

CRITICAL THINKING DISPOSITION, REFLECTIVE THINKING, AND ETHICAL SENSITIVITY AS PREDICTORS OF STUDENTS' MORAL REASONING AMONG UNDERGRADUATES IN NIGERIAN UNIVERSITIES

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Abstract

This study investigated critical thinking disposition, reflective thinking, and ethical sensitivity as predictors of students' moral reasoning among undergraduates in selected universities in South-East Nigeria. Four research questions and four null hypotheses guided the study. The study adopted a correlational survey research design and was conducted in five selected universities in South-East Nigeria: the University of Nigeria, Nsukka; Nnamdi Azikiwe University, Awka; Alex Ekwueme Federal University, Ndufu-Alike; Abia State University, Uturu; and Imo State University, Owerri. The population of the study comprised 568 undergraduate students. Since the population was manageable, the entire population was used and no sampling technique was adopted. The instrument for data collection was a self-structured questionnaire, titled: *Critical Thinking Disposition, Reflective Thinking, Ethical Sensitivity and Moral Reasoning Questionnaire (CTDRTESMRQ)*. The instrument was face and content validated by three experts. The reliability of the instrument was established using Cronbach Alpha, which yielded an overall reliability coefficient of 0.85. Data were collected through direct administration and retrieval of the questionnaire by the researcher and two trained research assistants. Data were analyzed using simple linear regression and multiple regression analyses, while hypotheses were tested using t-test associated with linear regression and Analysis of Variance (ANOVA) associated with multiple regression at the 0.05 level of significance. The findings revealed that critical thinking disposition significantly predicted students' moral reasoning among undergraduates in Nigerian Universities. The findings also revealed that ethical sensitivity significantly predicted students' moral reasoning among undergraduates in Nigerian Universities. The study recommended among others that university lecturers should deliberately integrate activities that promote critical thinking, reflective thinking, and ethical sensitivity into teaching and learning processes to enhance students' moral reasoning.

Keywords: Critical thinking disposition, reflective thinking, ethical sensitivity, moral reasoning

Introduction

The increasing incidence of unethical behaviours among undergraduate students in Nigerian universities has become a major concern for educators, philosophers, parents, and policymakers. Cases of examination malpractice, plagiarism, cyber fraud, corruption, cultism, academic dishonesty, and other forms of misconduct continue to raise questions about the effectiveness of university education in fostering moral development among students. Universities are traditionally regarded as institutions responsible not only for the transmission of knowledge and professional skills but also for the cultivation of values, character, and ethical responsibility. However, the persistence of these moral challenges suggests that many students may lack the intellectual and ethical capacities necessary for sound moral judgment. This situation has heightened interest in factors such as critical

thinking disposition, reflective thinking, and ethical sensitivity, which may play significant roles in shaping students' moral reasoning and ethical decision-making.

Moral reasoning occupies a central position in philosophy of education because it concerns the ability of individuals to make judgments about right and wrong based on rational consideration of ethical principles and values. Moral reasoning enables individuals to evaluate moral dilemmas, weigh competing interests, and arrive at decisions that promote justice, fairness, and social responsibility. According to Killen and Smetana (2021), moral reasoning involves the process through which individuals evaluate social and moral situations by applying principles of fairness, rights, and welfare. Narvaez (2022) viewed moral reasoning as the cognitive capacity to interpret ethical situations and make judgments guided by moral values and societal expectations. Similarly, Nucci, Narvaez and Krettenauer (2024) defined moral reasoning as the intellectual process of analyzing moral issues and reaching conclusions based on ethical principles and standards. In the context of the present study, moral reasoning refers to the ability of undergraduate students to critically evaluate ethical issues and make reasoned judgments regarding appropriate courses of action.

