

UNIVERSITY OF CAPE COAST

ECONOMIC LITERACY AMONG UNDERGRADUATE EDUCATION
STUDENTS AT THE UNIVERSITY OF CAPE COAST, GHANA

BY

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the Faculty of Humanities and Social Sciences Education, College of Education
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award of Master of Philosophy degree in Economics Education.

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature..... Date:

Name: Ewurafua Bentsi-Enchill

Supervisor's Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature..... Date:.....

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Co-Supervisor's Signature..... Date.....

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ABSTRACT

The study assessed economic literacy among undergraduate education students at the University of Cape Coast using a cross-sectional survey design. A multi-sampling technique was employed to select 300 respondents. The adapted Test of Economic Literacy (TEL) was used to assess the students' economic literacy level, while the ecolit factor questionnaire (EFQ) examined factors influencing their economic literacy. Data analysis included descriptive statistics (median and interquartile range) and inferential statistics (ANOVA, regression analysis). Findings indicated that the level of economic literacy among undergraduate education students at the University of Cape Coast was good. The study found that there was a statistically significant influence of students' programme of study on their economic literacy. The study showed that undergraduate students' engagement in co-curricular activities, career aspiration, and prior exposure to economics courses had no significant influence on their economic literacy. However, there was no interaction effect between students' programme of study and prior exposure to economics courses on their economic literacy. It was recommended that lecturers who teach microeconomics should make the teaching of the topics more practical to promote deeper understanding in undergraduate students. Also, the university through the various departments should organise co-curricular activities, such as economics or business-related workshops.

KEYWORDS

Economics Education

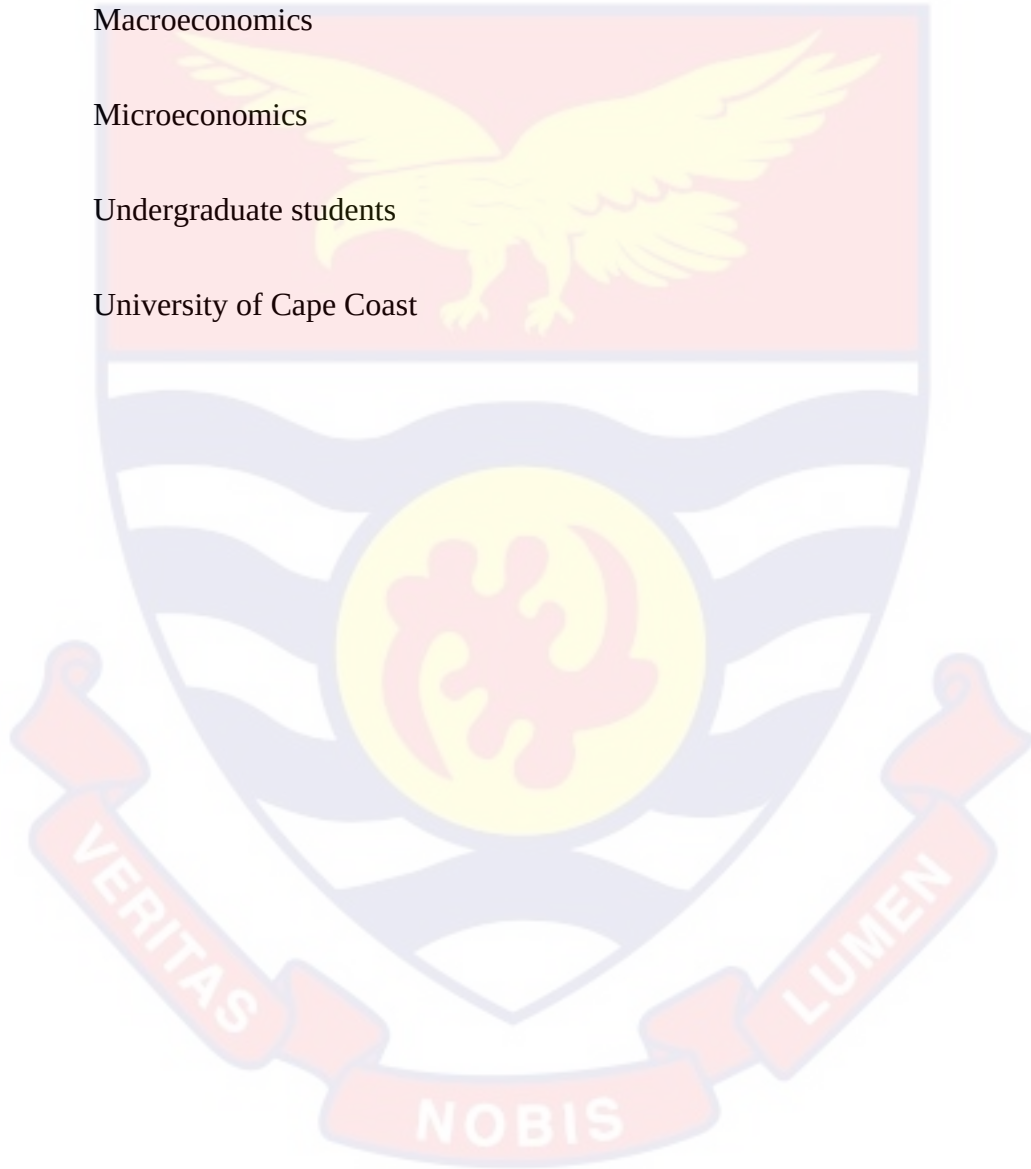
Economic Literacy

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DEDICATION

To the entire family of Bentsi-Enchill



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LIST OF ACRONYMS

TEL	Test of Economic Literacy
TUCE	Test of Understanding College Economics
TEK	Test of Economic Knowledge
BET	Basic Economics Test
SHS	Senior High School
EFQ	Ecolit Factor Questionnaire
DoBSSE	Department of Business and Social Sciences Education
UCC	University of Cape Coast
ATM	Automatic Teller Machine
CEE	Council for Economics Education
TOP	Theory of Performance
SCT	Social Cognitive Theory
NCEE	National Council on Economics Education

CHAPTER ONE

INTRODUCTION

Economic issues are a central concern worldwide, significantly impacting individuals' daily lives. These issues encompass a range of economic factors, including taxation, inflation, interest rates, wealth distribution, unemployment, household consumption, and government spending. They arise from the fundamental economic problem of scarcity – balancing limited resources against the infinite demands for goods and services. Current economic challenges such as debt crises, recessions, and economic slowdowns exacerbate problems like rising food prices, unemployment, and stagnant wages (Fourie, 2016). Given the pervasive influence of economic issues on personal and societal well-being, it is crucial for individuals, especially students, to possess a solid understanding of economic principles. This awareness enables informed decision-making and effective personal financial management. Therefore, this study assesses the level of economic literacy among university undergraduate education students.

