CHAPTER III
RESEARCH METHODS

3.1. **Research Objects and Subjects**

The methodology employed for the study is examined in this chapter. It comprises the study design, the population, the sample, and sampling procedure, the data collection instrument technique, the data analysis technique, and the research questions and hypothesis design. Additionally, it takes into account the research paradigm, the research methodology, ethical issues, and the operationalization of the variables. The research hypothesis, according to (Dorman, 2003), should dictate the methods used for gathering and analyzing data. The approach for this study was therefore chosen to be consistent with the research concept.

3.1.Object of research

The objects in this study are the research variables used, the variables in question are as follows:

1. Independent Variable (Independent)

   The independent variables in this study is entrepreneurship which is divided into three categories, namely: (1) entrepreneurship intentions; (2) experiential learning; (3) theoretical learning.

2. Dependent Variable (Dependent)

   The dependent variable of this research is students' occupational aspirations

3. Mediator Variables

   The mediator variables that support this research are educational choice, perception about the labor market, and perception about Information technology.

4. Moderator Variable

   The moderator variable that supports this research is role of gender which is divided into two categories: (1) male; (2) female.

3.2.Research subject

The subject of this study took into account the objectives formulated previously, so that for data collection the research focused on students on final year SHS three (3) students consisting of 445 participants

3.3.Research Methods

3.3.1. Description of the Quantitative Approach

This study employs a quantitative approach by using a questionnaire as the main instrument of data collection. Research design is the framework or method for investigation, utilized as a guide to obtain and analyze data (Abutabenjeh & Jaradat, 2018). The purpose of this study is to analyze senior high school students' occupational aspiration model in Ghana. (Brent & Kraska, 2014) contends that positivism serves as the intellectual underpinning of quantitative research design. The quantitative method of inquiry presupposes the application of impartial, scientific techniques to knowledge acquisition. Measurement and an empirical or scientific basis are necessary for the scientific method to be used for analyzing populations and samples. The scientific approach entails formulating hypotheses and gathering observable and quantitative facts.(Klassen, Creswell, Plano Clark, Smith, & Meissner, 2012) advises utilizing a quantitative method when addressing a research challenge that calls for (a) identifying elements that affect a result, (b) evaluating the effectiveness of an initiative, (c) determining the most accurate forecasting tool, or (d) evaluating a theory. This research aims to evaluate a theoretical framework using quantitative research methods and identify the variables influencing students' occupational aspirations. For this investigation, the previously mentioned research design was found appropriate. This is because the study sought to describe and determine the general and the current state of senior high school students' occupational aspiration in Ghana by delving deep into the mediators and moderators of some key variables and their implications on the senior high school model in Ghana.

This study design is classified as descriptive research to give a general summary of the different traits of the suggested variables and their connection to real-world phenomena. To answer the verification hypothesis, a survey method is used which can be grouped into the categories of exploratory research because it can describe causality (cause-and-effect) relationships between the variables studied, by testing hypotheses, both individually and simultaneously, using mediation and moderation effects as well as investigating the interaction effects among the variables in question.

3.3.2. The study design

An ex-post facto, correlational, cross-sectional, and non-experimental research design is used in this study. Non-experimental design depends on quantitative measurement rather than human intervention from the researcher. Investigations of changes among respondent variables are the focus of non-experimental designs. The importance of establishing this link in educational research has been extensively justified by (McMillan & Schumacher, 2010). The

connection helps the researcher to identify a potential root cause of an important educational study at an early stage.

This study is also correlational. A correlational design is acceptable, by (Creswell, 2014), if the research's objectives relate to two or more variables to determine how they interact with one another in a particular model. Creswell distinguished between two primary categories of correlational designs, those that can be utilized to forecast a study's results and those that are employed to clarify the connection between various factors. To determine the study's goal, both forms of correlational designs were used.

Cross-sectional and longitudinal survey designs are the two categories that (Creswell, 2014) has recognized. Data for this study were gathered all at once, hence a crossed-sectional design was adopted. Cross-sectional survey designs, in Creswell's perspective, are highly helpful for gathering information about people's beliefs, opinions, or attitudes.

To determine if one or more previous conditions may have contributed to later differences in the subject groups, an ex-post factor design is employed. This study investigates the possible factors that influence senior high school students' occupational aspirations in Ghana.

3.3.3. Research paradigms

The researcher's philosophical assumptions, inquiry technique, and specific research methods for gathering, analyzing, and interpreting data are referred to as the research paradigm (Creswell, 2014). To create meaning contained in data, paradigms are human creations that deal with initial principles and show where the researcher is coming from (Kivunja & Kuyini, 2017). Consequently, paradigms are important because they provide guidelines and convictions that influence what should be explored, how it should be studied, and how the study results should be judged by researchers in a given field. This is made up of research plans and strategies that span everything from broad theories to particular methods for gathering, analyzing, and interpreting data. The overall choice of how to explore a topic is one of the decisions that go into the research strategy. The type of issue under investigation, the researchers' past experiences, and the study's intended audiences all have an impact on the technique choice. To create the research paradigm, the study must address four general assumptions, according to (Günbayi & Sorm, 2018). These include the estimation technique, ontological, epistemological, and human nature.

The nature of the social phenomena under study is a concern of the ontology assumption. These queries, according to (Tubey, Rotich, & Bengat, 2015), are intimately related to the philosophical discussion between nominalists and realists. The second group of identified assumptions, according to (Burrell & Morgan, 2017), is epistemology. These are related to the types and very nature of knowledge. Specifically, how it can be acquired and transmitted to other people. Extreme stances on the questions of whether knowledge can be learned or must be directly experienced on the one hand are determined by the epistemological premise. The third group of presumptions focuses on how people interact with their surroundings. According to (Tuli, 2010), since the human person is both its object and its topic of research, the implications for such an assumption in social science are profound. From the foregoing, it can be concluded that the three sets of assumptions have a direct impact on the methodological challenges that researchers face since the various ontologies, epistemologies, and models of human beings will need the use of various research methodologies. The fourth group of presumptions addresses methodological concerns. This viewpoint is most strongly expressed, in the opinion of (Burrell & Morgan, 2017), when one looks for general principles that can be used to explain and control the world as it is currently experienced.