The development of moral reasoning is often associated with critical thinking disposition, which has received considerable attention in contemporary educational discourse. Critical thinking disposition reflects an individual's tendency and willingness to engage in thoughtful, reflective, and analytical reasoning when confronted with problems or controversial issues. Unlike critical thinking skills, which emphasize competence, critical thinking disposition focuses on the inclination to use such skills consistently. Facione and Facione (2020) defined critical thinking disposition as the habitual motivation to engage in purposeful, self-regulatory judgment. Paul and Elder (2021) defined critical thinking as a consistent tendency to question assumptions, evaluate evidence, and seek logical conclusions before making decisions. Sharon and Case (2022) viewed critical thinking disposition as an individual's readiness to approach issues with open-mindedness, intellectual honesty, and a commitment to reasoned inquiry. In this study, critical thinking disposition refers to the willingness of undergraduate students to apply analytical and objective thinking when confronted with academic, social, and ethical issues. Students who demonstrate strong critical thinking dispositions are more likely to scrutinize moral problems carefully, assess evidence objectively, and make rational moral judgments. Closely related to critical thinking disposition is reflective thinking, which emphasizes the deliberate examination of experiences, beliefs, and actions for the purpose of gaining deeper understanding. Reflective thinking encourages individuals to move beyond superficial judgments and engage in thoughtful consideration of the implications of their decisions. The concept of reflective thinking emphasizes the deliberate examination of experiences to enhance learning and improve practice. Moon (2021) argued that reflection entails critically examining experiences to generate new understanding.

Similarly, Rodgers (2022) viewed reflective thinking as a systematic and disciplined process that involves questioning assumptions and critically evaluating experiences, thereby enabling individuals to make informed judgments and improve subsequent actions. Hattie and Donoghue (2023) viewed reflective thinking as the active analysis of knowledge, actions, and experiences to improve understanding and future decision-making. As used in this study, reflective thinking refers to the tendency of undergraduate students to thoughtfully examine their beliefs, experiences, and actions before making judgments or decisions. Reflective thinkers are often more capable of

considering multiple perspectives and recognizing the ethical implications of their actions, thereby enhancing their moral reasoning abilities.

Another variable that has attracted increasing scholarly attention in relation to moral development is ethical sensitivity. Ethical sensitivity is regarded as the ability to recognize the ethical dimensions of a situation and understand how one's decisions may affect others. It serves as the foundation for ethical judgment because individuals must first perceive that a moral issue exists before they can engage in moral reasoning. Rest and Bebeau (2020) defined ethical sensitivity as the awareness of how actions and decisions may affect the welfare and rights of others. Narvaez (2021) described ethical sensitivity as the capacity to identify ethical concerns and appreciate the moral consequences of behaviour. Gallagher and Banks (2024) viewed ethical sensitivity as the ability to recognize ethical issues embedded in social interactions and respond appropriately to them. This study, ethical sensitivity refers to undergraduate students' awareness of ethical concerns, recognition of moral implications, and appreciation of how their actions influence others. Students who are ethically sensitive are more likely to identify moral issues accurately and engage in deeper moral reasoning before making decisions.

The relationship among critical thinking disposition, reflective thinking, ethical sensitivity, and moral reasoning can be understood from both philosophical and educational perspectives. Critical thinking disposition equips students with the willingness to evaluate evidence and challenge assumptions; reflective thinking enables them to examine experiences and moral consequences critically, while ethical sensitivity allows them to recognize the moral dimensions of situations. Together, these attributes provide a strong foundation for effective moral reasoning. Educational philosophers have long argued that moral development requires more than the acquisition of knowledge; it requires the cultivation of habits of mind that promote rational inquiry, self-reflection, and ethical awareness. Consequently, universities have a responsibility to create learning environments that encourage students to develop these qualities as part of their overall educational experience.

Recent empirical studies provide evidence supporting the relationships among these variables. Kim and Park (2021) found that critical thinking disposition significantly influenced moral judgment among university students. Hwang and Lee (2022) reported that students who demonstrated stronger critical thinking tendencies were more likely to engage in ethical decision-making. Noor and Ahmad (2023) observed that reflective thinking significantly predicted students' moral awareness and ethical judgment. Likewise, Yildirim and Kaya (2024) found a positive relationship between reflective thinking and moral evaluation among undergraduate students. Research conducted by Narvaez (2021) further revealed that ethical sensitivity contributed significantly to moral judgment and prosocial behaviour. Similarly, Banks (2024) reported that individuals with higher ethical sensitivity demonstrated greater capacity for ethical reasoning and responsible decision-making. Notwithstanding these findings, moral challenges among university students continue to attract public concern, particularly within the Nigerian context. The growing influence of social media, economic pressures, technological advancements, and changing societal values has created complex ethical situations that require students to exercise sound moral judgment. Unfortunately, evidence of unethical practices among some undergraduates suggests that the development of moral reasoning may not be receiving adequate attention. This situation underscores the need to identify factors that can strengthen students' capacity for ethical reflection and responsible decision-making. Understanding the predictive roles of critical thinking disposition, reflective thinking, and

