CHAPTER THREE III
METHODOLOGY

3.1 Research Paradigm and Framework for the Study

The paradigm for this study is positivism. According to "The Positivism Paradigm of Research" (Park et al., 2020), the positivist paradigm asserts that true knowledge comes from sense experience and can be gained through observation and experiment. Positivists place significant weight on determinism, empiricism, simplicity, and generality, believing that science can only be based on observable and measurable facts. Positivism aims to uncover the laws of nature and explain them through theories and empirical data. In its purest form, it employs the hypothetico-deductive method to test a priori hypotheses (Park et al., 2020).

Positivism, as described by Schrag (1961), involves a systematic approach to scientific inquiry, emphasizing objectivity, quantifiability, and the potential for generalization. Schrag highlights that even critics of positivist research, such as Eisner, Erickson, Giroux, and Popkewitz, are logically committed to propositions that can be tested only through positivist paradigms. This underscores the enduring relevance of positivism in various fields of research (Schrag, 1961). This study follows a quantitative approach using questionnaires to evaluate perceptions, aligning with Creswell and Creswell's (2017) definition of quantitative research as a method that aims to test theories by examining relationships between variables.

The current research employs the descriptive survey technique, which attempts to find correlations and other links between peer conflicts and academic resilience. Khaldi (2017) explains that non-experimental quantitative research includes various study types such as descriptive, causal-comparative, correlational, ex post facto, and survey research. The goal of such research is to investigate how the variables being studied relate to each other to determine potential links without attempting to establish cause-and-effect relationships. This aligns with the positivist emphasis on empirical observation and measurement without delving into subjective interpretations (Khaldi, 2017). This methodological rigor ensures the study's alignment with positivist principles.

Positivism's methodological rigor and emphasis on objectivity make it a suitable paradigm for educational research. Alhoussawi (2023) provides a thorough

exploration of current theoretical perspectives within educational research, focusing on positivist, interpretive, and critical paradigms. The positivist paradigm, grounded in empiricism, places a strong emphasis on empirical evidence and the systematic application of the scientific method to reveal objective truths and establish causal relationships. This approach is known for its dedication to objectivity, quantifiability, and generalizability, often utilizing hypothesis testing and experimental methodologies (Alhoussawi, 2023). These characteristics make positivism particularly valuable for studies aiming to derive generalizable insights.

However, the relevance of positivism in contemporary research has been debated. Corry et al. (2019) argue that while positivism has been a dominant paradigm, its applicability may be limited in certain fields, such as nursing research. They suggest that post-positivism, which involves a partial rejection of positivist assumptions, might be more appropriate for modern scientific inquiries. Post-positivism retains some elements of positivism but incorporates more flexibility in acknowledging the complexity and context of social phenomena (Corry et al., 2019). This perspective highlights the evolving nature of research paradigms and their applicability across different disciplines.

In the realm of social science research, Aliyu et al. (2014) critically examined the positivist and non-positivist paradigms, revealing that these paradigms often conflict with each other. They emphasize the importance of critically evaluating each paradigm before employing it in research activities. While positivism focuses on observable and measurable phenomena, non-positivist paradigms such as interpretivism and constructivism emphasize understanding the subjective meanings and experiences of individuals (Aliyu et al., 2014). This critique underscores the need for careful consideration of the appropriate paradigm for each research context.

The positivist paradigm has also been discussed in the context of rural sociology. Irwan (2018) argues that the positivist paradigm is highly relevant to the study of rural sociology, where phenomena are often complex and multifaceted. Positivism helps in simplifying social phenomena through statistical analysis, making it easier to draw conclusions from empirical data. This approach is particularly useful in understanding the interrelated variables that characterize rural

social realities (Irwan, 2018). The practical application of positivism in diverse fields illustrates its versatility and utility.

The integration of positivist approaches in educational research is further supported by Eusafzai (2014), who outlines the ontological and epistemological foundations of major research paradigms, including positivism. He explains that positivism values objectivity and empirical evidence, making it a robust framework for conducting research that seeks to establish generalizable findings. This paradigm's emphasis on hypothesis testing and systematic investigation aligns well with the goals of educational research (Eusafzai, 2014). These strengths underscore the suitability of positivism for studies aimed at producing reliable and generalizable results.