Pragmatic paradigm

The pragmatic point of view was developed by philosophers who claimed that neither social reality as it was created under the Interpretivist paradigm nor the natural world could be determined by a single scientific approach supported by the Positivist paradigm. Peirce, James, Mead, and Dewey are the sources of pragmatism (Hafsa, 2019). It is concerned with action and change and the interplay between knowledge and action. Rather than a preconceived structure of the relationships, (Carter & Fuller, 2016) contends that the true meaning of society is found in an ongoing process of action. Any kind of human relationship is useless in the absence of action. The action that permeates a society must be grasped to understand it as a whole. Thus, the focus of pragmatism is on actions—but not for their own sake. The function of action is that of a mediator (Siegesmund, 2012). Existence can only be changed via action. Changes must be implemented in a preferred manner, and action must be directed by knowledge and purpose. Thus, both reason and action may transform the world, and there is an unbreakable connection between what people know and what they do. This also implies that the development and clarification of cognitive/conceptual processes depend on actions and their results (Goldkuhl, 2012). Instead of concentrating on procedures, researchers concentrate on the study challenge and employ all accessible techniques to comprehend the issue.

Interpretivist/Constructivist paradigm

Understanding the subjective nature of human experience is at the heart of the interpretivism paradigm (Lincoln, Lynham, & Guba, 2011). The social world is intersubjectively constructed, according to the constructivist viewpoint, by the meanings, understandings, and experiences of society. The researcher aims to comprehend the environment in which they operate. People interpret their experiences subjectively and assign meanings to individual items or objects. According to (Alase, 2017), these meanings are different, which prompts the investigator to focus on the difficulty of concepts instead of condensing meanings into a small number of concepts. The goal of the study is to base its conclusions on how the participants perceive the situation under investigation. As a result, the researcher can't divorce themselves from what has been discovered. Since the researcher and the topic under investigation are intertwined, one's worldview plays a critical role in how one perceives themselves, other people, and the wider world (Zina, 2021). To guarantee an appropriate conversation between the researchers and those they deal with, interpretivist/constructivists rely heavily on natural methods (interviewing, observing, and analyzing existing texts) (Kivunja & Kuyini, 2017). They questioned participants in a general and open-ended manner to help them build their meaning for a scenario, which was often modeled after interactions with other people. The researcher carefully observes what individuals say and do in their everyday environments. These arbitrary meanings are frequently socially and historically negotiated; they evolve via interactions with others as well as through historical and cultural conventions that influence how people conduct their lives. They frequently talk about how people interact with one another. They also focus on the local settings in which individuals live and work in order to understand the historical and cultural context of the participants. To acknowledge how their interpretation is influenced by their historical, cultural, and personal experiences, researchers include themselves in the study and admit how their backgrounds shape their interpretation (Creswell, 2014).

Positivist paradigm

The scientific method of study, which is well-known in research methodologies, is the foundation of the positivist paradigm, which describes a viewpoint to research. The positivist perspective holds that natural processes are intricate, real, and independent of the individual. So, the only crucial thing is what can be empirically observed. Consequently, science is the sole reliable source of knowledge (Johnson & Christensen, 2019; Kivunja & Kuyini, 2017). According to positivist philosophy, the world is governed by rules or theories, which must be put to the test, confirmed, and improved upon to comprehend it. Because of this, in the scientific method, the conventional research methodology, a researcher first develops a theory, collects

evidence that either refutes or supports the theory, and then makes the required adjustments and runs additional tests (Kivunja & Kuyini, 2017). Finding the fundamental principles that underlie human behavior is therefore the task of the researcher. The positivist believes that human behavior can be understood, anticipated, and studied through controlled experiments. It is therefore possible to examine and quantify behavior to identify its patterns and regularities. (Russu, n.d.) lists the following as the main tenets of positivist research as follows: First, there is no such thing as perfect truth; all knowledge is speculative. Therefore, research-based evidence is never perfect and never trustworthy. As a result, researchers contend that their results demonstrate that the theory cannot be ruled out rather than proving it. The second supposition holds that the process of doing research consists of formulating hypotheses, and discarding or improving. Several of them are in favor of others that have stronger supporting data. In the majority of quantitative studies, the researcher starts by testing a theory, and knowledge is then shaped by facts, arguments, and logical considerations. Second, depending on the participants' completed measurements or the researcher's observations, the researcher gathers data on the equipment. Thirdly, the study aims to produce pertinent, factual assertions that can clarify the problematic circumstance or elaborate on the pertinent causal links. Since researchers develop the link between variables and submit queries or hypotheses, this is evident in quantitative investigations. Last but not least, objectivity is a crucial component of the skillful investigation. Due to the importance of the standards of validity and reliability in quantitative research, researchers must carefully examine the methodology and findings for bias. This study adheres to the positivist school of thought, which emphasizes the use of quantitative data and fully exploits its replicability, objectivity, testing for the data set's robustness based on an existing theory, and generalizability of findings.

3.3.4. Area of Study

The study was carried out in Ghana, which is a country in Sub-Saharan Africa, in the western part of the continent. Its borders are shared with Burkina Faso, Cote d'Ivoire, and Togo. It occupies an area of land that is roughly 147,360 km (Ocansey, 2005). Ghana, which was a British colony in its official capacity, acquired independence in 1957 and republican status in 1960. Presently, 16 regional capitals, including Ashanti, Greater-Accra, Bono East, Brong Ahafo, Upper East, Upper West, Eastern, Western North, Western, Oti, Savanna, North East, Northern, Ahafo, Volta, and Central, serve as the country's administrative centers. Ghana's population was estimated to be 30.8 million according to the 2021 Population and Housing Census (Service, 2021). Men make up 15.2 million of the population, compared to 15.6 million women. However, since the 2000 census, Ghana's population has been expanding less quickly.

The lowest rate of average household size is 3.6 (Service, 2021). The study was carried out in Ghana, which is a country in Sub-Saharan Africa, in the western part of the continent. Its borders are shared with Burkina Faso, Cote d'Ivoire, and Togo. It occupies an area of land that is roughly 147,360 km (Ocansey, 2005). Ghana, which was a British colony in its official capacity, acquired independence in 1957 and republican status in 1960. Presently, 16 regional capitals, including Ashanti, Greater-Accra, Bono East, Brong Ahafo, Upper East, Upper West, Eastern, Western North, Western, Oti, Savanna, North East, Northern, Ahafo, Volta, and Central, serve as the country's administrative centers.

3.4. Variable Operationalization

Variable operationalization is the process of operationalizing research, how to measure, record and assign values to each variable according to observations on the indicators (Kerlinger, 2000). Then the operationalizationof this variable bridges between inductive and deductive. These variables are the effective entrepreneurship education independent variable(X) and students' occupational aspiration (Y). The independent variables consist of Educational choice (X1), Perception students hold about IT(X2),Perception students hold about PLM (variable X3), Gender (variable X4), while student occupation aspiration (variable Y) as the dependent variable. More clearly contained in table 3.1.