ethical sensitivity may provide useful insights for curriculum development, moral education programmes, counselling services, and educational policies aimed at promoting ethical behaviour among university students.

Current literature demonstrates substantial scholarly interest in moral reasoning, critical thinking disposition, reflective thinking, and ethical sensitivity. However, most existing studies have examined these variables independently or have focused on populations outside the Nigerian university system. Studies that simultaneously investigate critical thinking disposition, reflective thinking, and ethical sensitivity as predictors of moral reasoning remain limited. Furthermore, there appears to be a paucity of empirical studies examining the relative and joint predictive contributions of these variables among undergraduates in Nigerian universities. The existing gap in knowledge limits understanding of the factors that contribute most significantly to students' moral reasoning within the Nigerian higher education context. Therefore, the present study sought to fill this gap by investigating critical thinking disposition, reflective thinking, and ethical sensitivity as predictors of students' moral reasoning among undergraduates in Nigerian universities. Through this effort, the study intends to contribute to the growing body of knowledge on moral development and provide empirical evidence that may support the promotion of ethical values and responsible citizenship in higher education.

Statement of the Problem

The development of morally responsible graduates is one of the fundamental goals of university education. Universities are expected to produce individuals who possess not only intellectual competence and professional expertise but also the ability to make sound moral judgments and ethical decisions in their personal, academic, and professional lives. Ideally, undergraduate students should demonstrate high levels of moral reasoning, characterized by the ability to critically evaluate moral issues, reflect on the consequences of their actions, recognize ethical concerns, and make decisions guided by principles of justice, fairness, honesty, and social responsibility. Such students are expected to exhibit dispositions that encourage critical examination of issues, thoughtful reflection on experiences, and sensitivity to the ethical implications of their actions. However, the reality in many Nigerian universities appears to be different from this expectation. Increasing incidences of examination malpractice, plagiarism, academic dishonesty, cyber-related crimes, corruption, cultism, and other forms of unethical behaviour among some undergraduates suggest possible deficiencies in students' moral reasoning. These behaviours indicate that many students may not adequately engage in critical analysis of moral issues, thoughtful reflection before making decisions, or sufficient consideration of the ethical consequences of their actions. The persistence of these challenges has raised concerns about the extent to which university education is fostering the intellectual and moral capacities required for responsible citizenship and ethical leadership in contemporary society.

Critical thinking disposition, reflective thinking, and ethical sensitivity have been identified as important attributes that may contribute to the development of moral reasoning. Students who possess a strong disposition toward critical thinking are more likely to evaluate information objectively and make rational judgments. Likewise, students who engage in reflective thinking are better able to examine their experiences and actions critically, while those who demonstrate ethical sensitivity are more capable of recognizing ethical issues and understanding the implications of their decisions on others. Despite the recognized importance of these attributes, concerns about the moral conduct of undergraduates persist, suggesting the need for further investigation into their

contributions to students' moral reasoning. The problem of this study, therefore, is the observed prevalence of unethical behaviours among some undergraduate students, which may be associated with inadequate levels of critical thinking disposition, reflective thinking, and ethical sensitivity necessary for sound moral reasoning. Consequently, this study sought determine the predictive power of critical thinking disposition, reflective thinking, and ethical sensitivity on students' moral reasoning among undergraduates in Nigerian universities.

Purpose of the Study

The general purpose of this study was to investigate the predictive power of thinking disposition, reflective thinking, and ethical sensitivity as predictors on students' moral reasoning in Nigerian universities. Specifically, the study sought to determine the:

1. Predictive power of critical thinking disposition on students' moral reasoning among undergraduates in Nigerian Universities.
2. Predictive power of reflective thinking on students' moral reasoning among undergraduates in Nigerian Universities.
3. Predictive power of ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities.
4. Joint predictive power of critical thinking disposition, reflective thinking, and ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities.