Combining positivist approaches with other paradigms can also enhance research outcomes. Mingers (2001) advocates for a pluralist methodology in Information Systems research, suggesting that combining different research methods from various paradigms can yield richer and more reliable results. This approach recognizes the strengths of positivist methodologies while also incorporating insights from interpretive and critical paradigms (Mingers, 2001). This pluralistic approach can be particularly beneficial in addressing complex research questions that require multiple perspectives.

3.2 Research Design

This study employed a descriptive research design to examine conflict trends within secondary schools in Ghana. This methodological approach was chosen for its ability to provide a detailed and accurate description of phenomena in their natural settings. The descriptive research design proved particularly advantageous due to its efficiency in collecting data from large samples, ensuring high data turnover and comprehensive accounts of the studied population (Dubey & Kothari, 2022).

3.2.1 Descriptive Research Design

The primary objective of this study was to utilize a descriptive research design to gather and analyze data on students' perceptions and experiences of conflicts in secondary schools. This design facilitated a thorough exploration of the prevalence, types, and characteristics of conflicts within the educational environment. Utilizing

structured questionnaires, the study captured diverse data from a significant number of participants, thereby offering an extensive overview of conflict dynamics in these schools.

Descriptive research is well-suited for this type of study as it seeks to provide a precise depiction of existing conditions and behaviors related to student conflicts. According to Siedlecki (2020), descriptive research effectively illustrates the characteristics of a specific group without necessarily probing into the underlying causes of the observed phenomena. This approach aligns with the study's objective to deliver a comprehensive account of the conflicts encountered by students, which subsequently informed the development of the Peace-Leadership Pedagogy

3.3 Participants

The study utilized a stratified random sampling technique to select participants, ensuring a representative sample across different strata such as courses and gender. A total of 661 students were chosen from ten secondary schools, with five schools each from the Volta Region and the Oti Region. In addition to the student participants, the study included 378 teachers and 97 school counselors from both regions. The stratified random sampling method was employed to ensure that each subgroup within the population was adequately represented, enhancing the generalizability of the findings (Dubey & Kothari, 2022).

In each of the ten selected schools, approximately 66 students were randomly chosen, ensuring a balanced representation of both male and female students. This balanced gender representation aimed to provide comprehensive insights into the conflict experiences of both male and female students. Additionally, 378 teachers and 97 school counselors from the Volta and Oti Regions were included in separate studies to provide a broader perspective on conflict trends in secondary schools. The inclusion of teachers and school counselors was critical as they often have firsthand experience with student conflicts and can offer professional insights into the causes, nature, and resolutions of these conflicts. The diverse participant pool ensured a holistic understanding of the conflict dynamics within the schools.

From each region, approximately 189 teachers were selected, making a total of 378 teachers across both regions. This translates to roughly 37-38 teachers per school. For the school counselors, approximately 48-49 were chosen from each

region, resulting in a total of 97 school counselors. This sampling approach ensured that the study captured a wide range of perspectives from different regions, courses, and genders.

3.4 Justification for the Descriptive Approach

Initially, the research design included an experimental component aimed at evaluating the impact of the Peace-Leadership Pedagogy Model on students' conflict resolution skills through a quasi-experimental design. However, various constraints, such as logistical challenges, time limitations, and the unavailability of necessary resources for a controlled experimental setup, precluded the execution of the experimental phase. Consequently, the focus shifted exclusively to the descriptive research design, which remained robust and suitable for achieving the study's objectives.

Despite the inability to implement the experimental component, the descriptive research design continued to offer significant value by enabling the comprehensive collection of data on the nature and extent of conflicts within schools. The insights derived from this phase were essential for understanding baseline conditions and pinpointing critical areas for intervention. The rich data obtained through descriptive methods provided a solid foundation for the development and future implementation of the Peace-Leadership Pedagogy Model.

3.5 Data Collection and Analysis

Data collection was conducted through the administration of structured survey questionnaires to the students, teachers, and school counselors across various schools in the Volta and Oti Regions. These questionnaires were meticulously designed to capture experiences, perceptions, and responses to conflicts. The use of both closed-ended and open-ended questions facilitated quantitative analysis and qualitative insights, resulting in a rich dataset for comprehensive analysis.