Background to the Study

Economic literacy is the ability to understand, analyse, and respond to events that shape the economic environment (Akhan, 2015). This includes recognizing economic issues, evaluating costs and benefits, assessing the impact of public policy changes, and organizing economic data (Yildirim & Ozturk, 2017). Mastery of the basic economic concepts such as scarcity, demand and supply, costs and benefits are essential. Such understanding is crucial for studying and analysing the decisions and behaviours of economic agents – including

producers, consumers, and government entities – involved in production, exchange, and consumption.

Although financial literacy and economic literacy are often used interchangeably, they represent distinct concepts. According to the Financial Literacy and Education Commission (2003), financial literacy encompasses five key components: earning, spending, saving and investing, borrowing, and protecting. It involves understanding financial principles related to managing money (Roberts, 2005). In contrast, economic literacy is a broader concept that includes not only financial literacy but also the ability to understand and evaluate the broader economic decisions and their impacts (Fourie, 2016). Economic literacy thus encompasses both an understanding of economic principles and financial literacy (Ahman, Budiwati, & Suparno, 2020).

Roberts (2005) distinguishes between factual and conceptual knowledge within economic literacy. Factual knowledge involves understanding specific economic facts, such as the current inflation rate and its calculation. In contrast, conceptual knowledge emphasises economic reasoning, which includes analysing how individuals make choices under scarcity and understanding systems of production, consumption, and distribution. Additionally, economic reasoning involves examining how government policies influence market outcomes.

This study prioritises testing students' knowledge of the basic economic concepts and their application in microeconomic and macroeconomic contexts. These aspects are not only critical for personal financial well-being but also for making informed decisions.

Economically literate individuals exhibit distinct characteristics, such as the ability to perform cost-benefit analyses, understand the interaction between demand and supply, recognise the roles of economic organisations, and evaluate macroeconomic indicators (Ünal et al., 2015). Studying economics plays a crucial role in developing economic literacy. Economics is a widely studied subject globally (MEXT, 2020; OECD, 2017) and is defined as the study of human behaviour in relation to ends and scarce resources with alternative uses (Robbins, 1932). This field explores the concept of scarcity, which illustrates that while human demands are endless, resources to meet these demands are limited. This fundamental economic concept – the logic of economics – underpins the study of how current resources cannot meet current demands. Economics encompasses microeconomics and macroeconomics. Microeconomics focuses on the behaviour of individuals and organisations in resource allocation and their interactions (Kesse, 2016). In contrast, macroeconomics examines the overall functioning and decision-making of an economy (Kesse, 2016).

In the Ghanaian education system, economics is taught at both senior high schools (SHSs) and universities. At SHSs, it is an elective subject for students in general arts, business, and, in some cases, visual arts and home economics programmes. At universities, such as the University of Cape Coast (UCC), economics is offered as a major course at both undergraduate and postgraduate levels. It is a required course for programmes like Bachelor of Science Economics and Bachelor of Education Social Sciences (economics major) and is also included in the Bachelor of Education, accounting and management programmes.

Additionally, economics is studied as an optional course in other programmes. At the postgraduate level, economics is included in programmes such as Master of Philosophy in Economics and Doctor of Philosophy in Economics Education, among others.

Economic literacy is essential for students, who often face peer pressure, financial mismanagement, and susceptibility to economic influences. Being economically literate helps students prioritise and meet their needs (Lestari, Yuniarsih, Fattah & Ahman, 2018). It empowers them to make informed decisions in the job market and throughout life (Yasmin, Kouser & Ahmad, 2014). Hussain and Manzoor (2022) emphasise that university students must understand fundamental economic principles to make rational economic decisions. Improved economic literacy among students can contribute to more effective economic policies and practices (Gbadeyan, Oppong & Oduro, 2017).

Despite its significance, studies show that many, including tertiary students, lack familiarity with economics (Fourie, 2016). Research by Harris (2009) and the National Council on Economics Education (NCEE) indicates that a lack of basic economic knowledge can lead to financial difficulties and career challenges. In Ghana, Nunoo and Afful (2015) found that students had a moderate level of economic literacy, though specific data on undergraduate education students is limited.

This study targets undergraduate education students at UCC, a leading institution in Ghana known for its academic excellence and diverse student body. UCC's role in shaping future professionals makes it an ideal setting to investigate

economic literacy among undergraduates education students. By enhancing economic literacy, the university can foster better decision-making, entrepreneurship, and overall economic development. The focus on the Department of Business and Social Sciences Education highlights its role in preparing future teachers who will influence the quality of economic education. This research aims to provide insights that support UCC's mission to develop graduates capable of thriving in Ghana's evolving economic landscape.

Statement of the Problem

A solid understanding of economic principles is essential for making informed financial decisions (Hussain & Manzoor, 2022). Economic literacy involves critical areas such as consumption, production, asset evaluation, and resource management (Yayar & Karaca, 2017). However, the level of economic literacy among undergraduate education students at the University of Cape Coast (UCC) remains unclear.

Observations at UCC indicate that some undergraduate education students exhibit imprudent financial behaviours. For example, some female students prioritize expensive artificial hair, make-up, and clothing while struggling to pay their school fees. Similarly, gambling and sports betting appear to be prevalent among male students, with some reportedly using their school fees for these activities (Akoh, 2022). These behaviours suggest potential gaps in students' economic literacy and financial management skills. These behaviours may indicate gaps in their understanding of financial planning, budgeting and resource allocation-critical components of economic literacy.

