to examine the variations in the students' capacity for persuasive text creation before and after exposure to the project-based learning paradigm. The findings showed a link between pupils' writing abilities and critical thinking. Additionally, the significance value of 0.00, which was less than 0.05, showed that students' writing abilities significantly improved after adopting the project-based learning paradigm. This suggests that the project-based learning approach has a positive effect on improving the writing and critical thinking abilities of elementary school pupils (Suteja, S., & Setiawan, D. 2022).

The Theoretical Constructs of Critical Thinking

Following Kaplan's study in 1966 that compared cognitive patterns across cultures, other studies have offered some evidence that there are cultural variances in how people think and learn. This cross-cultural analysis served as the foundation for contrastive rhetoric (CR), a field of study that held that "different groups of languages reflected different cultures and literary practices" (Canagarajah, 2002). According to studies, the fundamental difference between "non-mainstream" or Confucian-based learning methods and Anglo-American academic models is their emphasis on critical thinking (Cadman, 2000; Egege & Kutieleh, 2004). The presented results suggest that students from Asian nations or "Confucian-heritage cultures" (CHC) such as China, Vietnam, Korea, Singapore, and Japan avoided applying critical thinking to academic texts and were thought to be unaware of what critical thinking and evaluation entailed (Biggs, 1987, 1994; Ballard and Clanchy, 1991). These cultures' lack of critical thinking has mostly been related to their rote-learning-based educational system and their respect for teachers and academics, where any criticism can be seen as impolite and disrespectful (Andrews, 2007).

Bloom Taxonomy Critical Thinking Model

Benjamin Bloom proposed the Bloom's taxonomy in 1956. It describes numerous kinds of thinking abilities, from simple memory recall to higher-order critical thinking. According to Bloom, B. S. (Ed.) (1956), it divides cognitive processes into six categories: recollecting, comprehending, applying, assessing, and developing ideas.

Paul-Elder Framework for Critical Thinking

Linda Elder and Richard Paul developed a model emphasizing critical thinking as the ability to identify and evaluate assumptions, analyze concepts, and assess evidence and arguments. Their framework consists of eight elements: purpose, question, information, interpretation, inference, concepts, assumptions, and implications (Paul, R., & Elder, L. 2001).

Theoretical Constructs of Argumentative Writing

Six elements make up Stephen Toulmin's model for building and evaluating arguments: the claim, the grounds, the warrant, the backing, the qualifier, and the rebuttal. According to Toulmin, S. E. (1958), this framework offers a methodical technique to presenting and assessing arguments. By using this model of thought, people can improve their ability to critically think, make informed judgments, and create persuasive arguments.

Rogerian Argumentation

The Rogerian method of argumentative writing was created by Carl Rogers and focused on finding areas of agreement between competing points of view as opposed to outright refuting them. It sought to promote consensus-building through dialogue and understanding (Rogers, C. R., 1951). Instead, then pursuing direct confrontation or striving to establish one's own position as superior, this strategy intended to promote understanding and discover common ground amongst people with different opinions. Situations with a lot of dispute or polarization benefited most from Rogerian argumentation. This strategy may encourage open dialogue and mutual understanding, which could result in more beneficial and fruitful interactions.

A potential research gap could be the lack of a specific focus on examining how the development of critical thinking skills impacts the improvement of argumentative writing skills in the context of GCUF bachelor degree students, according to previous studies mentioned in the topic "Exploring the Interplay between Critical Thinking and Academic Writing Skills Pursuing the Students of Government College University Faisalabad. There seems to be a research gap in understanding the direct interaction and reciprocal influence between critical thinking and academic writing specifically within the context of this particular university and its undergraduate students, even though previous studies have examined critical thinking and writing skills separately or in different educational settings. Therefore, more investigation is required to determine the distinctive elements, difficulties, and methods associated with fostering critical thinking skills and their relationship to improving academic writing proficiency among Government College University Faisalabad bachelor degree students.