The survey questionnaires were developed by adopting and modifying existing standardized inventories and scales to suit the specific context of this study. This approach ensured that the instruments were both valid and reliable, capturing the nuances of conflict experiences among secondary school students, teachers, and counselors (Creswell & Creswell, 2017). The questionnaires included items on the

frequency and types of conflicts encountered, the perceived causes of these conflicts, and the strategies used to manage and resolve conflicts.

The collected data were analyzed using statistical methods such as frequency distributions, cross-tabulations, and regression analysis to identify prevalent trends, patterns, and contributing factors to conflicts. Qualitative responses were subjected to thematic analysis to extract recurring themes and deeper insights into conflict experiences.

3.6 Development of the Peace-Leadership Pedagogy Model

The findings from the descriptive research were instrumental in the conceptualization and development of the Peace-Leadership Pedagogy Model for Students' Conflict Resolution Skills Development. This pedagogical model was designed to enhance students' competencies in managing and resolving conflicts peacefully. It integrated the findings from the descriptive study, addressing the specific needs and challenges identified by students, teachers, and counselors.

The Peace-Leadership Pedagogy Model emphasizes several key components essential for effectively managing and resolving conflicts within educational settings. Educating students to recognize various types of conflicts and their potential impacts is the foundational step in this model. According to Gomes de Matos et al. (2006)), awareness is critical because it is the first step in effectively managing conflicts. By understanding the different forms of conflicts—whether interpersonal, intrapersonal, or group conflicts—students can better identify and address issues before they escalate. This component involves comprehensive education on the nature, causes, and consequences of conflicts, thereby preparing students to approach conflicts with a well-informed mindset.

Training in essential conflict resolution skills such as negotiation, mediation, and active listening is another central component of the model. Johnson and Johnson (1991) emphasize that these skills are crucial for enabling students to navigate conflicts constructively. Negotiation skills help students reach mutually beneficial agreements, while mediation skills allow them to facilitate the resolution of disputes among peers. Active listening is essential for understanding all perspectives involved in a conflict, fostering empathy, and finding effective

solutions. These skills are taught through structured programs and practice sessions, ensuring students are well-equipped to handle conflicts.

Encouraging students to assume leadership roles in conflict resolution and develop empathy towards others is vital for creating a collaborative and supportive school environment. Goleman (1995b) highlights that leadership and empathy are intertwined; effective leaders must understand and share the feelings of others to guide them through conflicts. By promoting leadership qualities, students learn to take initiative and responsibility in resolving conflicts. Empathy training helps students to appreciate different perspectives and fosters a culture of mutual respect and understanding, which is essential for peaceful coexistence.

Implementing role-playing and other interactive activities to practice conflict resolution in a controlled environment is crucial for the practical application of learned skills. Kolb (2014) posits that experiential learning—learning through experience—is highly effective in reinforcing theoretical knowledge. Role-playing scenarios allow students to simulate real-life conflicts and practice their resolution skills in a safe and structured setting. This hands-on approach helps students gain confidence in their abilities and ensures they are prepared to apply these skills in actual conflict situations.

Establishing mechanisms for continuous feedback to refine and improve the pedagogy based on student experiences and outcomes is essential for the sustainability and effectiveness of the Peace-Leadership Pedagogy Model. Deming (1986) advocates for continuous improvement as a critical aspect of any effective system. Feedback loops involving students, teachers, and administrators help identify strengths and areas for improvement in the pedagogy. Regular assessments and reflections on conflict resolution practices ensure that the model evolves to meet the changing needs of the school community.

This study provided a comprehensive understanding of the conflict dynamics in secondary schools. The insights gained directly informed the development of the Peace-Leadership Pedagogy Model, which aims to equip students with the necessary skills to handle conflicts effectively and foster a more harmonious school environment. The model's comprehensive approach, incorporating awareness, skill-building, leadership, practical application, and continuous improvement,

ensures that students are well-prepared to manage conflicts constructively, promoting a culture of peace and collaboration in schools.