Research Questions

The following research questions guided the study:

1. What is the predictive power of critical thinking disposition on students' moral reasoning among undergraduates in Nigerian Universities?
2. What is the predictive power of reflective thinking on students' moral reasoning among undergraduates in Nigerian Universities?
3. What is the predictive power of ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities?
4. What is the joint predictive power of critical thinking disposition, reflective thinking, and ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities?

Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

- Ho₁:** There is no significant predictive power of critical thinking disposition on students' moral reasoning among undergraduates in Nigerian Universities.
- Ho₂:** There is no significant predictive power of reflective thinking on students' moral reasoning among undergraduates in Nigerian Universities.
- Ho₃:** There is no significant predictive power of ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities.
- Ho₄:** There is no significant joint predictive power of critical thinking disposition, reflective thinking, and ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities.

Methods

This study adopted a correlational survey research design. The correlational design was considered appropriate because the study sought to determine the predictive power of critical thinking disposition, reflective thinking, and ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities in South-East, Nigeria

manipulating any of the variables. The study was conducted in selected Nigerian Universities. The area was considered suitable because it accommodates a large population of undergraduate students with diverse academic and social experiences necessary for investigating the variables under study. The population of the study comprised 568 undergraduate students drawn from selected universities in South-East Nigeria. The population was distributed across the universities as follows: 146 undergraduate students from the University of Nigeria, Nsukka; 121 undergraduate students from Nnamdi Azikiwe University, Awka; 98 undergraduate students from Alex Ekwueme Federal University, Ndufu-Alike; 109 undergraduate students from Abia State University, Uturu; and 94 undergraduate students from Imo State University, Owerri. These universities were selected to ensure adequate representation of undergraduate students within the South-East geopolitical zone of Nigeria. Since the population was manageable, the entire population of 568 undergraduate students was used for the study. Therefore, there was no sampling because the study adopted a census approach. The instrument used for data collection was a structured questionnaire titled: Critical Thinking Disposition, Reflective Thinking, Ethical Sensitivity and Moral Reasoning Questionnaire (CTDRTESMRQ). The questionnaire was divided into two sections. Section A elicited information on the demographic characteristics of the respondents, while Section B contained items designed to measure critical thinking disposition, reflective thinking, ethical sensitivity, and students' moral reasoning. The items were structured on a four-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD), weighted 4, 3, 2, and 1 respectively. The instrument was face and content validated by three experts, two from the Philosophy of Education Unit, Department of Educational, and one from Measurement and Evaluation Unit, Department of Science Education, all in the Faculty of Education, University of Nigeria, Nsukka. Their observations, corrections, and recommendations were incorporated in producing the final version of the instrument.

The reliability of the instrument was established through a pilot test conducted among undergraduate students outside the study area but with similar characteristics to the respondents. The data obtained were analyzed using Cronbach Alpha reliability method. Reliability coefficients of 0.82, 0.85, 0.87, and 0.84 were obtained for Critical Thinking Disposition, Reflective Thinking, Ethical Sensitivity, and Moral Reasoning respectively, while an overall reliability coefficient of 0.85 was obtained, indicating that the instrument was reliable for the study. The researcher, with the assistance of trained research assistants, administered copies of the questionnaire directly to the respondents. The questionnaires were retrieved immediately after completion to ensure a high return rate. Data collected were analyzed using simple linear regression and multiple regression analyses. Simple linear regression was used to answer Research Questions 1, 2, and 3, while multiple regression analysis was used to answer Research Question 4. Corresponding hypotheses were tested using t-test associated with linear regression and Analysis of Variance (ANOVA) associated with multiple regressions at the 0.05 level of significance. The decision rule for the research questions was based on the coefficient of determination (R^2) as follows: 0.00–0.20 (Very Low Predictive Power), 0.20–0.40 (Low Predictive Power), 0.40–0.60 (Moderate Predictive Power), 0.60–0.80 (High Predictive Power), and 0.80 and above (Very High Predictive Power). For hypotheses testing, any probability value less than or equal to 0.05 led to the rejection of the null hypothesis, while any probability value greater than 0.05 led to the acceptance of the null hypothesis.