Research Questions

This research-based study investigates the following question;

- What is the critical thinking ability of bachelor degree students of Government College University Faisalabad?
- What is the relationship between the critical thinking abilities of bachelor students of GCUF and their argumentative writing skills?

Methodology

Research Design

This mixed method study aims to investigate the potential correlation between the argumentative writing and the enhancement of critical thinking skills. Data were collected from 105 students at Government College University Faisalabad. The participants were major from Applied

Linguistics, International Relations and Psychology department of bachelor degree students. They mainly took part in research questionnaires and writing tests were from the 6th to 8th semesters. Participants were selected through convenient sampling. The entire participants answered the questionnaire same as well as solved argumentative writing test to measure their critical thinking ability and writing performance.

Instrumentation

Critical thinking questionnaire (Appendix A)

In order to analyze the students' critical thinking ability, two parts of the questionnaire was utilized. The first part deal with the participants' background such as ID number, age, gender, class, section and second part is followed by a list of thirty-four structured items that were used to measure their critical thinking ability which focused the main part of the instrument. Rating frequency of 34 items, each rated on a 5-point Likert scale that was starting from never = 1, rarely = 2, sometimes = 3, often = 4 and always = 5. This survey was created using a critical thinking questionnaire created by Dr. Peter Honey, a psychologist and the founder of Peter Honey Publications Ltd., as well as The Delphi Expert Consensus Definition of Critical Thinking, which was broadly accepted by a panel of 46 critical thinking experts [16].

Argumentative Essay (Appendix B)

An argumentative essay test was used to evaluate the writing of the students. The essay challenge introduced two forms of university classroom activities, either working in a team or working alone about which participants had varying opinions. The participants were asked for their thoughts on the subject. Due to the fact that university learning necessitates many types of activities, either in a group or by oneself, it was assumed that university students were familiar with this topic. A written test was invalid, in accordance with Hyland's [33], if the subject matter calls for specialized expertise that test takers lack. Additionally, participants could make the use of their prior knowledge on the subject while discussing topics that are familiar to them [5]. The minimal word required for the writing test was 250.

Rubric for marking writing test (Appendix B)

In addition to the survey and the writing test, a rubric for scoring argumentative essays turned into evolved the usage of the VSTEP (Vietnamese Standardized test of English skill ability). A scoring device with "similar interpretations of universal CEFR level classifications" was well regular by means of Vietnamese universities. The four VSTEP criteria challenges final touch; organization; vocabulary, and grammar have been broken down into seven classes; Topic presentation, thesis statement, evidence to support it, refutation of that evidence, conclusion, organization (structure and transitions), and language (vocabulary, syntax, and mechanics) were the components. From 1 (do no longer meet the necessities) to four (excellence), every criterion is scored, total of 28 factors can be earned from the seven classes. The primary five criteria descriptions have been modified from Liu's rubric for writing crucial notion [35]. The ultimate was created using VSTEP. Three EFL instructors with revel in coaching and grading writing provided robust validation for the present-day criteria.

Data Procedures

The three primary phases of the data collection process were as follows: 1 piloting the questionnaire 2 distributing the questionnaire to the participants themselves 3 giving out the writing test. The questionnaire was trustworthy for the real study (Cronbach's Alpha=0.87) after being piloted on 30 students with backgrounds similar to those of the official participants and confirmed by experienced M.Phil scholars. With the approval of the responsible professors, the questionnaire and the essay test will be administered in July 2023. Students were told about the study goals, questionnaire, and written assessments for the questions' clarity before data collection. After the data had been collected and categorized, two experienced MPhil scholars marked the essay test used the researcher's provided rubric to assign grades to ensure objectivity and reliability. A significant positive correlation ($r=.99$, $p0.001$) was found, indicating that the two sets of scores were almost identical. In other words, the degree of similarity between various raters was preserved and the inter-rater reliability was upheld. Statistical Package for the Social Sciences (SPSS) software was then used to examine the data that had been obtained. The next section summarizes the study's findings