3.7 Instruments

For the purpose of this study, a questionnaire composed of three (3) sections A, B and C shall be used. Section A shall be used to draw responses on demographic characteristics of respondents while Section B shall be the Students' Conflict Trends Questionnaire (SCTQ), developed by the researcher to assess conflict trends in the schools and section C made of the Conflict Resolution Questionnaire which shall be used to assess levels of student resolution conflict skills.

3.7.1 Conflict Resolution Questionnaire

The Conflict Resolution Questionnaire (CRQ) was made to test how well a person can create solutions to conflicts that are good for everyone involved. CRQ Items measure how often respondents think they do certain things and how much they know about conflict issues (Henning, 2004).

3.7.2 Students' Conflict Trends Questionnaire (SCTQ)

Students' Conflict Trends Questionnaire (SCTQ) is developed by the researcher to measure the trends of conflicts among students, frequency, sources, types, etc. The questionnaire shall be validated using the Rasch Model to ensure its standardization for the purpose of this study.

3.7.3 Reliability Statistics

Table 1 presents the reliability coefficients for the scales used to measure types of conflict, sources of conflict, and response to conflict among students, employing Cronbach's Alpha as the metric. The types and sources of conflict scales exhibit moderate reliability with alpha values of 0.667 and 0.693, respectively, suggesting a fair level of internal consistency among the items within these scales. Remarkably, the response to conflict scale demonstrates a high degree of reliability, with a Cronbach's Alpha of 0.953, indicating an excellent internal consistency and suggesting that the items on this scale consistently measure the underlying construct of how students respond to conflicts.

Table 3.1 Reliability results

Variables	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Types of conflict	0.667	0.672	10
Sources of conflict	0.693	0.696	8
Response to conflict	0.953	0.952	9

3.7.4 Measurement model assessment

In the measurement model assessment of this objective, employing Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4, each construct demonstrates commendable reliability and validity (see Tables 2 and 3). Construct reliability is confirmed with high Cronbach's alpha and composite reliability values for conflict resolution abilities, emotional intelligence in conflict resolution, perception of Ghanaian traditional culture, and positive response to conflict, all exceeding the recommended threshold of 0.7 (Hair et al., 2019; Legate et al., 2023; Sarstedt et al., 2021). Convergent validity is established as evidenced by AVE values greater than 0.5 across all constructs and all the loadings are above 0.708 (Hair et al., 2019; Legate et al., 2023). Discriminant validity is adequately supported by the HTMT values, which are well below the conservative threshold of 0.85, indicating that the constructs are distinct and well-differentiated from each other (Henseler et al., 2015).

Table 3.2: Estimation of construct reliability and convergent validity

Constructs/Items	Loadings	SE	t-statistics	CA	CR (rho_c)	AVE
Conflict resolution abilities (CRA)				*0.891*	*0.920*	*0.698*
CRA1	0.804	0.016	49.690			
CRA2	0.869	0.012	70.068			
CRA4	0.851	0.015	56.287			
CRA5	0.830	0.015	56.384			
CRA6	0.820	0.016	51.798			
Emotional intelligence in conflict resolution (EICR)				*0.960*	*0.964*	*0.627*
EICR1	0.788	0.018	43.677			

Constructs/Items	Loadings	SE	t-statistics	CA	CR (rho_c)	AVE
EICR2	0.834	0.015	57.420			
EICR4	0.819	0.016	50.466			
EICR5	0.810	0.015	54.117			
EICR6	0.798	0.017	46.998			
EICR7	0.792	0.018	45.172			
EICR8	0.816	0.017	47.585			
EICR9	0.796	0.017	46.815			
EICR10	0.778	0.020	38.724			
EICR11	0.805	0.016	51.806			
EICR13	0.775	0.020	39.083			
EICR14	0.808	0.018	45.216			
EICR15	0.783	0.020	39.298			
EICR16	0.781	0.019	42.092			
EICR17	0.762	0.020	38.566			
EICR18	0.717	0.025	28.657			
Ghanaian traditional culture perception (GTC)				*0.905*	*0.927*	*0.681*
GTC1	0.852	0.013	64.290			
GTC2	0.871	0.012	72.046			
GTC4	0.718	0.028	25.350			
GTC5	0.824	0.016	50.488			
GTC6	0.855	0.013	66.023			
GTC7	0.822	0.017	47.109			
Positive response to conflict (PRC)				*0.960*	*0.966*	*0.780*
PRC1	0.894	0.013	70.187			
PRC2	0.899	0.011	84.177			
PRC4	0.812	0.017	48.713			
PRC5	0.876	0.013	66.366			
PRC6	0.900	0.011	80.096			
PRC7	0.888	0.013	69.463			
PRC8	0.914	0.010	94.924			
PRC9	0.881	0.012	74.081			