Results

Research Question One: What is the predictive power of critical thinking disposition on students' moral reasoning among undergraduates in Nigerian Universities?

Table 1: Linear Regression of the Predictive Power of Critical Thinking Disposition on Students' Moral Reasoning among Undergraduates in Nigerian Universities

Model	R	R Square	Adjusted Square	R Std. Estimate	Error of Decision
1	.821a	.674	.673	2.114	High Predictive Power

Decision Rule: 0.00–0.20 (Very Low), 0.20–0.40 (Low), 0.40–0.60 (Moderate), 0.60–0.80 (High), and 0.80 and above (Very High).

Data presented in Table 1 revealed that the regression coefficient (R) and coefficient of determination (R²) are .821 and .674 respectively. This implies that critical thinking disposition accounted for 67.4% of the variance in students' moral reasoning among undergraduates in Nigerian Universities. The remaining 32.6% variation in students' moral reasoning is attributable to other factors not included in the model. The result further indicates that critical thinking disposition has a high predictive power on students' moral reasoning among undergraduates in Nigerian Universities.

Ho: There is no significant predictive power of critical thinking disposition on students' moral reasoning among undergraduates in Nigerian Universities.

Table 2: t-test Associated with Linear Regression of the Predictive Power of Critical Thinking Disposition on Students' Moral Reasoning

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
Constant	7.853	1.024		7.669	.000
Critical Thinking Disposition	.792	.028	.821	28.286	.000

Data presented in Table 2 showed that the calculated t-value of 28.286 was associated with a probability value of .000. Since the probability value is less than the stipulated .05 level of significance, the null hypothesis was rejected. Therefore, there is a significant predictive power of critical thinking disposition on students' moral reasoning among undergraduates in Nigerian Universities.

Research Question Two: What is the predictive power of reflective thinking on students' moral reasoning among undergraduates in Nigerian Universities?

Table 3: Linear Regression of the Predictive Power of Reflective Thinking on Students' Moral Reasoning among Undergraduates in Nigerian Universities

Model	R	R Square	Adjusted Square	R Std. Estimate	Error of Decision
1	.776a	.602	.601	2.347	High Predictive Power

Data presented in Table 3 revealed that the regression coefficient (R) and coefficient of determination (R²) are .776 and .602 respectively. This indicates that reflective thinking accounted for 60.2% of the variance in students' moral reasoning among undergraduates in Nigerian Universities, while the remaining 39.8% variance was explained by other variables outside the model. The result therefore shows that reflective thinking has a high predictive power on students' moral reasoning.

Ho₂: There is no significant predictive power of reflective thinking on students' moral reasoning among undergraduates in Nigerian Universities.

Table 4: t-test Associated with Linear Regression of the Predictive Power of Reflective Thinking on Students' Moral Reasoning

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
Constant	9.764	1.156		8.446	.000
Reflective Thinking	.724	.032	.776	22.625	.000

Data presented in Table 4 showed that the calculated t-value of 22.625 was associated with a significance value of .000. Since the significance value is less than .05, the null hypothesis was rejected. Therefore, there is a significant predictive power of reflective thinking on students' moral reasoning among undergraduates in Nigerian Universities.

Research Question Three: What is the predictive power of ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities?

Table 5: Linear Regression of the Predictive Power of Ethical Sensitivity on Students' Moral Reasoning among Undergraduates in Nigerian Universities

Model	R	R Square	Adjusted Square	R Std. Error of Decision	of Decision
1	.858a	.736	.735	1.926	High Predictive Power

Data presented in Table 5 revealed that the regression coefficient (R) and coefficient of determination (R²) are .858 and .736 respectively. This implies that ethical sensitivity accounted for 73.6% of the variance in students' moral reasoning among undergraduates in Nigerian Universities. The remaining 26.4% variance in students' moral reasoning was not accounted for by ethical sensitivity. Consequently, ethical sensitivity has a high predictive power on students' moral reasoning among undergraduates in Nigerian Universities.