Table 3.1. Operationalization of Variables

Construct	Variable definition	Indicators	Measurement and scale	No.
1	2	3	4	
The strong desire/urge for a particular job or occupation (Hoff et al., 2022; Kidd, 1984; Ocansey, 2008)	**SOA** (Student occupational Aspiration) (Level of students' occupational aspirations	• I hope to become a leader in my career field. • When I am established in my career, I would like to manage other employees. • I do not plan on devoting energy to getting promoted in the organization or business I am working in. • When I am established in my career, I would	Q29-Q37 Interval	

		like to train others. • I hope to move up through any organization or business I work in. • Once I finish the basic level of education needed for a particular job, I see no need to continue my education. • I plan on developing as an expert in my career field. • I think I would like to pursue graduate training in my occupational area of interest. • Attaining leadership status in my career is not that important to me.	
deals with how students can have access to the skills and knowledge needed to start a business Omar et al., 2016; Ozturk, 2001; Shah,	**EEE** (Effective Entrepreneurship Education) (Level of students' effective entrepreneurship education)	• Entrepreneurial Intentions • I will start my own business after completing high school. • I will start my own business after completing tertiary education. Example first degree • I have the intention to work for someone after SHS.	Q1-Q5 Interval

Amjed, & Jaboob, 2020b; Welsh et al., 2016b)		• I have the intention to study entrepreneurship after SHS. • I am ready to do anything to start my own business.	
	• Experiential Learning • I know the necessary practical details to start a business. • I know how to plan my business. • I know how to sell. • I know how to save for my business. • I have tried doing business before.		Q6-Q10 Interval
	• Theoretical Learning • I like solving questions on simple and compound interest. • The introductory business topic requires too much memorization • I find it difficult to lve business-related estions • I have difficulty understanding business-related topics • Topics on business are boring		Q11-Q15

The desire and interest in the selection of a specific educational qualification (Bashir & Kaur, 2017; K. Edwards & Quinter, 2011; Ocansey, 2005)	**EC** (Education choice) (The level of educational choice)	Would you like to continue your full-time education after you have completed your Senior High School education		Q16-Q18 Interval
		How would you rate your desire to continue full-time education after you have completed your Senior High School education		
		Looking realistically at your future, how would you rate your chances of continuing your education after Senior High School		
How students perceive the usage of information technology (Irinoye, Ayamolowo, & Tijnai, 2016; Zaharin, Sharif, & Mariappan, 2018) (Ndibalema, 2020)	**PIT** (Perception on Information Technology) (Level of students' perception in IT)	I Frequently use a smartphone or computer. I have some level of ICT knowledge. Knowing ICT can increase the number of job opportunities. In using ICT, I can handle the negative effect of the technology		Q25-Q28 Interval

How students think about the world of work	**PLM** (Perceptions students hold about the labor markets) (level of students' perception in Labor market	With my educational background, I will get a suitable job. With my educational background, I will get the appropriate salary. Men will get better jobs than women. I prefer to be self-employed than work as an employee.
The sex of the participants	Gender	• Male • Female
School category	School Category	• A • B • C • D
Where they reside	School type (Level of students' demographic traits)	• Day • Border
	Residency Type	
They are academic courses run by a formal educational institution	Academic Program (Level of Academic program	• Business • General Arts • Science • Home Economics • Visual Arts
How old is the participants in years	Age of participant	• Age

3.5.Population, Sampling Technique, and Sample

The targeted population for the study was final-year SHS3 students in 12 Senior high Schools in the Cape Coast Metropolis. Moreover, because of the uneven distribution of the number of senior high school students to use for the study and the extent of geographical stretch, it was impossible to cover all the participants under study which was necessitated by budget constraints and the study period. The study uses a descriptive survey, and through the use of suitable sampling techniques, steps were taken to ensure that the sample had a nationwide representation. To achieve this, the study used the Ghana Education Service Categorization of Senior High Schools. Through a simple random sampling method (Lottery Approach) with the respective categories A, B, C, and D Senior High Schools, two schools will be selected from category A and one school will be selected from each of the three categories B, C, and D. Two schools were selected from Category A because all the listed category A schools in the Cape Coast metropolitan were all single-sex school (either 'boys only' or 'girls only'). Therefore, we selected one boy's school and one girl's school all from category A. The study's participants were chosen using a multi-stage stratified random sampling process. This is to guarantee that the various student categories (female, male, school type, residence, and academic programs) were fairly chosen to represent the study's objective. SHS 3 final-year students were chosen for this study because they were in their final year of the senior high school program and valued the opportunity to complete their education and choose a career more than their peers in lower forms or grades. Table 3.2 below shows the described method in more detail.

Table 3.2: Distribution of Sampled Schools by School name, Category of School and by the Type of School

Name of School	Category of School	Type of School
Academy of Christ the King SHS	Category C	Mixed
Adisadel College SHS	Category A	Boys only
Effutu SHS	Category D	Mixed
University Practice SHS	Category B	Mixed
Wesley Girls SHS	Category A	Girls only

Source: Generated from the author's field survey (2022)

Following the selection of the participants from each of the categories, the sampling method was the next step in achieving the aforementioned conditions. The sample size for the study was established using the table for estimating sample size from a particular population by (Krejcie & Morgan, 1970) and mentioned (Sarantakos, 2017) for each category.

$$\dot{n} = \frac{\chi^2 \mathcal{N} \mathcal{P}(1 - \mathcal{P})}{d^2(\mathcal{N} - 1)} + \chi^2 \mathcal{P}(1 - \mathcal{P})$$

where $\dot{n}$ is the sample size, χ^2 the chi-square value for 1 degree of freedom in the table (3.841) at the.05 alpha level, $\mathcal{N}$ stands for the population size, $\mathcal{P}$ stands for population proportion, and d measures the degree of accuracy. A sample size of 445 was used for this study. Table 3.2 displays the distribution of the sample from the chosen schools. The school's attendance book was used to determine the student's enrollment.

3.4.1 Characteristics of the Participants

After the data from their responses was examined, the sample size was 445. After the data set had been altered and cleaned for further analysis, this number was analyzed. The incompleteness of several questionnaires led to their rejection (refer to Table 3.3). It appears from the final sample that 192 of the participants were females representing 43.1% while 253 participants were sampled from their male counterparts representing 56.9%. This was depicted in Table 3.4 below.