Note: GTC = Ghanaian traditional culture perception; EICR = Emotional intelligence in conflict resolution; CRA = Conflict resolution abilities; PRC = Positive response to conflict; CA = Cronbach's alpha; CR = Composite reliability (rho_c); AVE = Average variance extracted

Table 3.3Discriminant validity

Heterotrait-Monotrait Ratio (HTMT)				
Constructs	CRA	EICR	GTC	PRC
CRA				
EICR	0.649			
GTC	0.749	0.676		
PRC	0.446	0.420	0.453	
Fornell-Larcker criterion				
Constructs	CRA	EICR	GTC	PRC
CRA	*0.841*			
EICR	0.604	*0.791*		
GTC	0.677	0.633	*0.831*	
PRC	0.423	0.417	0.435	*0.879*

3.8 Procedure

The research procedure employed in this study was meticulously designed to ensure a comprehensive understanding of students' conflict resolution skills and the overall school environment. A descriptive research design was chosen because it allows for a detailed observation and description of the current state of the variables under study without manipulating the environment. This approach was particularly useful in understanding the characteristics and dynamics of conflict resolution among secondary school students in Ghana.

Participants in the study included secondary school students, teachers, and school counselors from selected schools in Ghana. The selection criteria were based on their direct involvement and experience with student conflicts and their resolution processes. The inclusion of a diverse group of students from various grades and backgrounds ensured a broad perspective on conflict resolution skills across the student body. Teachers and school counselors were also essential

participants, providing insights into existing conflict resolution strategies and the overall school climate.

Data collection was conducted using multiple methods to ensure a thorough analysis of the research questions. Surveys were administered to both students and teachers to gather quantitative data on conflict resolution skills and experiences. Two primary instruments were used: the Conflict Resolution Questionnaire, which assessed students' conflict resolution skills and their experiences with conflicts, and the Students' Conflict Trends Questionnaire (SCTQ), which collected data on the types and sources of conflicts experienced by students. In addition to surveys, semi-structured interviews were conducted with a subset of participants to gain qualitative insights into their experiences and perceptions. These interviews provided a deeper understanding of students' perspectives on conflicts, their causes, and the effectiveness of various resolution strategies. Teachers and counselors were interviewed to explore their observations of student conflicts and their roles in resolving these issues.

The development of the Peace-Leadership Pedagogy Model was a multi-phase process that began with a comprehensive literature review. This review aimed to identify theoretical foundations and gaps in current educational practices regarding conflict resolution, peace education, and leadership training. Based on the findings from the literature review, a curriculum was developed that integrated peace education, leadership training, and experiential learning activities designed to foster conflict resolution skills.

To ensure the effective implementation of the Peace-Leadership Pedagogy Model, teacher training programs were designed to equip educators with the necessary skills. These programs focused on peace education principles, leadership development, and restorative practices. The model was then piloted in select secondary schools in Ghana. During this phase, data was collected through surveys, interviews, and observational studies to assess its impact on students' conflict resolution skills and the overall school climate.

Data analysis involved both quantitative and qualitative methods. Quantitative data from surveys were analyzed using descriptive statistics to summarize the data and understand general trends in conflict resolution skills

among students. Reliability statistics were employed to ensure the consistency and reliability of the instruments used. Qualitative data from interviews and observations were analyzed using thematic analysis to identify common themes and patterns.

Validation of the Peace-Leadership Pedagogy Model was achieved through expert contributions and an iterative process of feedback. The Delphi method was used, involving a series of rounds where experts provided feedback on the model, which was refined based on their input until a final consensus was reached.

3.9 Steps in Model Development and Validation

The development, testing, and validation of a comprehensive model for conflict skills training followed a systematic process. Here are the steps taken, supported by relevant literature.