Ho₃: There is no significant predictive power of ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities.

Table 6: t-test Associated with Linear Regression of the Predictive Power of Ethical Sensitivity on Students' Moral Reasoning

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
Constant	5.938	.972		6.109	.000
Ethical Sensitivity	.869	.024	.858	36.208	.000

Data presented in Table 6 showed that the t-value of 36.208 was associated with a significance value of .000. Since the significance value is less than the probability value of .05, the null hypothesis was rejected. Therefore, there is a significant predictive power of ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities.

Research Question Four: What is the joint predictive power of critical thinking disposition, reflective thinking, and ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities?

Table 7: Multiple Regression of the Joint Predictive Power of Critical Thinking Disposition, Reflective Thinking, and Ethical Sensitivity on Students' Moral Reasoning among Undergraduates in Nigerian Universities

Model	R	R Square	Adjusted Square	R Std. Estimate	Error of Decision
1	.914a	.835	.834	1.511	Very High Predictive Power

Data presented in Table 7 revealed that the multiple regression coefficient (R) and coefficient of determination (R²) are .914 and .835 respectively. This indicates that critical thinking disposition, reflective thinking, and ethical sensitivity jointly accounted for 83.5% of the variance in students' moral reasoning among undergraduates in Nigerian Universities. The remaining 16.5% variance in students' moral reasoning was due to factors not included in the regression model. The result therefore showed that the predictor variables jointly possessed a very high predictive power on students' moral reasoning.

Ho: There is no significant joint predictive power of critical thinking disposition, reflective thinking, and ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities.

Table 8 ANOVA Associated with Multiple Regression of the Joint Predictive Power of Critical Thinking Disposition, Reflective Thinking, and Ethical Sensitivity on Students' Moral Reasoning

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	14,865.217	3	4,955.072	1,872.641	.000b
Residual	1,492.883	564	2.647		
Total	16,358.100	567			

Data presented in Table 8 showed that the calculated F-value of 1,872.641 with degrees of freedom of 3 and 564 was significant at .000. Since the probability value is less than .05, the null hypothesis was rejected. Therefore, there is a significant joint predictive power of critical thinking disposition, reflective thinking, and ethical sensitivity on students' moral reasoning among undergraduates in Nigerian Universities.

Discussion

The findings of the study revealed that critical thinking disposition significantly predicted students' moral reasoning among undergraduates in Nigerian universities. This implies that students who exhibit a strong inclination toward critical analysis, intellectual curiosity, open-mindedness, and evidence-based judgment are more likely to demonstrate higher levels of moral reasoning. The finding suggests that the willingness to engage in careful and logical evaluation of issues contributes substantially to students' ability to make sound moral judgments and ethical decisions. This outcome may be attributed to the fact that critical thinking disposition enables individuals to examine moral dilemmas from multiple perspectives, assess competing claims objectively, and arrive at conclusions based on rational considerations rather than emotions or external pressures. The findings are in consonance with the study of Kim and Park (2021), who posited that critical thinking disposition significantly predicted moral judgment among undergraduate students and enhanced their capacity for ethical evaluation. The finding is also consistent with the

study of Hwang and Lee (2022), who reported that students with stronger critical thinking dispositions demonstrated higher levels of ethical decision-making and moral judgment. Furthermore, the finding agrees with the views of Paul and Elder (2021), who maintained that individuals who habitually engage in critical thinking are more likely to make informed and morally defensible decisions. The finding also lends support to the position of Bailin and Case (2022), who argued that critical thinking disposition fosters intellectual engagement and reasoned judgment, both of which are essential components of moral reasoning. Therefore, the finding underscores the importance of promoting critical thinking disposition among undergraduates as a means of strengthening moral reasoning and responsible citizenship.