The literature on economic literacy among tertiary students shows conflicting results. Some studies suggest students lack economic education (Hashim & Kayode, 2013; Barış & Şeker, 2017; Dilek et al., 2018), while others report high levels of economic literacy (Lyn & Sahid, 2021; Tekbaş, 2021). In Ghana, Nunoo and Afful (2015) found moderate economic literacy among students in general regardless of their programme of study. However, the specific level of economic literacy among undergraduate education students remains unknown.

Research has identified several determinants of economic literacy, including urban versus rural residence (As'Ad & Zulfikar, 2020; Hussain & Manzoor, 2022), family income (Martins & Veiga, 2019; Nizam et al., 2020), and gender (Yasmin et al., 2014; Martins & Veiga, 2019; Happ et al., 2021). However, there is a gap in understanding how factors such as career aspirations, prior exposure to economics courses, engagement in co-curricular activities, and programme of study specifically influence economic literacy. While co-curricular activities have been associated with improved academic performance in various fields (Acquah & Partey, 2014), their impact on economic literacy remains underexplored. Additionally, Chaudhary and Jeswal (2021) observed only a minimal positive relationship between career expectations and academic performance. The interaction between prior exposure to economics courses and programme of study is also inadequately researched, limiting our understanding of how these factors jointly affect economic literacy.

Furthermore, most research on economic literacy has been conducted outside Ghana, with studies focusing on countries such as Pakistan, the USA, and Turkey. Research within the Ghanaian context, particularly at UCC, is limited. Conducting this study will provide valuable, context-specific insights into the economic literacy of undergraduate education students, considering local socio-economic conditions, cultural nuances, and educational systems.

Therefore, this study aims to assess the level of economic literacy among undergraduate education students at the University of Cape Coast and explore how factors such as programme of study, engagement in co-curricular activities, career aspirations, and prior exposure to economics courses influence their economic literacy.

Purpose of the Study

This cross-sectional survey study assessed the level of economic literacy among undergraduate education students at the University of Cape Coast. It also investigated how their programme of study, engagement in co-curricular activities, career aspirations, and prior exposure to economics courses influence their economic literacy.

Research Objectives

Specifically, the study seeks to:

1. examine the level of economic literacy among undergraduate education students at the University of Cape Coast.
2. determine whether education students' programmes of study significantly influence their level of economic literacy.

3. examine if students' engagement in co-curricular activities has a significant influence on their level of economic literacy.
4. assess whether students' career aspirations significantly influence their level of economic literacy.
5. determine if students' prior exposure to economics courses significantly influences their level of economic literacy.
6. explore whether there is a significant interaction between prior exposure to economics courses and programme of study on students' level of economic literacy.

Research Questions

The following research question was formulated to guide the study:

1. What is the level of economic literacy among undergraduate education students at the University of Cape Coast?

Research Hypotheses

The study tested the following hypotheses at a .05 level of significance:

1. H_0 : There is no statistically significant influence of undergraduate education students' programme of study on their level of economic literacy.
2. H_0 : There is no statistically significant influence of undergraduate education students' engagement in co-curricular activities on their level of economic literacy.
3. H_0 : There is no statistically significant influence of career aspiration of undergraduate education students on their level of economic literacy.

4. H_0 : There is no statistically significant influence of undergraduate education students' prior exposure to economics courses on their level of economic literacy.
5. H_0 : There is no significant interaction between prior exposure to economics courses and programme of study on students' level of economic literacy.

Significance of the Study

The study assessed the level of economic literacy among undergraduate education students at the University of Cape Coast and investigated how their programme of study, engagement in co-curricular activities, career aspirations, and prior exposure to economics courses influence their economic literacy. The findings offer valuable insights for various educational stakeholders, including lecturers, academic departments, and academic counsellors. By understanding how these factors impact students' economic literacy, the study provides a deeper comprehension of the elements contributing to students' knowledge and proficiency in economics.

The study highlights a notable concern regarding students' academic performance in microeconomics. This informs economics lecturers about revisions in their pedagogical practices. This finding points to the potential value of integrating more application-oriented approaches in teaching to address the issue.

Although co-curricular engagement, career aspirations, and prior exposure to economics did not significantly influence economic literacy in this study, their

lack of impact offers important implications. It points to the possibility that these factors, while theoretically relevant, may not currently be structured or leveraged in ways that meaningfully support economic learning. For instance, the finding suggests that co-curricular activities may need to be more purposefully aligned with academic content to enhance their educational value. Similarly, it highlights the need to re-evaluate how economic concepts are introduced at the SHS level, as well as how students are guided in linking their career goals to academic pursuits.

Another important insight is the observed higher levels of economic literacy among students in economics, accounting, geography, and management programmes compared to those in social studies. This disparity draws the attention of academic departments to the need for a closer examination of curriculum content across different programmes to ensure all students receive adequate exposure to essential economic concepts. Overall, these findings provide valuable insights into the factors affecting economic literacy and highlight areas for potential focus within the educational framework. The study therefore makes a significant contribution by expanding knowledge in the literature about students' economic literacy and the factors that influence it.

Delimitation

The study focused on the level of economic literacy and factors influencing the economic literacy of undergraduate education students. The study focused on undergraduate students in the Department of Business and Social Sciences Education (DoBSSE) at the University of Cape Coast, Ghana.

In measuring students' level of economic literacy, the study adapted the test of economic literacy by Kimanzi (2021) which involves questions on macroeconomics and microeconomics. In measuring the factors, the study only focused on the programme of study, career aspiration, engagement in co-curricular activity and prior exposure to economics courses. It appeared literature was silent on these factors as they can also contribute to shaping individuals' perspectives, interests and exposure to real-world economic concepts.

Limitations

The study encountered a few limitations that must be acknowledged. The use of questionnaires as a self-report measure introduces the possibility of socially desirable or inaccurate responses, which may not fully reflect the respondents' true situations. To mitigate this, respondents were encouraged to provide truthful answers. Despite these efforts, biases and ambiguities inherent in questionnaires remain a concern. To address these issues, the researcher pilot-tested the instruments, revised them to improve clarity and objectivity, and provided clear instructions to all respondents.