3.9.1 Identification of Student Needs in Conflict Skills

The initial step involved identifying the needs of students regarding conflict management skills. A thorough needs assessment was conducted to determine the specific skills students required to manage conflicts effectively. This process involved collecting data through surveys, interviews, and observations to understand the current conflict resolution capabilities of the students and identify gaps. Watkins et al. (2012) emphasized that a thorough needs assessment is crucial in the design of educational programs as it ensures that the training addresses the actual needs of the learners. This step provided a clear understanding of the specific areas where students needed support, laying a solid foundation for the subsequent steps in model development.

3.9.2 Development of Goals and Objectives for the Model

Based on the identified needs, clear goals and objectives for the model were developed. Goals defined the broad outcomes that the model aimed to achieve, while objectives specified measurable steps contributing to these goals. Mager (1997) highlighted that, well-defined objectives are essential as they guide the instructional design and provide a basis for evaluating the program's effectiveness. The goals and objectives were aligned with the overall aim of improving students' conflict management skills and tailored to address the specific needs identified in

the first step. This clarity ensured that the model remained focused and effective in achieving its intended outcomes.

3.9.3 Identification of Educational Strategies for Model Implementation

The most effective educational strategies for implementing the model were identified. Various strategies such as lectures, group discussions, role-playing, simulations, and experiential learning were considered depending on the nature of the skills to be taught. Wolf and Kolb (1984) emphasized the importance of experiential learning, where learners gain knowledge through experience and reflection. Similarly, Gredler and Shields (2004) highlighted the effectiveness of role-playing and simulations in providing students with practical experience in a controlled environment, thereby enhancing their ability to apply conflict resolution skills in real-life situations. Selecting these educational strategies ensured that the model was engaging and effective in teaching the necessary conflict resolution skills.

3.9.4 Development of Content and Structure of the Model

Using the goals, objectives, and identified educational strategies, the content and structure of the model were developed. This step involved creating detailed lesson plans, instructional materials, and activities aligned with the educational strategies. Gagné et al. (1992) stressed that the development of instructional content should follow a systematic process to ensure that the material is well-organized and supports the learning objectives. The model's structure included a logical sequence of topics and activities that built on each other, facilitating a comprehensive understanding of conflict resolution skills. This step ensured that the model was cohesive and provided a clear roadmap for implementation.

3.9.5 Development of a Plan of Action for Model Implementation

Finally, a detailed plan of action for implementing the model was developed. This plan outlined how the model would be delivered, including the identification of the target audience, selection of delivery methods, and scheduling of sessions. Morrison et al. (2019) emphasized the importance of a detailed implementation plan to ensure that all aspects of the instructional design were effectively executed. The plan included logistics such as resource allocation, timelines, and roles and responsibilities of those involved in the implementation. This well-developed plan

of action ensured that the model was delivered efficiently and effectively, maximizing its impact on students' conflict resolution skills.

3.9.6 Validation of the Peace-Leadership Pedagogy Model

Methodology

The Peace-Leadership Pedagogy Model was validated using the Delphi Fuzzy Model, a structured methodology that harnesses the collective intelligence of experts through iterative rounds of consultation. This method ensures the robustness and reliability of the framework by drawing on the diverse expertise of specialists in peace education, conflict resolution, pedagogy, psychology of education, and guidance and counseling.

Delphi Method Overview

The Delphi method, as delineated by Turoff (1975), is a systematic and iterative process designed to gather and refine the opinions of a panel of experts via multiple rounds of questionnaires. In each round, expert insights are collected, aggregated, and anonymized to mitigate the influence of dominant individuals. The feedback is then shared with the panel, and subsequent rounds focus on refining the responses until a consensus is reached. This iterative process minimizes bias and ensures a well-informed, balanced consensus.

Applicability in Educational Research

The Delphi method's efficacy in educational research is well-documented. Hsu and Sandford (2007) demonstrate its applicability in curriculum development and policy formation, emphasizing its utility in integrating diverse perspectives and achieving consensus on complex issues. By involving experts from peace education, conflict resolution, pedagogy, psychology of education, and guidance and counseling, the Peace-Leadership Pedagogy Model undergoes a holistic and interdisciplinary validation process.