Table 3.3. Population, Sampled, Questionnaires not returned, Questionnaires returned and Valid Questionnaires

School	Population	Sampled	Questionnaires Not returned	Questionnaires returned	Valid Questionnaire
Academy of Christ the King SHS	310	150	30	120	90
Adisadel College SHS	452	150	16	134	98
Effutu SHS	258	120	8	112	92
University Practice SHS	259	120	20	100	80
Wesley Girls SHS	318	150	23	127	85
Total	1397	570	97	593	445

Source: Generated from the author's field survey (2022)

Table 3.4. Distribution of Participants by School and Sex

School	No. of Female	Percentage of Female	No. of Male	Percentage of Male	Total Participants
Academy of Christ the King SHS	52	27.1	38	15	90
Adisadel College SHS	0	0	98	38.7	98
Effutu SHS	20	10.4	72	28.5	92
University Practice SHS	35	18.2	45	17.8	80
Wesley Girls SHS	85	43.3	0	0	85
Total	192	43.1	253	56.9	445

Source: Generated from the author's field survey (2022)

Table 3.5 shows the participant distribution according to their program of study. Since every school has an arts program, enrollment in those programs was at a high level. Additionally, art programs are composed of numerous combinations; nonetheless, for the sake of this study, such combinations were treated as a single group. Table 3.6, also indicates that 58.9% of the sample came from schools with both boys and girls, whereas 22% and 19% of the participants came from schools with just boys and girls, respectively.

Table 3.5 Distribution of Participants by their Program of Study

Program of Study	Frequency	Percentage
Business	104	23.4
General Arts	103	23.1
Home Economics	81	18.2
Science	79	17.8
Visual Arts	78	17.5

Total	445	100.0

Source: Generated from the author's

Table 3.6 Distributions of Participants by the Type of School

Type of School	Frequency	Percentage
Mixed	262	58.9
Boys only	98	22.0
Girls only	85	19.1
Total	445	100.0

Source: Generated from the author's field survey (2022)

In our consideration of the participants in the sampling frame, we also considered their place of residence. The participants consisted of 24% of day students and 76% of boarders. Because final-year students typically are boarders, there were a lot of boarders. In the Ghanaian SHS system, when SHS students are in their final year, day students typically apply to live in boarding housing. Also, all the schools had boarding facilities which could also be attributed to the high number of boarders. This was presented in Table 3.7. Furthermore, table 3.8 shows the distribution of gender to the age of the participants.

Table 3.7. Distribution of Participants by School and the Type of School Residence

School	No. of Day	Percentage	No. of Boarder	Percentage of Boarders	Percentage Total	Total of Participants
Academy	36	8.1	54	12.1	20.2	90
Adisadel	0	0	98	22.0	22	98
Effutu	37	8.3	55	12.4	20.7	92
Univ. Practice	27	6.1	53	11.9	18.0	80
Wesley Girls	7	1.6	78	17.5	19.1	85
Total	107	24.0	338	76.0	100	445

Source: Generated from the author's field survey (2022)

Table 3.8. Distribution of Participants by their Gender and Age

Age(years)	Female	Percentage	Male	Percentage	Total	%
15-17	121	63.0	105	41.5	226	50.8
18-20	68	35.4	135	53.4	203	45.6
21-23	3	1.6	13	5.1	16	3.6

Source: Generated from the author's field survey (2022)

The educational level of the participants' parents is shown in Table 3.9 It is significant to note that a sizable portion of participants' parents had educational levels that were elementary. This was consistent with the findings from the Ghana Statistical Service's Living Standard Survey

report on the breakdown of educational attainment among Ghanaian parents. It appears that mothers have low educational levels than fathers as presented in Table 3.9.

Table 3.10. shows the participants' parent employment type. According to table 3.10, a sizable fraction of the participants' parents were self-employed, with respective percentages of 51.7 percent and 60.4 percent for the father's and mother's employer types. Parents who worked for others came from the public or government sector category (24.7 percent fathers, 26.5 percent mothers).

Table 3.9 Participants' Parents' level of Education

Parents' level of Education	Father's education		Mother's Education	
	Frequency	Percentage	Frequency	Percentage
None	64	14.4	79	17.8
University	89	20	8	1.8
Diploma	32	7.2	27	6.1
Secondary	108	24.3	129	29.0
Commercial	10	2.2	20	4.5
Teacher training	7	1.6	13	2.9
Elementary/Basic	135	30.3	73	16.4
Total	445	100	95	21.3

Source: Generated from the author's field survey (2022)

Table 3.10 Disaggregation of Participants Parents Employer Type

Type of Employer	Father's Employer		Mother's Employer	
	Frequency	Percentage	Frequency	Percentage
Public/Government	110	24.7	118	26.5
Private Firm	96	21.6	40	9.0
NGO	3	0.7	5	1.1
Self	230	51.7	269	60.4
I don't know	6	1.3	13	2.9
Total	445	100	445	100

Source: Generated from the author's field survey (2022)

Table 3.11 below lists the parents' jobs for the participants. It is interesting to observe from the table that while higher percentages of participant mothers were involved in petty trading, a sizable majority of the participant fathers were engaged in farming, as shown by table 3.11. This is also an accurate depiction of the living standards survey report, which shows that the majority of Ghanaians engage in farming and small-scale business.

Table 3.11. Participants Parents Occupation

Parents' level of Education	Father's education		Mother's Education	
	Frequency	Percentage	Frequency	Percentage
Medical doctor	11	2.4	-	-
AC repairer	1	.2	-	-
Accountant	3	.7	2	0.4
Administrator	2	.4	1	0.2
Architect	5	1.1	-	-
Assistant technical director	2	.4	-	-
Automobile Engineer	1	.2	-	-
Bank manager/Manageress	7	1.5	3	1.6
Barber/beautician	2	.4	8	1.8
Broadcaster	1	.2	-	-
Building Constructor	1	.2	-	-
Business-Man	44	9.8	16	3.5
Butcher	1	.2	-	-
Car Agent	1	.2	1	0.2
Carpenter	9	2.0	-	-
Chef	1	.2	-	-
Chemical Engineer	1	.2	-	-
Chief Director	1	.2	-	-
Civil Engineer	3	.6	-	-
Cleaner	2	.4	2	0.4
Cocoa Farmer	4	.9	-	-
Commercial Driver	1	.2	-	-
Computer Programmer	4	.8	-	-
Computer System Administrator	1	.2	-	-

Computer Technician	1	.2	-	-
Consultant	1	.2	-	-
Contractor	9	2	-	-
Dentist	1	.2	-	-
Distributor	1	.2	-	-
Driller	3	.7	-	-
Driver	20	4.5	-	-