Another limitation relates to the test of economic literacy itself. Respondents' characteristics, such as mood or fatigue, might have influenced their performance on the test. Additionally, the potential for cheating during the test administration could affect the results. To counter this, the researcher ensured that students worked independently during the test to ensure that the scores accurately reflected their economic literacy. Overall, while these limitations posed

challenges, the steps taken by the researcher aimed to reduce the impact of the limitations on the study's findings.

Operational Definition of Terms

Economic literacy: Economic literacy is knowledge of the basic economic concepts to facilitate decision-making processes effectively in our day-to-day activities.

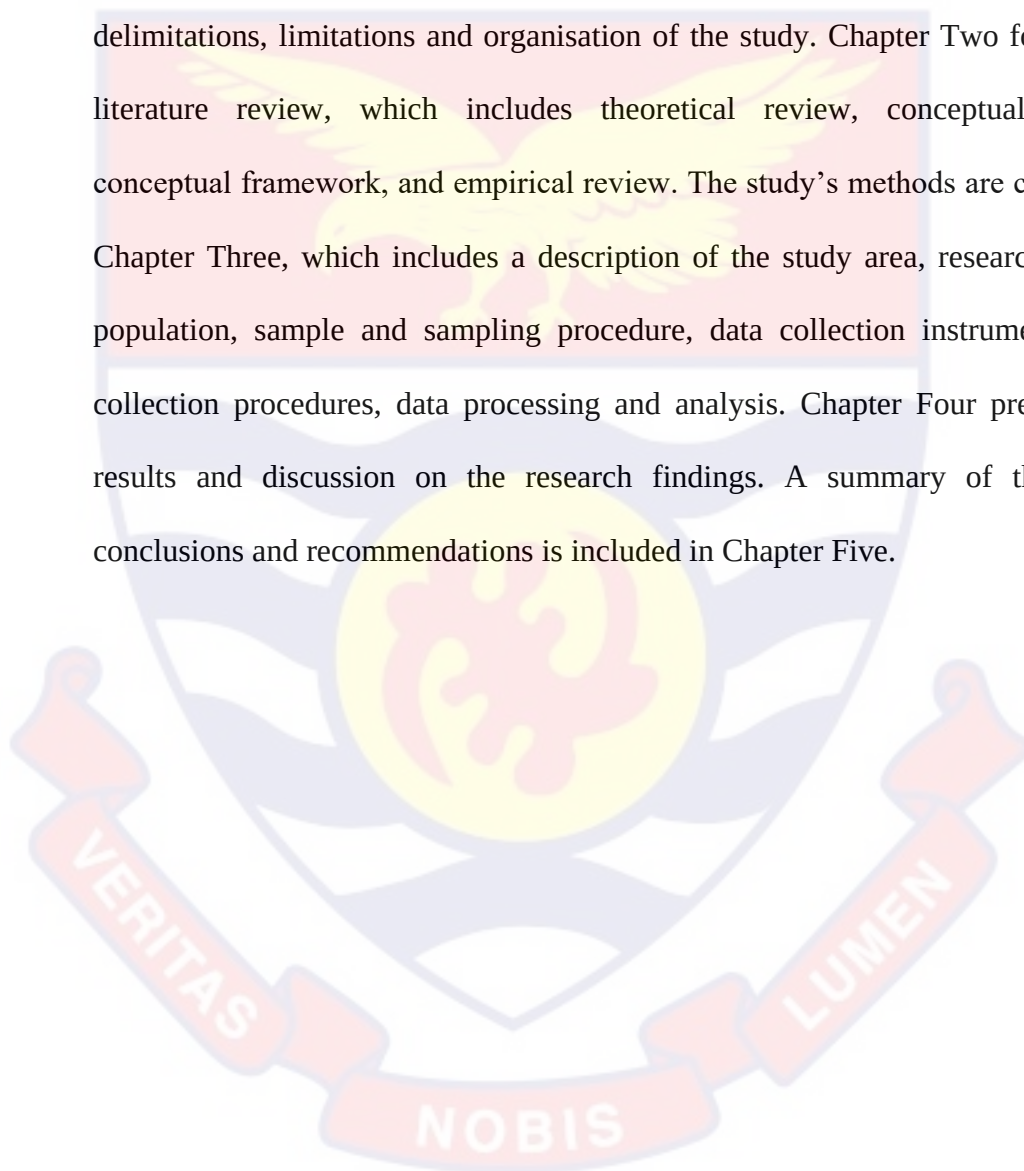
Co-curricular activity: Co-curricular activities are activities that complement the academic curriculum in schools and universities. These activities typically take place outside of regular classroom instruction and include a wide range of experiences such as sports, clubs, conferences, workshops etc. Co-curricular activities are designed to provide students with opportunities for personal development, and skill-building, while also fostering a well-rounded educational experience.

Career aspiration: Career aspiration encompasses what an individual wants to do professionally in the future. This could include specific job roles or even entrepreneurial endeavours that an individual aims to pursue. For example, someone might aspire to become a doctor, a lawyer, a teacher, or an entrepreneur. These aspirations often reflect an individual's interests, values, skills, and long-term vision for their professional life.

Sex: Used interchangeably with gender to mean male and female only.

Organisation of the Study

The study is structured into five chapters. The first chapter presents the background to the study, statement of the problem, the purpose of the study, objectives of the study, research questions, significance of the study, delimitations, limitations and organisation of the study. Chapter Two focuses on literature review, which includes theoretical review, conceptual review, conceptual framework, and empirical review. The study's methods are covered in Chapter Three, which includes a description of the study area, research design, population, sample and sampling procedure, data collection instruments, data collection procedures, data processing and analysis. Chapter Four presents the results and discussion on the research findings. A summary of the study, conclusions and recommendations is included in Chapter Five.



CHAPTER TWO

LITERATURE REVIEW

Overview

This chapter provides a review of relevant theories and studies that were considered significant to the study. This chapter covers theoretical review, empirical review and conceptual framework. Under the theoretical review, the theory of performance and the social cognitive theory are considered. The conceptual framework, economic literacy construct that guide the study follows. The empirical review focused on peer-reviewed studies conducted by researchers on economic literacy among undergraduate students.