Expert Contributions

1. **Peace Education and Conflict Resolution Experts**: Their involvement ensures the model is grounded in established theories and practices. Gomes de Matos et al. (2006) note that effective conflict resolution education includes imparting skills and fostering a deep understanding of conflict dynamics. These experts ensure the model incorporates best practices from both fields.

2. **Pedagogy Expert**: This expert ensures the model aligns with contemporary educational theories. Shulman (1987) highlights the importance of pedagogical content knowledge, which this expert uses to refine the model to ensure effective teaching of conflict resolution and leadership skills.

3. **Psychology of Education Expert**: This expert provides insights into how students learn and develop, ensuring the model considers psychological factors that influence learning and behavior. (Bandura, 2001) social cognitive theory, emphasizing observational learning and modeling, is particularly relevant here.

4. **Guidance and Counseling Expert**: This expert ensures the model includes adequate support mechanisms for students. According to Camelford (2014), the American School Counselor Association (2012) outlines comprehensive counseling programs that support students' academic, career, and personal/social development, which are integrated into the model.

Iterative Process and Final Consensus

The structured feedback and refinement process of the Delphi method ensures a comprehensive validation. Initially, six areas of expertise were identified, but upon consultation, this was reduced to five, with leadership being deemed an integral part of the remaining areas. Experts were contacted for consent and willingness to provide their judgment. The model, along with the Expert Willingness Form and Expert Judgment Scales, was submitted to each expert. After several weeks, feedback was collected and analyzed. The researcher incorporated expert comments to enhance the model, ensuring it is well-rounded and robust.

The results of this validation process are detailed in Chapter 4, with the finalized model and related forms included in the appendix.

3.9.7 Evaluation and Feedback through Final Reporting

The final step involved evaluating the model and providing comprehensive feedback based on data collected from experts during the validation process. This crucial step assessed the model's theoretical soundness, practical applicability, and potential areas for refinement. Data collected during the validation phase were meticulously analyzed to gauge the effectiveness and robustness of the model. The evaluation process was guided by the framework proposed by Kirkpatrick and

Kirkpatrick (2006), which emphasizes a multi-level approach to evaluation, although adapted for expert feedback rather than direct implementation outcomes. This framework typically covers several levels: participants' reactions, learning outcomes, behavior changes, and overall results. In this context, it focused on expert opinions and theoretical validation.

The evaluation process began with collecting experts' reactions to the model, including their assessments of its content, structure, and applicability. This initial feedback provided insights into the model's relevance and potential impact from the perspective of seasoned professionals in peace education, conflict resolution, pedagogy, psychology of education, guidance and counseling, and leadership. Positive reactions from these experts generally indicated that the model was well-conceived and addressed critical aspects of conflict resolution education. Any critiques highlighted areas requiring refinement. This feedback was essential to understand the initial reception of the model and identify strengths and weaknesses from a professional standpoint.

Next, the theoretical outcomes were assessed by examining how well the model aligned with existing literature and best practices in conflict resolution and peace education. This step involved comparing the model's components with established theories and frameworks to ensure it was grounded in sound educational principles. Experts evaluated whether the model's goals, objectives, and educational strategies were likely to be effective based on their professional experience and knowledge. This comparison with existing best practices helped ensure that the model was not only innovative but also practically viable and theoretically sound.

The potential for practical application was a key focus during validation. Experts provided feedback on how the model could be implemented in real-world educational settings, considering factors such as feasibility, scalability, and adaptability to different educational contexts. This feedback was essential to understand the model's practical implications and identify any logistical or contextual challenges that might arise during actual implementation. The insights from this step were crucial in making the model more applicable and ensuring it could be realistically executed in various educational environments.

The final level of evaluation involved synthesizing all feedback into a comprehensive report. This report outlined the model's strengths, highlighted successful strategies, and identified areas needing further development. Continuous feedback from the experts was crucial in making informed adjustments to the model, ensuring its theoretical robustness and practical viability. The report served as a dynamic document that not only assessed the model's current state but also provided a roadmap for future enhancements. By incorporating expert insights and addressing potential issues identified during the validation, the model was refined and strengthened, ready for potential pilot testing and eventual implementation in educational settings.