Table 3.11 continues

Parents level of Education	Father's education		Mother's Education	
	Frequency	Percentage	Frequency	Percentage
Economist	1	.2	-	-
Education Director	1	.2	-	-
Electrical Engineer	1	.2	-	-
Electrician	5	1.1	-	-
Engineer	14	3.1	-	-
Entrepreneur	4	.9	2	0.4
Estate Developer	2	.4	-	-
Examination Officer	1	.2	-	-
Farmer	55	12.4	22	4.9
Fisherman	8	1.8	11	2.4
Forestry Commission	2	.4	-	-
functional Manager	3	.7	3	0.6
GES director	1	.2	-	-
Graphic Artist	2	.4	-	-
Gym instructor	1	.2	-	-
Hall Assistant	1	.2	-	-
Headmaster	1	.2	1	0.2
Health Worker	1	.2	-	-
Herbalist	3	.7	1	0.2

Journalist	1	.2	-	-
Labour Officer	1	.2	-	-
Lawyer	3	.7	3	0.7
Lecturer	2	.4	-	-
Manager	2	.4	1	0.2
Marketing Director	1	.2	-	-
Marketing Officer	3	.7	-	-
Masonry	5	1.1	-	-
Mechanic	1	.2	-	-
Metal Works	2	.4	-	-
Miner	9	2.0	-	-
NADMO Officer	1	.2	-	-
National Security	1	.2	-	-
Nurse	4	.9	13	2.9
Operations Manager	1	.2	-	-
Pastor	5	1.1	-	-
Pavement moulder	2	.4	-	-
Pharmaceutical Technologist	1	.2	-	-
Photographer	1	.2	-	-
Plumber	2	.4	-	-
Police Officer	6	1.3	-	-
Politician	1	.2	-	-
Poultry Farmer	1	.2	-	-
Prison Officer	2	.4	2	0.4
Publisher	1	.2	-	-
Radio Presenter	1	.2	-	-
Researcher	1	.2	-	-
Retiree	5	1.1	3	0.7
Reverend Minister	1	.2	-	-
Sailor	1	.2	-	-
Sales Manager	2	.4	7	1.6

Table 3.11 continues

Parents' level of Education	Father's education		Mother's Education	
	Frequency	Percentage	Frequency	Percentage
Security Service	5	1.1	-	-
Self-Business	4	0.9	-	-
Software Developer	1	.2	-	-
Soldier	2	.4	-	-
Sound Engineer	2	.4	-	-
statistician	1	.2	-	-
Surveyor	1	.2	-	-
Tailor	3	.7	7	1.5
Tax Collector	1	.2	-	-
Teacher	31	7.0	35	7.8
Technician	1	.2	-	-
Trader	50	11.2	220	49.4
Transport Manager	3	.7	-	-
Transport officer	1	.2	-	-
Unemployed	7	1.6	11	2.5
VAT Personnel	1	.2	-	-
Ware House Assistance	1	.2	-	-
Welder	1	.2	-	-
Sells Fabrics	-	-	1	0.2
Auditor	-	-	4	0.9
Bar Attendant	-	-	3	0.7
Caterer	-	-	20	4.2
CEO of Saloon	-	-	1	0.2
Charcoal Seller	-	-	3	0.7
Immigration Officer	-	-	3	0.7
Lab Technician	-	-	1	0.2
Nanny	-	-	2	0.4

I don’t know	9	2	5	1.1
Total	445	100	445	100

Source: Generated from the author’s field survey (2022)

3.6. Research Instrument

Data from a sample of students is collected for this study using a single design tool in the form of a questionnaire (Appendix A). The research instrument was designed in six sections.

Section one: On the demographic profile of the participants, there are 12 constructed items in this section. participants' personal information.

Section two: This section of the instrument was used to examine the data set on entrepreneurship intention, experiential learning, and theoretical learning to measure participants' level/extent of effective entrepreneurship education. This section was constructed based on existing theory and literature as in the works of (Akolgo, Li, Dodor, Udimal, & Adomako, 2018; Fredua-Kwarteng, 2005; Khuong & An, 2016; Shah, Amjed, & Jaboob, 2020b; Welsh et al., 2016b)

Section three: This part gauges students' aspirations for their future occupations. The students' aspirations for their occupations were assessed using a 9-item scale. This was consistent with Bakare's occupational choice scale as cited (Ocansey, 2005). With an alpha coefficient of 0.78 and a reliability coefficient of 0.78, the original version of Bakare's scale has been verified on students in Ghana (Ocansey, 2005). The degree to which these latent variables measure the concept of student's occupational aspiration was evaluated by the students using a five-point Likert scale (strongly disagree-1, disagree-2, neutral-3, agree-4, strongly agree-5). An alpha coefficient of 0.93 was obtained for the entire scale.

Section four. This section assesses participants' educational choices by examining where they are now and where they hope to be in the future concerning their educational pursuits. The Likert scale was used to ask students to rate (strongly disagree-1, disagree-2, neutral-3, agree-4, strongly agree-5). Test for reliability and the validity of the education choice yielded 0.78 and 0.71 respectively.

Section five. This section contained a measure of the students' perception of IT. The Likert scale was used to ask students to rate (strongly disagree-1, disagree-2, neutral-3, agree-4, strongly agree-5). After three weeks, the test produced a test-retest reliability coefficient of 0.94 and an alpha coefficient of 0.87.

Section six: To elicit information from the participants on their perception of the labor market. The Likert scale was used to ask students to rate (strongly disagree-1, disagree-2, neutral-3, agree-4, strongly agree-5).

Stages for data collection

Pilot study

Using 50 students as the sample size, a pilot study was carried out at the Academy of Christ Senior High School in Cape Coast Metropolitan. To ensure that students from all different groups (boys, girls, day and boarders, and diverse programs of study) were selected for the pilot studies, the sample was chosen using a simple random approach. We also tested the reliability of the test instrument. A statistical characteristic of test results known as reliability is unrelated to the subject matter and is measured consistently. The goal of reliability is to make sure that the data-gathering tool consistently generates the same or similar results in various contexts and at various times (Petty, Briñol, Loersch, & McCaslin, 2009). It refers to the degree of accuracy of measurements. A measure with high reliability has relatively little error, and one with low reliability has a lot of errors. Unexpected outcomes will occur if the tool is unreliable (Teddlie & Tashakkori, 2006). To decrease errors or unintended outcomes in reliability, there are two major types to take into account. Both internal and external reliability fall under this category. The degree to which a measure is consistent among the instruments within itself is known as internal reliability (dependability). Utilizing Cronbach alpha and split-half reliability, internal consistency can be determined (Towers & Allen, 2009). On the other hand, external reliability refers to how much a measure differs from one user to another and can be gained by other researchers using the same methods and processes in the same or similar circumstances to ascertain whether the results would be consistent or not (Joe F Hair Jr, Howard, & Nitzl, 2020). A "test-retest" coefficient of stability can be used to calculate this. According to (Towers & Allen, 2009), Cronbach's alpha and Kuder Richardson's "KR" reliability can be used to determine the instrument's (questionnaire's) reliability; therefore, high KR reliability scores or scores that are high on both measures denote good reliability. An indication of the test's strong internal consistency is an alpha test result of greater than 0.75.The questionnaire's validity and reliability were checked, and the pilot research assisted in examining the questionnaire's accuracy and clarity as well as any problems that arose during its primary delivery. The piloted tool also helped in testing the anticipated statistical approach that will be applied to the study.