Findings and discussion

The critical thinking skill of Government College University Faisalabad students were assessed by using descriptive statistics. The current study aims to investigate the connection between graduate students of Government College University Faisalabad critical thinking and writing abilities. A 34-item Likert scale questionnaire was used to measure participants' critical thinking skills, while an argumentative writing test was used to gauge their writing prowess. A total of 105 students took part in the study. The data were analyzed using regression analysis, and it was discovered that there was only a modest connection (r value) between writing and critical thinking, which was found to be 0.1.

Table 1

The average scores of both tests

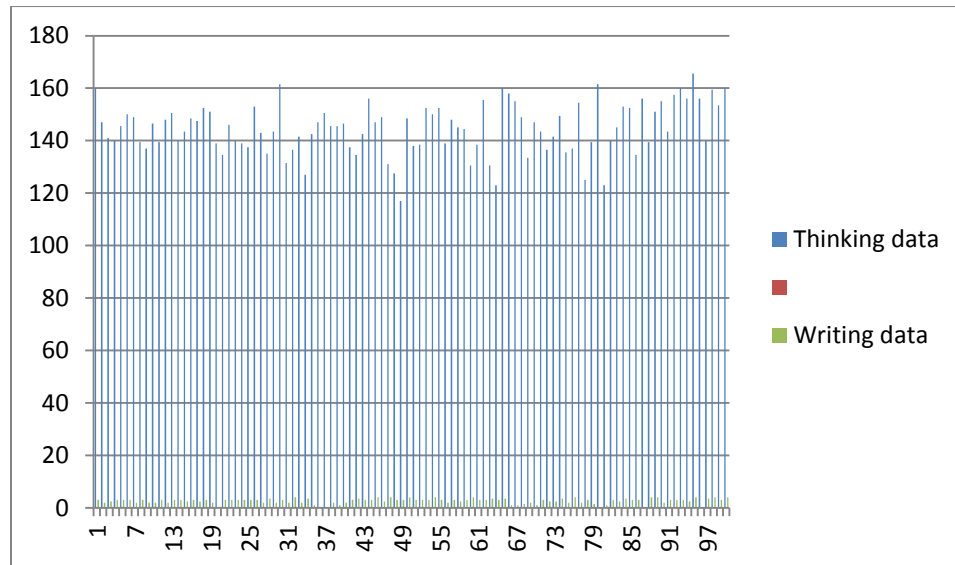
Data	Scores
Average score of writing data	216.21
Average score of CTQ	165.5

Table 1 indicates a great difference between the averages of both tasks critical thinking and argumentative writing.

Relationship between CT and AW writing

Figure 1

Average data of both variables critical thinking and argumentative writing



Statistical analysis

Table 2

Regression Statistics	
Multiple R	0.118760136
R Square	0.01410397
Adjusted R Square	0.004043806
Standard Error	1.007644361
Observations	100

The analysis shows a weak positive link between critical thinking and essay writing, with a multiple correlation coefficient (Multiple R) of about 0.1188. According to the coefficient of determination (R Square), which is roughly 0.0141, only 1.41% of the variation in essay writing scores can be accounted for by critical thinking scores, leaving the remainder of the variation unaccounted for. Since the modified R Square is considerably lower than R Square, at about 0.0040, it is possible that the model's fit was not much improved by adding critical thinking as a predictor. The projected essay writing scores typically deviate from the actual essay writing

scores by about 1.0076 units, according to the standard error of approximately 1.0076. Critical thinking alone seems to have minimal explanatory ability in predicting essay writing skill within this sample, despite the regression statistics suggesting a weak positive connection.