Theoretical Review

The Theory of Performance (Elger, 2007)

Elger's theory of Performance (ToP) defines "perform" as the capacity to provide a beneficial result and "performer" as an individual or group that works together, with a performance level denoting a certain point in an academic journey. The location in the journey is labelled as "level of performance". Each level describes the efficacy or quality of a performance. Therefore, as students' progress in their performance, they acquire significant knowledge and advanced skills in economics. The progression of performance through levels is demonstrated, with the performance's effectiveness being described by labels such as "Level 1", "Level 2," etc. In other words, an individual or group operating at Level 3 is outperforming an individual or group operating at Level 2. Higher performance yields result that fall into one of the following categories:

1. Quality increases: Products or results are more successful in reaching or surpassing stakeholders' expectations.
2. Capability increases: The capacity to take on more difficult roles or tasks increases.
3. Capacity increases: The capacity to produce higher throughput rises.
4. Knowledge increases: Knowledge expands in both breadth and depth.
5. Skills increase: The scope and efficacy of one's ability to set objectives, persevere, keep a positive attitude, etc., grow.
6. Identity and motivation increase: Organizations find their core and people become increasingly aware of their professional identities.

According to Elger, as an educator progresses in his performance, he can achieve better learning outcomes, enhanced skill development, and greater discipline while requiring less time to do the task. A manager can more efficiently manage resources and personnel as he advances his performance level, producing better work faster. As students reach higher performance levels, they show increased creativity, enhanced problem-solving abilities and a better comprehension of the material, all of which point to their advancement and success in their academic careers. In terms of the topic under study, as students' progress, they demonstrate a deeper comprehension of fundamental economic concepts and exhibit improved critical thinking skills when analysing economic issues. According to Elger, the current level of performance depends holistically on components such as the context of performance, level of identity, level of skills, level of knowledge and personal factors.

1. Level of identity: As people advance in their chosen fields, Elger contends, they both elevate their individuality and adopt the collective identity of the professional society. An organization's mission, style of operation, and distinctiveness all evolve as it matures. Thus, as students advance in their economics studies, they may develop a sense of professional identity in the discipline. This indicates that in addition to understanding economic principles, students also begin to identify with the beliefs, methods, and viewpoints of economists.
2. Level of skills: According to Elger, skills are particular behaviours that are employed in a variety of performances by people, groups, or organizations. Thus, making assumptions persisting as well as setting goals. As a result, this covers abilities including comprehending economic ideas, analysing economic data, thinking critically about economic problems, and solving problems pertaining to economic difficulties. As students advance in their economic literacy, they demonstrate improved proficiency in these skills. For example, they may become more adept at analysing economic trends, making informed financial decisions and evaluating the impact of economic policies. Evaluating students' application of economic literacy in many circumstances, such as making personal financial decisions, might reveal information about their performance level as a whole.
3. Level of knowledge: Knowledge is all information that has been gained by an individual or group via education or experience, including facts,

figures, theories and principles. An understanding of economics serves as the cornerstone for economic literacy. To become economically literate, students must acquire facts, knowledge, ideas, concepts and principles pertaining to economics.

4. Context of performance: According to Elger, this component consists of elements related to the circumstances in which the person or organization operates. The context in which students acquire economic knowledge is vital. Factors such as the quality of educational institutions, teaching methods, curriculum design and available resources all shape students' economic literacy. The socioeconomic environment in which students live and learn may also have an impact on their level of economic literacy. Factors like income levels, access to economic opportunities and economic disparities can influence students' economic understanding. Economic attitudes and behaviours can be influenced by cultural and societal standards. For example, cultural views on investing, saving and spending might affect how students understand and interact with economic concepts.
5. Personal factors: This component contains elements related to a person's unique situation. Personal elements include an individual student's past economics-related knowledge and experiences. Students who have been exposed to economics through co-curricular activities or family conversations may have varied degrees of prior knowledge when they start their economics studies. When it comes to a student's readiness to interact

with economic concepts, personal drive and interest in the subject matter are critical factors. Students are more likely to devote time and energy to their studies if they have a sincere interest in Economics.

Social Cognitive Theory

Social Cognitive Theory, developed by psychologist Albert Bandura in 1977, is a comprehensive theoretical framework that emphasizes the role of observational learning, imitation, and cognitive processes in shaping human behaviour. The Social cognitive theory, also referred to as the Social Learning Theory, has influenced a number of disciplines, including communication, psychology, education, and health.

Key concepts of Social Cognitive theory include:

1. **Observational Learning:** Through observing and imitating others, people can pick up new skills and behaviours. This process is known as modelling or vicarious learning. Students who participate extensively in co-curricular activities related to finance or economics-related such as joining an investment club, debate club or a business conference, have the opportunity to observe and learn from their mentors or role models within these activities. People can improve their economic literacy by seeing how others choose investments or use economic concepts in practical situations. Students may have a strong belief in their capacity to understand economic concepts and excel in these careers if they hope to pursue careers in economics or related fields. They can be further encouraged to increase their economic literacy and self-efficacy by

positive role models and mentors who have gone on to have successful careers in economics. A student's chosen field of study may have an impact on how much they are exposed to and comprehend economic concepts.

2. **Reciprocal Determinism:** Bandura proposed that personal, behavioural and environmental factors interact and influence each other dynamically, affecting an individual's behaviour and development. Reciprocal determinism suggests that a student's engagement in co-curricular activities related to economics can be influenced by their prior experiences, self-efficacy and environmental factors. For example, if a student has had positive prior exposure to economics education and high self-efficacy in understanding economic concepts, they may be more likely to choose to participate in economics-related co-curricular activities. Reciprocal determinism comes into play when considering how a student's career aspirations affect their economic literacy. If a student aspires to a career in economics, they may be more motivated to seek out opportunities to improve their economic knowledge. Reciprocal determinism also suggests that as students immerse themselves in their chosen field of study, they may be exposed to different economic concepts and principles affecting their understanding and self-efficacy in economics. Reciprocal determinism highlights the dynamic and interrelated nature of these factors. The interaction between prior exposure, self-efficacy, engagement in co-curricular activities, career

aspirations and programme of study can either reinforce or hinder a student's economic literacy. Positive experiences and feedback can create a feedback loop, leading to greater economic literacy while negative experiences can have the opposite effect. Understanding these interactions can help educators and policymakers design interventions to enhance students' economic literacy effectively.