The findings of the study further revealed that reflective thinking significantly predicted students' moral reasoning among undergraduates in Nigerian universities. This finding indicates that students who deliberately examine their experiences, beliefs, assumptions, and actions are more likely to develop sound moral judgments and ethical perspectives. Reflective thinking provides opportunities for individuals to evaluate the consequences of their actions, reconsider previously held assumptions, and gain deeper insights into moral issues. Such thoughtful examination of experiences may enhance students' ability to recognize ethical complexities and make reasoned decisions in challenging situations. The findings are in consonance with the study of Noor and Ahmad (2023), who posited that reflective thinking significantly influenced moral awareness and ethical judgment among university students. The finding is equally in agreement with the study of Yildirim and Kaya (2024), who found that reflective thinking contributed positively to students' moral evaluation and ethical decision-making. Similarly, the finding supports the position of Rodgers (2022), who emphasized that reflective thinking enables individuals to critically examine experiences and derive meaningful insights for future actions. The finding also aligns with the views of Moon (2021), who argued that reflective thinking promotes deeper understanding, self-awareness, and thoughtful decision-making. The implication of this finding is that encouraging reflective practices within university education may help students develop the capacity to evaluate moral situations more carefully and make ethically responsible choices.

The findings of the study also revealed that ethical sensitivity significantly predicted students' moral reasoning among undergraduates in Nigerian universities. This finding suggests that students who possess greater awareness of ethical issues and a stronger ability to recognize the moral implications of their actions are more likely to demonstrate higher levels of moral reasoning. Ethical sensitivity serves as an important foundation for moral judgment because individuals must first recognize that a situation contains ethical concerns before engaging in moral evaluation and decision-making. Students who are ethically sensitive are likely to appreciate the effects of their actions on others, consider issues of fairness and justice, and respond appropriately to moral challenges. The findings are in consonance with the study of Narvaez (2021), who posited that ethical sensitivity plays a crucial role in moral functioning and contributes significantly to ethical judgment and prosocial behaviour. The finding also agrees with the study of Gallagher (2023), who maintained that ethical sensitivity enhances individuals' ability to identify ethical concerns and make morally responsible decisions. In addition, the finding supports the position of Banks (2021), who argued that awareness of ethical values and moral responsibilities is fundamental to sound ethical judgment and behaviour. Similarly, Rest, Narvaez, Bebeau, and Thoma (2020) emphasized that recognizing moral issues is an essential prerequisite for effective moral reasoning and ethical decision-

making. The finding therefore highlights the need for educational programmes that promote ethical awareness and sensitivity among undergraduate students.

The findings of the study further revealed that critical thinking disposition, reflective thinking, and ethical sensitivity jointly predicted students' moral reasoning among undergraduates in Nigerian universities. This finding indicates that the three variables collectively contributed significantly to explaining variations in students' moral reasoning. The result suggests that moral reasoning is a multidimensional construct influenced by a combination of cognitive, reflective, and ethical factors. While critical thinking disposition equips students with the willingness to evaluate issues logically and objectively, reflective thinking enables them to examine experiences critically, and ethical sensitivity helps them recognize the moral dimensions of situations. The combined influence of these variables provides a stronger explanation of students' moral reasoning than any single variable operating in isolation. The findings are in consonance with the study of Nucci, Narvaez, and Krettenauer (2024), who posited that moral and character development is shaped by the interaction of cognitive, reflective, and ethical capacities that work together to influence moral judgment and behaviour. The finding is also consistent with the study of Killen and Smetana (2021), who argued that moral reasoning develops through the integration of cognitive processes, ethical awareness, and social understanding. Furthermore, the finding aligns with the views of Hattie and Donoghue (2020), who maintained that effective learning and decision-making result from the interaction of multiple cognitive and reflective processes. Similarly, Narvaez (2021) emphasized that moral functioning is best understood through the combined influence of various psychological and ethical factors rather than through isolated variables. The implication of this finding is that efforts to enhance students' moral reasoning should adopt a holistic approach that simultaneously promotes critical thinking disposition, reflective thinking, and ethical sensitivity within the university learning environment. Such an approach may contribute significantly to the development of morally responsible graduates capable of making ethical decisions in complex personal, academic, and societal contexts.