3.7. Data collection instrument technique

The data collection team, which included the researcher and two research assistants, personally handed the participant's instrument to each student after providing them with some training on how to conduct the questionnaire. They were chosen based on their educational background, as well as their research and data collection experience. Graduate students on national service working as teaching assistants at the University of Cape Coast were these research assistants. There was an in-depth discussion about the research instrument between the researcher and the research assistants. The research assistants were also given an explanation of the study's objectives and the operational definitions of the terminologies. The purpose of the training was to establish a framework for equitable comprehension and interpretation of questions, accuracy, and comprehensiveness in responses, and appropriate interpersonal skills. The participants' classroom was where the instruments were administered. The purpose of the study was communicated to the sampled participants while they were instructed to remain in their separate classrooms. To assure the accuracy of the data, respondents were given enough time during the data-gathering process. Within two weeks, the researcher and his research assistants gathered the data.

Problem Encountered

Only the students present on the data collection day were sampled during the data gathering process. It was impossible to access the student's class register (class list). In addition, the participants spent longer than the 35-minute pilot study's pre-estimated time. The period during which the questionnaire was distributed coincided with the students' time for either breakfast or lunch. Before the break, some students took away the questionnaire and never returned them. This had an impact on the return rate but also caused incomplete responses to several questionnaires. In light of this, no data analysis could be done on them.

3.8. Data Analysis Techniques and Hypothesis Testing Design

The data analysis for the study was obtained from 445 in 5 senior high schools. Then, variables were identified and entered into the IBM SPSS 26.0 data view of the Statistical Package for Social Science. The data set was entered into SPSS, modified, and coded for bad rejection. The data were then cleansed to ensure that the values fall within the range of what is reasonable to expect. To assess the accuracy of the data, consistency checks were looked at following the works of (Meyers, Gamst, & Guarino, 2013). Using the raw data scores from the survey's main questionnaire, incorrect data sets were checked and corrected. The next step was

to create statistical tables to find the missing data. The scores from the normal distributions were then checked for each observable variable. The dataset was then clearly reduced by excluding elements that were not normally distributed. Listwise deletion was used to complete all analyses. Principal axis factoring with Promax rotation was used to conduct exploratory factor analyses on the items of the self-constructed scales as well as on scales that had several items removed due to non-normality. With theoretical foundations, these studies sought to recommend potential models for more thorough research. Eigenvalues greater than one (> 1) were used as the yardstick to determine the final number of factors. The components' interpretability as well as their number about the amount of explained variance. The components discovered by the exploratory factor analyses were then subjected to confirmatory factor analyses utilizing structural equation modeling using AMOS version 26 software. We evaluated the confirmatory factor models using a range of goodness-of-fit indices. Finally, the models that both offered a strong match and had conceptual meaning for the data were selected for additional analysis for greater comprehension.

Given that the study was descriptive, both descriptive and inferential statistics were applied. By examining the distribution of the data set across participants and the participant characteristics for each variable, statistical tables calculated using SPSS 26.0 were used to describe the participants. The frequency distribution and the percentages of the data set were analyzed especially for the first section, answering research questions one to four.

Analysis of hypotheses one (1) to three (3) was done using structural equation modeling and the Hayes process macro. This statistical method was used to evaluate the reliability of the data and test the relationships between the variables. Using IBM SPSS Amos 26 and structural equation modeling analysis (SEM) as well as Process macro version 4.2, the assertion was examined (Arbuckle, 2012). SEM is a method for data analysis that can be used to assess both measurement models and structural models. The measuring model can be analyzed separately from the structural model, which is the subject of investigation (Meyers et al., 2013). The most common approach for evaluating model fit are the following (Meyers et al., 2013): The root means the square error of estimate (RMSE), the comparative fit index (CFI), the normed fit index (NFI), and the goodness-of-fit index (GFI) are all statistical measures of fit (RMSEA).

When comparing theoretical and empirical models, the most significant absolute fit indicator uses the chi-square and likelihood ratio statistics (Meyers et al., 2013). A significant chi-square (χ^2), as opposed to a non-significant chi-square (χ^2), indicates that the theoretical model does not effectively explain the empirical data. The null hypothesis (Ho) is represented

by the initial (complete) model, according to (Schumacker & Lomax, 2004).

The GFI and the R^2 in multiple regression are conceptually comparable (Khine, 2013). It counts how many variances and covariances the model, on average, can explain. A good model fit is defined as values that are equal to or higher than.90. The NFI examines the discrepancy between the hypothesized and null models' chi-square values. The NFI's desired value is .95. Inconsistencies between the theoretical model and the empirical data are investigated by the CFI. Any value greater than.95 signifies a good fit.

A statistical method for studying structural models with latent variables is called structural equation modeling (SEM) (Meyers et al., 2013). The two sorts of models that SEM may assess are a structural model and a measurement model. The measuring model assesses how well the connections between the variables that were observed mirror the predicted relationships between the variables. Both the strength of the association between latent constructs and the relationship between other measurable variables are measured by the structural model. If the data from the observed models and the hypothesized model are consistent, the structural equation model can be used to describe it. The use of structural equation modeling as a data analysis technique is justified by the nature of the study hypothesis. In this study, the structural model was the main focus, and the suitability of the real model and the proposed structural model were compared.

The study used the hypothesized Process Macro for analyzing hypothesis 3. Andrew Hayes created the process macro, a bootstrapping statistical computer tool, as an add-on for the SPSS and SAS programs (Hayes, 2013). For the sake of this study, the SPSS extension was used. On the link between the independent and dependent variables, the Process macro was used to investigate the impact of one or more mediating or moderating variables. The Process macro computes the t and p values, R^2, unstandardized and standardized regression coefficients, standard errors, and other statistics such as the direct, indirect, and overall effects of the independent variable on the dependent variable. Contrary to the Sobel test, which presumes a continuous outcome, the Hayes process macro can be used with both continuous and dichotomous outcomes (linear regression analysis), which is a considerable advantage (logistic regression analysis).