3. **Self-Efficacy:** Self-efficacy is a central concept, representing a person's confidence in their abilities to carry out particular actions or tasks. High self-efficacy is associated with greater motivation and success. Students who have previously been exposed to economics education, whether through formal courses or informal learning may have had the chance to observe and learn economic concepts and practices. The quality and effectiveness of prior education can impact a student's self-efficacy in economics. A well-designed economics curriculum with supportive teachers can boost their confidence in understanding and applying economic principles.

Conceptual Review

Concept of Literacy

The capacity to read and write is the basic definition of literacy. Literacy is said to have been made possible by the invention of computational tools and numeracy as early as 800 BC. The term now describes the capability to understand and use a culture's dominant symbol systems through the use of words, numbers, images, and other symbols. Literacy is "the quality or state of

being literate; knowledge of letters; a condition in connection to education specifically the capacity to read and write," according to the Oxford english dictionary. The fifth edition of the American heritage dictionary of the english language defines it as "the condition of excellence, notably the ability to read and write." The two criteria heavily emphasize "reading and writing skills" as well as "quality."

The definition of literacy in Organization for Economic Co-operation and Development (OECD) countries is evolving to include technological access to knowledge and the ability to assess complex situations. Pilgrim & Martinez, 2013 defines literacy as the ability to read and write effectively in a variety of contexts. Reading development is the cornerstone of all literacy; It is a series of abilities that starts with the capacity to comprehend spoken language and interpret written language and concludes with the ability to grasp literature in great detail (Acheampong & Acquah, 2015). Researchers have explored various literacy domains, including financial literacy (Oseifuah, Gyekye & Formadi, 2018; Mandmaa, 2019) information literacy (Igun & Odafe, 2014; Aliyu, 2018; Nmecha, & Ejitagha, 2023), health literacy (Aluh, Okonta & Odili, 2019; Gairhe et al., 2023; Shudayfat et al., 2023). Within this diverse landscape, this study specifically centres on economic literacy as a critical aspect.

Concept of Economic Literacy

Economic literacy is the capacity to evaluate the implications of economic developments, evaluate government policies, obtain and analyse economic data, and examine profits and costs (Kahya & İmamoğlu, 2015; Gerek & Kurt, 2010).

Tekbas, 2017 defines economic literacy as an analysis of several approaches to the understanding and fixing of economic issues. The capacity to comprehend economic trends and their implications, assess public policies, gather and analyse economic data, and look at costs and profits is known as economic literacy (Kahya & İmamoğlu, 2015). As stated by the Organization for Economic Literacy (2011), economic literacy has two aspects; the first aspect is being aware of the economic perspective, which includes appreciating the significance of incentives, comprehending trade-offs, and foreseeing the complete impact of public policy, including any unforeseen repercussions. Understanding basic economic principles, such as how the monetary system functions or market dynamics, is required for the second facet.

In a world, where we cannot have everything, we desire, economics is about recognizing and making trade-offs between a few resources. It also involves living with the repercussions of such trade-offs (Koshal et al., 2008). People are expected to get ready for change more quickly, gather and organize economic evidence; compare costs and benefits and bear a large amount of the risk associated with the current economic unrest, making economic literacy more important than it was previously (Grol, Sent & Vries, 2017). It's common knowledge that people who are economically educated possess abilities like cost-benefit analysis, understand how supply and demand interact, and are aware of the roles played by economic organizations, monitor and assess macroeconomic indicators in roles such as consumer, producer, investor as well as determine the motives that affect human behaviour (Ünal, Düğer & Söylemez, 2015).

Components of Economic Literacy

Economic literacy covers understanding of economic concepts and financial literacy (Ahman, Budiwati, & Suparno, 2020).

Basic Economic Concepts

A strong foundation in basic economic concepts is essential for economic literacy. Understanding concepts such as scarcity, opportunity cost, supply and demand and market forces enables individuals to analyse economic situations and make informed decisions (Sichel & Eckstein, 1974). Understanding the basic economic concepts is essential for comprehending the complexities of how economies function. Scarcity, opportunity cost, supply and demand and comparative advantage are the building elements that guide decision-making in the economic realm. By applying these concepts, policymakers, businesses and individuals can make more informed choices to promote societal growth, efficiency and prosperity. As we navigate the challenges of an ever-changing world, a solid grasp of these fundamental concepts will continue to be indispensable in shaping a sustainable and thriving global economy.

Concept of Financial Literacy

Financial literacy is a key component of economic literacy. It encompasses knowledge and skills related to personal finance, budgeting, saving, investing and managing debt. A study by Lusardi and Mitchell (2014) emphasized the significance of financial knowledge in making sound financial decisions and achieving financial well-being. Lusardi and Mitchell (2014) reported that lower literacy consumers are less likely to invest in stocks, build money, or plan for

retirement. They are also more likely to take out a loan with unfavourable terms. Also, Bernheim (1997), Bernheim and Garrett (2003), Cutler and Delvin (2000) and Chen and Volpe (1998) concluded, that the financial stability of households and countries is seriously threatened by insufficient financial literacy. According to a report by the OECD (2020), financial literacy is essential for making informed choices about saving, investment and retirement planning. A high level of financial literacy has several benefits. A study published in the Journal of Financial Economics in 2020, found that financially literate individuals tend to make more informed investment decisions leading to better portfolio performance. Additionally, a report by the World Bank in 2014 highlighted that improved financial literacy can contribute to economic development by fostering a culture of saving and investment. The ability to handle one's finances, speak about financial ideas, and make sound short, medium, and long-term plans are all parts of financial literacy (Tavares, Almeida & Cunha, 2019). According to Huston (2012), financial literacy has two dimensions: a knowledge dimension and an application dimension. This means that to make wise financial decisions, people need to be informed about the topic of personal finance and also able to apply that knowledge.