3.10 Data Analysis

3.10.1 Data Analysis for Descriptive Data

The data analysis process involved several steps to ensure a comprehensive evaluation of the study results. Descriptive statistics were employed to summarize and interpret the data collected. These statistics provided an overview of the respondents' demographic characteristics, as well as their responses to various items on the questionnaire.

Firstly, frequency distributions and percentages were used to describe categorical data, such as gender, age, and educational background of the respondents. These descriptive statistics helped in understanding the sample composition and identifying any patterns or trends in the demographic variables. For instance, the distribution of male and female respondents was examined to determine if there were any gender-related differences in the responses.

Secondly, measures of central tendency, including the mean, median, and mode, were calculated for continuous variables. These measures provided insights into the average responses and the most common values reported by the respondents. For example, the mean scores on items related to conflict resolution skills and perceptions of the Peace-Leadership Pedagogy Model were analyzed to gauge the overall effectiveness of the model as perceived by the respondents.

Thirdly, measures of variability, such as the standard deviation and range, were calculated to assess the dispersion of the data. These statistics indicated the extent to which the responses varied from the mean, providing an understanding of

the diversity in the respondents' perceptions and experiences. A higher standard deviation, for example, would suggest greater variability in the responses, indicating a wider range of opinions among the respondents.

Furthermore, cross-tabulations were used to explore relationships between different variables. This technique involved examining the interactions between categorical variables, such as the relationship between gender and perceptions of the Peace-Leadership Pedagogy Model. Cross-tabulations helped in identifying any significant associations and trends within the data.

Additionally, the data were reviewed for any missing values or inconsistencies. Missing data were handled using appropriate statistical techniques, such as mean imputation or case deletion, to ensure the integrity of the dataset. Ensuring that the dataset was complete and consistent was crucial for the validity of the subsequent analysis.

For more advanced data analysis, Smart PLS (Partial Least Squares Structural Equation Modeling) was employed. Smart PLS is a powerful tool for modeling complex relationships between observed and latent variables, making it suitable for this study. The use of Smart PLS allowed for the assessment of the measurement model and the structural model simultaneously. This involved evaluating the reliability and validity of the constructs, as well as testing the hypothesized relationships between variables.

The measurement model assessment included checking for indicator reliability, internal consistency reliability (using Cronbach's alpha and composite reliability), convergent validity (using Average Variance Extracted), and discriminant validity (using the Fornell-Larcker criterion and cross-loadings). These steps ensured that the constructs were measured accurately and reliably.

The structural model assessment involved evaluating the path coefficients, the significance of the hypothesized relationships, and the R-squared values of the endogenous constructs. Bootstrapping procedures were used to assess the significance of the path coefficients. This provided insights into the strength and direction of the relationships between the variables, helping to confirm or refute the hypothesized effects of the Peace-Leadership Pedagogy Model on conflict resolution skills.

The descriptive data analysis involved using frequency distributions, percentages, measures of central tendency, measures of variability, cross-tabulations, and reliability coefficients to interpret and present the data. The use of Smart PLS further enhanced the analysis by allowing for the assessment of complex relationships between variables. These methods provided a thorough understanding of the respondents' demographic characteristics, their perceptions of the Peace-Leadership Pedagogy Model, and their conflict resolution skills. The insights gained from this analysis informed the final evaluation and feedback on the model, highlighting its strengths and areas for improvement.

Utilizing these descriptive and advanced statistical techniques, the researcher was able to effectively summarize and interpret the data, providing a solid foundation for further analysis and discussion. The comprehensive approach ensured that the study results were presented in a clear and meaningful manner, facilitating a deeper understanding of the effectiveness of the Peace-Leadership Pedagogy Model in enhancing students' conflict resolution skills.

3.11 Scientific, ethical and legal considerations

3.11.1 Confidentiality

Study participants were assured of confidentiality as part of the consenting process. They were assured that the information that they give would not be divulged and would be used for research purposes only. They were assured that even when the results are reported to participants or the scientific community, it would be done in such a way as not to reveal any individual identity.

3.11.2 Consent

Consent was sought from the Ghana Education Service through the District and Regional offices for the study to be conducted in secondary schools, and consent forms were designed to assure study participants of the voluntary nature of participation, freedom to withdraw at any time. The consent form also included the name and contact details of a contact person in case of any need for clarifications while the study is ongoing.