3.9. Reliability Test

Generally, reliability can be defined as the consistency of a method and research results, but specifically, reliability can be defined as "the consistency of the methods, conditions, and results."(Budiastuti & Bandur, 2018). For this reason, in particular, the concept of reliability

refers to the consistency of the score results on the items contained in the questionnaire, so that the real reliability test tests the accuracy of the research instrument measurement scales(Budiastuti & Bandur, 2018). In quantitative research, there are two general methods used by many researchers to determine the level of reliability: (1) Test-retest reliability and (2) internal consistency tests. The test-retest approach, also known as re-measurement, is used when a researcher tests the same research sample at different times(Ghozali, 2016). In other words, if a respondent is given the same questionnaire and/or test at different times, then the results of the two tests are correlated to see the consistency of the results. The higher the level of correlation in the first and second tests, the better the reliability of the measurement scale.Meanwhile, the most appropriate internal consistency test is Cronbach's Alpha or also called the alpha coefficient (Budiastuti & Bandur, 2018). The range of alpha coefficient values ranges from 0 (no reliability) to 1 (perfect reliability). Furthermore, to determine the level of reliability of data, Budiastuti & Bandur (2018), Mark L. Manning (2006), and Nunnally (1978) state that data is classified as reliable if the value of the alpha coefficient ≥ 0.7. The Cronbach's Alpha method using SPSS version 24 was used to measure the reliability. The following were the results of our reliability of each key variable as presented in the table below.

3.10. Reliability test for individual variables

Variable	Cronbach's Alpha	No. of Items
EI	0.866	5
EL	0.918	5
TL	0.872	5
SOA	0.932	9
PIT	0.948	4
PLM	0.843	4
EC	0.780	3

3.11. Instrument validity test results

A valid validity test will ensure that the data set from the questionnaire was properly measured should be consistent and the correlation should be greater than or equal to 0.30 (Nuryamau 2015). The questionnaire is said to be valid if the 0.30 threshold is met. The grid of instruments is as fellows Instrument validity test on entrepreneurship education comprising; Entrepreneurship intentions, experiential learning, and theoretical learning, Students occupational aspirations, perception students hold about IT, perception of students about the labor market and educational choice as indicated below

Table 3.2. Entrepreneurship intentions

Description	Corrected item-total correlation	standard	Status
EI 1	.680	0.30	valid
EI 2	.676	0.30	valid
EI 3	.694	0.30	valid
EI 4	.703	0.30	valid
EI 5	.692	0.30	valid

Table 3.3. Experiential learning

Description	Corrected item-total correlation	standard	Status
EL 1	.832	0.30	valid
EL 2	.843	0.30	valid
EL3	.750	0.30	valid
EL4	.701	0.30	valid
EL 5	.820	0.30	valid

Table 3.4. Theoretical learning

Description	Corrected item-total correlation	standard	Status
TL 1	.699	0.30	valid
TL 2	.662	0.30	valid
TL 3	.687	0.30	valid
TL 4	.760	0.30	valid
TL 5	.692	0.30	valid

Table 3.5. Student Occupational aspirations

Description	Corrected item-total correlation	standard	Status
SOA 1	.760	0.30	valid
SOA 2	.744	0.30	valid
SOA 3	.744	0.30	valid

SOA 4	.754	0.30	valid
SOA 5	.747	0.30	valid
SOA 6	.751	0.30	valid
SOA 7	.739	0.30	valid
SOA 8	.769	0.30	valid
SOA 9	.705	0.30	valid

Table 3.6. Perception students hold about information technology

Description	Corrected item-total correlation	standard	Status
PIT 1	.877	0.30	valid
PIT 2	.901	0.30	valid
PIT 3	.817	0.30	valid
PIT 4	.907	0.30	valid

Table 3.7. Perception students hold about the labor market

Description	Corrected item-total correlation	standard	Status
PLM 1	.656	0.30	valid
PLM2	.679	0.30	valid
PLM3	.669	0.30	valid
PLM4	.720	0.30	valid

3.12. Testing prerequisites Analysis

Normality test

Whether or not the data is normally distributed is subject to a normality test. Normality requirements must be tested parametrically. Nonparametric statistics are used if the data does not have a normal distribution. For the normality test in this study, with a given sample, Kolmogorov Smirnov was tested at a 0.5, the research data is said to be normally distributed since the test of significance is less than 0.05 as indicated in the works of (Algifars, 2001)

Multicollinearity test

Observing the presence or absence of multicollinearity among the independent variables, a multicollinearity test was carried out. this was done by comparing the research data to the

variance inflation factor (VIF) value. If the calculated VIF value is greater than 10, it means that the variable has a multicollinearity problem with the other independent variables. However, if the VIF value is less than 10 then it means the research data is not suffering from multicollinearity.

Autocorrelation Test

An autocorrelation is carried out to observe whether there is a relationship between the error term and the other independent variables. We tested for autocorrelation using the Durbin Watson (D-W) test and compare the results to Durbin Watson (D-W) table as indicated in the table below

D-W value	information
<1.10	There is autocorrelation
1.11-1.54	There is no conclusion
1.55-2.46	There is no autocorrelation
2.47-2.90	There is no conclusion
>2.90	There is autocorrelation

Refinement and Validation of Instrument Using Amos

For some reason, it is essential to do a thorough investigation of the measurement of the research instrument used in this empirical study. In other investigations in this field on a variety of groups, empirically validated scales can be used right away. The second benefit is that it gives assurance that the empirical findings appropriately reflect the suggested constructs (A. Wong & Sohal, 2002). A psychometric scale's validity and reliability can be judged according to a variety of factors. For the scale employed in this study, Cronbach's alpha, composite reliability, content, construct, and criterion validity, among other types of reliability and validity, were evaluated (Malhotra, Agarwal, & Peterson, 1996).

Further reliability test using SEM AMOS

When employing the same instruments to measure recurring things, reliability refers to the extent to which the same results may be attained. Since a lack of unidimensionality may result in a correlation between false entities, unidimensionality should be addressed before performing a scale reliability evaluation. As a result, analyses of reliability and

unidimensionality were performed on each of the scales used in this study (A. Wong & Sohal, 2002).

Unidimensionality Analysis

Unidimensionality is a critical need for the examination of reliability and construct validity, as (Anderson & Gerbing, 1988) pointed out. Without unidimensionality, the scale's value cannot be expressed by a single number because its elements can only be used to estimate a single construct (A. Wong & Sohal, 2002). In this study, confirmatory factor analyses were conducted to examine the unidimensionality of the scales.

Statistical Procedure

Several multivariate analyses were conducted to establish the correlations between the variables in this study. Among these are CFA and SEM. All of these analyses will be elaborated.