Measuring Students Economic Literacy

A variety of tests have been created over time to measure economic literacy. The Test of Understanding College Economics (TUCE), the Basic Economics Test (BET), the Test of Economic Knowledge (TEK), and the Test of Economic Literacy (TEL) are four grade-level-specific standardized tests that

were created by the National Council on Economic Education (NCEE) in the United States to assess economic literacy (Soper 1979).

Test of Understanding College Economics (TUCE)

According to Walstad, Watts and Rebeck (2006), the TUCE gives test administrators information on how to administer the exam to students and gives instructors data on how to compare their students' performance to that of comparable students attending colleges and universities across the country. Two independent exams consisting of multiple-choice questions which cover both macroeconomics and microeconomics are part of the TUCE. TUCE edition 4 has two main objectives thus to provide students enrolled in principles of economics courses with a credible and trustworthy assessment tool and to provide data for a large, national sample of students in principles classes, enabling educators to contrast their students' results on pre-tests and post-tests with those of the national sample of educators and students. Cognitive specifications of the TUCE entail recognition, understanding, explicit and implicit application.

Basic Economics Test (BET)

The BET edition 3 is a basic economics accomplishment test intended to assess pupils' knowledge of economics in upper elementary and lower middle school (grades five and six). The test has been normed using several norming populations, giving the instructor data to contrast the performance of his or her students to that of other students who are similar throughout the country. It is employed to evaluate pre-college student learning. The purposes of BET include: giving test takers a thorough explanation of the economics section of the test to

ensure they understand the scope of the test and the reasoning behind each question. Secondly, it describes the purposes of the test for assessment as well as how it should be given to students. Lastly, to aid in interpreting test results, it gives test takers access to the test findings from a nationwide norming study with a sizable sample of fifth and sixth-graders. It was divided into three types of cognition: application, understanding, and knowledge.

Test of Economic Knowledge (TEK)

As seen in Yasmin et al., 2014, the Test of Economic Knowledge (TEK) consists of multiple-choice questions and it is a standardised test to measure the economic literacy of individuals in grade seven to nine (NCEE, 2007). According to Walstad, Rebeck and Butters (2010), TEK edition 2 is intended to assess students' economic knowledge at the start of high school and close to the end of middle school (eighth and ninth grades). Its goal is to raise the standard of economics cognitive achievement tests made accessible to the entire country by the Council for Economics Education. The purposes of TEK include: giving test takers a thorough explanation of the economics section of the test to ensure they understand the scope of the test and the reasoning behind each question. Secondly, it describes the proper way to give the test to students and how to use it for assessment. Lastly, to help test users understand the test scores, it gives them access to the test results from a national norming with a sizable sample of fifth- and sixth-graders.

Test of Economic Literacy (TEL)

The TEL is an assessment tool used to gauge high school students' proficiency in Economics that is nationally normed and standardized (Walstad, Watts & Rebeck 2013). Colleges and universities could also use it to assess students' economic literacy in introductory and fundamental Economics courses. The main purpose of the TEL is to help teachers evaluate students' learning and enhance their instruction. The cognitive specification of the TEL includes knowledge, comprehension and application. One aspect of the TEL is that, in terms of both content coverage and difficulty, the two test versions are rather similar. To determine whether or not students have improved their comprehension of Economics, teachers may assign pretests and posttests or, given that the content and degree of difficulty of the two test forms are comparable, they may, for comparison reasons, offer one form of the test to half the class and the other form to the other half. The purposes of TEL include: making sure test takers are thoroughly educated about the test's coverage and the reasoning behind each item by giving them a thorough explanation of the Economics portion of the test. Secondly, it describes the test's intended purposes for evaluation as well as how it should be given to students. Lastly, to aid in the interpretation of test results, it gives test takers access to the test scores from a nationwide norming study including a sizable sample of fifth- and sixth-graders.

Determinants of Economic Literacy

This section discusses some of the factors that may influence the Economic literacy level of an undergraduate student. Despite the fact that Ghana has had very few studies, numerous researchers have found a variety of factors

that influence Economic literacy. The determinants of Economic literacy have been discussed as follows:

An educational level refers to a hierarchical categorization of an individual's formal educational attainment and qualifications. Research has consistently found a positive relationship between education level and economic literacy. As individuals attain higher levels of formal education, they tend to better understand economic concepts and principles. Studies have found that studies with more years of schooling demonstrate improved economic literacy and financial decision-making skills. For instance, a study by Burke & Manz, 2010 and Hussain & Manzoor, 2022 examined the economic literacy of students at different educational levels and found a positive relationship between education level and economic literacy. A study by Lusardi and Mitchell (2006) found that individuals with more education were more likely to correctly answer questions about basic economic concepts, such as inflation and compound interest. Studies have shown that individuals with higher levels of education have a better understanding of economic concepts and are more economically literate than those with lower levels of education (Lusardi & Mitchell, 2014). Nizam, Sieng and Sulaiman (2020) revealed that students across all levels of education had a low economic literacy.

Age can influence students' economic literacy levels. A student's age influencing his or her level of economic literacy is attributed to accumulated life experiences and exposure to real-life decision-making situations over time. Some studies discovered that older students exhibited a greater level of economic

literacy whilst other studies showed younger students possessed a higher level of economic literacy. A study by Chen and Volpe (2002) and Akin (2021) discovered that older college students demonstrated higher levels of financial literacy compared to younger students. Younger individuals often possess lower levels of economic literacy than older individuals. Perhaps as a result of the fact that older individuals have had more opportunities to gain experience with economic matters (Lusardi & Mitchell, 2014). However, a study by Mandell and Klein (2007) found that adults aged 18-24 had the highest level of financial literacy while those aged 65 and older had the lowest. Lusardi and Mitchell (2011) asserted that individuals score higher on tests as they age.

Socioeconomic status is the place of an individual or group on the socioeconomic scale, which is influenced by a number of social and economic factors, including place of residence, type and prestige of work, education level, income and in some societies or parts of society it includes ethnic origin or religious background (adapted from the American Psychological Association dictionary of psychology). According to Sarsani (2011), socioeconomic status is a measure of a person's or group's place in the community and is based on factors such as wealth, occupation, and social class. According to Srinivasan and Sharan (2005), having a high socioeconomic standing consequently means having a high-level job, a large salary, and suitable living conditions. A healthy and stimulating atmosphere is said to be provided by a high socioeconomic position.