Table 3

	df	SS	MS	F	Significance F
Regression	1	1.423478421	1.423478421	1.401962283	0.239259222
Residual	98	99.50402158	1.015347159		
Total	99	100.9275			

ANOVA

	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	4.415104947	1.523636915	2.897740863	0.004637194	1.391497
Thinking data	-0.012443265	0.010509116	-1.184044882	0.239259222	-0.033298

The results of the regression analysis showed that the model had one degree of freedom and one independent variable (critical thinking). As shown by the sum of squares (SS) for regression, which was 1.423478421, the model's capacity to account for writing data variability. The average variability in writing data explained by critical thinking was indicated by the mean square (MS) of 1.423478421. With a significance level (p-value) of 0.239259222, the F-statistic of 1.401962283 used to evaluate the model's overall relevance indicated that it was not statistically significant in predicting writing data based on critical thinking. The intercept (4.415104947), which indicated the writing data value when critical thinking was zero, was statistically significant (p-value = 0.004637194). With a 95% level of confidence, the confidence interval provided a range for the true intercept value. The coefficient for critical thinking (Thinking data), however, was -0.012443265, meaning that for every one-unit decrease in critical thinking, the anticipated change in writing data would be 0.02443265. The fact that this coefficient was not statistically significant (p-value = 0.239259222) indicates that this analysis writing data is not significantly predicted by critical thinking.

The total model that takes into account critical thinking as a predictor for writing data lacks statistical significance, according to the ANOVA results. The coefficient for critical thinking is similarly not statistically significant, indicating that there is only a tenuous connection between the writing data and critical thinking. Consideration must be taken when interpreting these results, and more thorough investigation with a bigger and more representative sample is required to reach more firm conclusions. The reasons for this problematic relationship could be

several. One explanation for this would be because the participants' writing abilities were influenced by a variety of other elements, such as their level of language competence, their educational background, or the type of writing instruction they had received. It is also crucial to take into account the complexity of critical thinking and writing.

Research Limitations & Future Recommendations

The use of a single institution for data gathering is one of this study's limitations. The weak relationship found in this study may be a reflection of the difficulty in capturing all of these components within the parameters of a single research design, given the complexity of both critical thinking and writing. The particular measurement tools utilized may also be a plausible explanation for the weak association. Although the 34-item Likert scale questionnaire gave participants useful insights into their critical thinking inclinations, it may not have accurately caught the intricacies of their writing-related critical thinking abilities. Additionally, even while the argumentative writing test evaluated some writing-related skills, it is possible that it did not fully assess all aspects of students' writing ability. Bias in self-report, one time point the statistical power of the study may be impacted by the limited sample size and data collection of 105 participants. The results might have been more reliable and generalizable had the sample size been greater. The diversity and characteristics of graduate students in other universities or areas may not be effectively represented by the student's ability at this institution. Future studies should think about including individuals from various universities or educational environments to improve the external validity of the research.

Conclusion

The study's goal was to determine the relationship between argumentative writing ability and critical thinking among Government College University Faisalabad bachelor degree candidates. A Likert scale questionnaire was used to gather information from 105 participants, and an essay writing test was used to gauge the participants' argumentative writing abilities. The regression analysis showed a marginally favorable association between writing ability and critical thinking (multiple R = 0.1188). The explanatory power of critical thinking to predict writing performance was, however, weak (R Square = 0.0141), indicating that only 1.41% of the variance in writing scores could be assigned to critical thinking. This conclusion was strengthened by the ANOVA results since the total model, which included critical thinking as a predictor, lacked statistical significance. Additionally, the coefficient for critical thinking failed to reach statistical significance, suggesting that it may not be a reliable indicator of these students' ability to write persuasively. As a result, even if critical thinking might have some bearing on writing skills, it does not appear to be a strong or significant predictor in this situation. Due to the limitations of the study, caution is urged when interpreting these findings. To better understand the interaction between critical thinking and writing skills in academic settings, additional study with a bigger and more diverse sample is required.

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