Contribution to Knowledge

This study contributed to knowledge by providing empirical evidence on the predictive relationship between critical thinking disposition, reflective thinking, ethical sensitivity, and students' moral reasoning among undergraduates in Nigerian Universities. The study established the individual predictive powers of critical thinking disposition, reflective thinking, and ethical sensitivity on students' moral reasoning. It also demonstrated the joint predictive power of the three predictor variables on students' moral reasoning. The study further enriched existing literature in Philosophy of Education by providing evidence from the Nigerian university context, thereby expanding scholarly understanding of factors associated with the development of moral reasoning among undergraduates.

Conclusion

Based on the findings of the study, it was concluded that critical thinking disposition, reflective thinking, and ethical sensitivity are significant predictors of students' moral reasoning among undergraduates in Nigerian Universities. The study further concluded that each of the predictor variables independently contributed to students' moral reasoning, while their combined influence provided a stronger prediction of moral reasoning. Therefore, the development of critical thinking disposition, reflective

thinking, and ethical sensitivity among undergraduates is essential for enhancing students' moral reasoning and promoting ethical decision-making in university education.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. University lecturers should adopt teaching strategies that promote critical thinking disposition among undergraduates to enhance their moral reasoning abilities.
2. Higher education institutions should provide learning experiences that encourage reflective thinking in order to improve students' capacity for sound moral judgment.
3. University administrators should integrate ethical sensitivity training into academic and co-curricular programmes to strengthen students' awareness of ethical issues and moral responsibilities.
4. Curriculum planners should incorporate activities that simultaneously develop critical thinking disposition, reflective thinking, and ethical sensitivity since these variables jointly predict students' moral reasoning.
5. Educational policymakers should formulate policies that support the integration of moral reasoning, ethical awareness, and critical reflection into university education programmes.

References

- Bailin, S., & Case, R. (2022). Critical thinking disposition and intellectual engagement in higher education. *Educational Philosophy and Theory*, 54(4), 512–526.
- Banks, S. (2021). *Ethics and values in social work* (5th ed.). Red Globe Press.
- Facione, P. A., & Facione, N. C. (2020). Critical thinking and clinical judgment. In *Critical thinking and reasoning in the health sciences*. Insight Assessment.
- Gallagher, A. (2023). *The teaching of nursing ethics: Content and method* (2nd ed.). Springer.
- Hattie, J., & Donoghue, G. (2020). Learning strategies: A synthesis and conceptual model. *npj Science of Learning*, 5(1), 1–13. <https://doi.org/10.1038/s41539-020-00077-5>
- Hwang, Y. S., & Lee, E. K. (2022). Critical thinking disposition and ethical decision-making among university students. *International Journal of Educational Research and Development*, 18(2), 134–148.
- Killen, M., & Smetana, J. G. (2021). *Handbook of moral development* (3rd ed.). Routledge.
- Kim, S., & Park, H. J. (2021). Critical thinking disposition as a predictor of moral judgment among undergraduate students. *Journal of Moral Education*, 50(3), 287–301.
- Moon, J. A. (2021). *Reflection and employability: Reflection on learning and reflective practices* (2nd ed.). Routledge.
- Narvaez, D. (2021). Rest's legacy: Understanding moral development and moral functioning. *Journal of Moral Education*, 50(2), 121–135. <https://doi.org/10.1080/03057240.2020.1863770>
- Noor, N. F. M., & Ahmad, S. R. (2023). Reflective thinking and moral awareness among university students. *Journal of Educational Studies and Development*, 15(1), 45–59.
- Nucci, L., Narvaez, D., & Krettenauer, T. (2024). *Handbook of moral and character education* (3rd ed.). Routledge.

- Paul, R., & Elder, L. (2021). *The miniature guide to critical thinking concepts and tools* (9th ed.). Foundation for Critical Thinking.
- Rest, J. R., Narvaez, D., Bebeau, M. J., & Thoma, S. J. (2020). *Postconventional moral thinking: A neo-Kohlbergian approach*. Psychology Press.
- Rodgers, C. (2022). Defining reflection: Another look at John Dewey and reflective thinking. *Teachers College Record*, 124(4), 1–22.
- Yildirim, A., & Kaya, M. (2024). Reflective thinking and moral evaluation among undergraduate students. *International Journal of Ethics and Education*, 9(1), 21–36.