Confirmatory Factor Analysis

When using CFA approaches, an effort is typically made to identify the sets of observed variables that can best capture the constructs' covariance or common variables (Schumacker & Lomax, 2004). Except for limitations arising from the hypotheses being incorporated in the analysis, CFA and EFA are extremely similar. These limitations could take the shape of the number of hypothesized factors, the type of relationships between the factors, or the size of the factor loading for each variable (Schumacker & Lomax, 2004). CFA was used in this work to assess the latent variables' unidimensionality, convergent validity, and discriminant validity (Joe F Hair Jr et al., 2020).

Structural Equation Modelling

Since SEM allows for the adjustment and evaluation of the theoretical models, it has been frequently used in social science research that uses quantitative data (Bentler, 1986). Indeed, Examining the interdependence of various latent variables using SEM is quite helpful (Hair, Gabriel, & Patel, 2014). It is intended to determine the structural links between the sets of latent variables as well as how well a given conceptual model may match the data gathered. The covariance matrix was used to carry out the modeling process, and maximum likelihood estimation was used in this process (MLE). The multivariate normality assumptions must be met for MLE to be effective, which makes it one of the most widely used techniques (I. Choi, 2002; Joe F Hair Jr et al., 2020). The two-stage process for this structural test is described by (Anderson & Gerbing, 1988). Establishing accurate construct measurements comes first, while the examination of structural linkages comes afterward. In this investigation, SPSS 26 and AMOS 26 were used to create and evaluate the measurement and structural models.

Overall, Goodness-of-Fit Measures

There is no one statistical measure that best captures a structural model's capacity for prediction (Hair et al., 2014). According to (Moss, 2009), choosing which indices to use as good-fit estimators can be difficult because certain indices have been shown to operate somewhat differently given the sample size, estimation procedure, model complexity, and/or violation of the underlying assumptions of multivariate normality and variable independence. Because of this, determining the optimal indices to use to describe the model fit and the level of the reported fit that qualifies as good still depends on the researchers' expertise in the various indices, the model, and the data. In addition, a mix of measurements may be used to assess a structural model's overall goodness of fit. In this work, the absolute fit measures, CFI, RMEA, TLI, and IFI fit measures were used (S. L. Boateng, 2020).

Absolute Fit Measures

The degree to which the whole model (i.e., the measurement and structural models) predicts the observed covariance is determined by absolute fit measurements (Hair et al., 2014). The goodness-of-fit index, the root mean square residual, and likelihood-ratio chi-square statistics are a few examples of absolute fit measures that are frequently employed in SEM (A. Wong & Sohal, 2002).

Likelihood-ratio Chi-square Statistics

This is the sole statistically based measure of goodness-of-fit provided in SEM, and it is the most basic measure of overall fit, according to (Hair et al., 2014). A low chi-square statistic suggests that there is less discrepancy between the postulated and estimated models, which is how the model fit is evaluated. Nevertheless, the usage of chi-square in goodness-of-fit analysis in SEM has been problematic due to the propensity to reject the fitted model (Schumacker & Lomax, 2004). Since these errors are a result of the dataset's non-normality, it is anticipated that they will become more obvious as sample sizes increase. However, utilizing chi-square in SEM goodness-of-fit analysis is difficult due to its propensity to reject the fitted model (Schumacker & Lomax, 2004).

Goodness-of-Fit Index Goodness-of-Fit Index

GFI calculates a model's goodness-of-fit against a completely unfit set of data (Ulrich, 2009). The goodness-of-fit of the model is measured using an index that goes from zero (bad

fit) to one (perfect match); the higher the index, the better the fit. It is a universal consensus that a minimum value of 0.90 is required to indicate a good fit (Hair et al., 2014).

Root Mean Square

The mean of the squared residuals between the estimated and observed input matrices is called the root mean square (RMR) (Hair et al., 2014). RMR ranges from zero (perfect fit) to one (poor fit) and the lower the value, the better the goodness-of-fit (Hair et al., 1998). Comparing the estimated model to the baseline model, also known as the null model, is done using incremental fit measurements (A. Wong & Sohal, 2002), It is a useful model, which should be expected to be surpassed by all other models (Hair et al., 2014). Among the examples are the Normed Fit Index (NFI), Adjusted Goodness-of-Fit Index (AGFI), and Comparative Fit Index (CFI).

Adjusted Goodness-of-Fit Index

The goodness-of-fit index goes from zero (bad fit) to one (perfect fit), with a higher index indicating a greater goodness-of-fit. A good match is generally considered to have a minimum value of 0.90 (Hair et al., 2014).

Normed Fit Index

NFI shows an improvement in fitness over the independent baseline model as a percentage (Bentler & Bonett, 1980). Despite being frequently employed, NFI has been shown to overestimate a model's goodness of fit in small samples. The goodness-of-fit is measured using the NFI index, which runs from zero (poor fit) to one (perfect match). The consensus is to use 0.90 as a minimum value as a benchmark for a satisfactory match (Hair et al., 2014)

Comparative Fit Index

In CFI, "comparisons between the calculated model and a null or independence model" are discussed (A. Wong & Sohal, 2002). The goodness-of-fit index goes from zero (bad fit) to one (perfect fit), with a higher index indicating better goodness-of-fit. The consensus is that a good fit must have a minimum value of 0.90 (Hair et al., 2014).

3.13. Ethical Considerations

The study's ethical considerations included following institutional protocol before conducting the data-gathering exercise at various senior high schools. Ethics is one important factor that most researchers consider when performing a study. Research's guiding disciplines and principles have something to do with ethics (Resnik, Elliott, & Miller, 2015). Collaboration between the researcher and the dejected is necessary for every research project. This necessitates some sort of agreement between the parties to guarantee the

privacy of the responses. Participants have the right to hold researchers accountable for any information shared (Resnik, Rasmussen, & Kissling, 2015). As a result, before gathering data, there must be some amount of participant assent. To obtain authorization to administer the questionnaires, letters explaining the study's objectives were addressed to the heads of the various schools before the data collection for this study began. All participants were given a guarantee of confidentiality.

Chapter Summary

The key concerns concerning the research technique and tactics used in the study have been expounded upon in this chapter. The sampling size, pilot study, and data collection procedures for the quantitative research design are explained in the first part. The last segment that examined statistical analysis methods covered data cleansing, scale refining, validation methodologies, and statistical tools like CFA, SEM, and goodness-of-fit measurements. Both the other chapters and this one has concentrated on explaining the context of the study as well as the theoretical underpinnings of the research questions, hypotheses, and methodology. The study's findings will be presented and discussed, and each research question and hypothesis will be covered in turn in the following chapters.