Individuals with higher income and wealth tend to have higher level of economic literacy, whilst those with less wealth and income typically have lower

levels. A study by Lusardi and Tufano (2009) found that low-income households were more likely to engage in costly financial behaviours, such as using payday loans or paying bills late, due to a lack of financial literacy. Lusardi and Mitchell (2007) found that individuals with higher socioeconomic status generally had higher level of financial literacy. Mandell (2006) indicated the need to improve economic literacy among disadvantaged populations.

Cultural factors such as socialization, values and beliefs can also influence economic literacy. A study by Kusluvan, Kusluvan & Ilhan, 2010 showed that cultural factors can affect people's economic decision-making processes and attitudes towards financial matters. For example, some cultures may emphasize saving and investment, while others may prioritize spending and consumption. Other studies have shown that individuals from certain cultural backgrounds tend to have lower level of economic literacy than others. This may be due to cultural factors, such as the belief that talking about money is a taboo in some cultures (Lusardi & Mitchell, 2014). A study by Klapper and Panos (2011) highlighted how cultural norms can affect financial behaviours, impacting an individual's financial literacy level. Also, cultural variations in language might make it challenging for certain groups to understand economic terminology. In multilingual societies, translating economic concepts accurately becomes important for improving economic literacy levels. Cultures that have experienced economic instability or inequality might have a deeper understanding of economic concepts due to their direct impact on daily life.

Education is now a crucial component of modern industrial systems and people's economic behaviour (Martínez & Fernández, 2010). According to Jappelli (2009), human capital is among the variables that are positively connected with Economic literacy. The human capital hypothesis is predicated on the idea that a populace with education is one that is industrious and that investments in education pay off financially in the long run, according to Martínez & Fernández, 2010. According to Han and Lin (2008), education, experience, skill, and managerial traits that have a favourable impact on organizational performance are characteristics that can be used to describe human capital. Therefore, both individuals and society as a whole will benefit from investments in human capital. Educating people formally can be considered a positive investment in human capital. The accumulation of human capital is necessary for an increase in production, and literacy serves as the deciding factor in this regard (Martinez & Fernández, 2010). Jappelli (2009) discovered that economic literacy and education are related and that the proportion of adults with college degrees has an impact on economic literacy.

Exposure to economics education also influences students' level of economic literacy. Dilek et al. (2016) claim that economic education and economic literacy are closely related, and it has been highlighted that economic courses ought to be offered in all departments of universities because of their benefits to society. According to a study by Walstad and Soper (1988), college students who have taken economics courses are more economically literate than those who have not taken any economics classes. In addition, instructors who

have completed economics courses have helped their students' understanding of the subject. The degree of education of a person and their level of economic literacy are significantly correlated; those who have taken economics classes at least once, whether in college or university, are better capable of making wise decisions than those who have not taken a course in economics (Wood & Doyle, 2002). Yunus et al. (2010) discovered a substantial correlation between an individual's economic literacy and economic education. Economic education considerably increased students' economic literacy scores (Burke & Manz, 2010). Wood and Doyle (2002) investigated the economic literacy of a sample of people who had been out of school for a while. The findings showed that people with a college degree but no economics courses had worse economic literacy than those who had completed at least one college-level economics course. The same holds for people who took more economics classes in college compared to those who had only taken one college-level economics course, they demonstrated more economic knowledge. Those who studied business as undergraduates are more economically literate than students who specialized in other fields (Koshal et al., 2008). According to Walstad and Larsen (1992), if there is a deficiency in economic literacy, the related cost to a nation will be continuing economic illiteracy and enormous misunderstanding among the general people, whether young or elderly of how the economy functions. Even though economic literacy is crucial to the health of the entire economy, economic education does not receive the attention it deserves (Gerek & Kurt, 2010).

Gender and race have been studied as factors influencing students' economic literacy level. There is some evidence that indicates men may have higher levels of economic literacy than women. For example, a study by Jappelli and Padula (2013) found that women were less likely to understand basic financial concepts, such as interest rates and risk diversification. Due to cultural factors, such as the belief that men are more interested in finance and economics than women (Lusardi & Mitchell, 2014). In a study of economic literacy among corporate employees, Wood & Doyle (2002) and Burke & Manz (2010) both found that women had lower economic literacy scores than men. Burke & Manz (2010) found that economic literacy among people is also influenced by race, with blacks performing worse than whites on the exam. According to Wendt, West, and Parliament's (2007) research, white students considerably outperformed Black, Native American, Hispanic, and other students in terms of economic literacy scores.

Income can also be a factor affecting economic literacy. Research has found that people with higher incomes tend to have higher levels of economic literacy than people with lower incomes (Lusardi & Mitchell, 2014; Murguia & Trejo, 2019). This is explained by the fact that individuals with higher incomes may have more access to educational opportunities, financial resources and information about economic policies. In addition, to factors like education, age, and gender, additional factors that were shown to have a substantial impact on people's levels of economic literacy were income and investment (Wood & Doyle, 2002). Current and anticipated income rises, according to Caplan (2001),

led individuals to think more like economists. A greater motivation to become economically literate will result from a larger level of investment resources (Jappelli, 2009). Yunus et al. (2010) discovered a strong correlation between Economic literacy and personal spending and investment.

Empirical Review

This part of the chapter concentrates on empirical studies, which are related to the problem under investigation in this study. It considers various research works in the areas of students' level of economic literacy and factors influencing students' economic literacy level. Implications of the empirical literature to the current study are captured under summary and implications for the current study.

Students' Level of Economic Literacy and Demographic Characteristics

Literature has so far reported variations in students' level of economic literacy. While some studies reported a high level of economic literacy among students, others reported a moderate level of economic literacy. Yet, other studies have indicated that students have a low level of economic literacy. The context and how the studies were conducted are significant in appreciating students' economic literacy.

In Turkey, Gerek and Kurt (2008) examined the level of economic literacy among undergraduate students (reading computer and instructional technologies, economics, public finance, business administration, journalism and mathematics) at Anadolu University. The study employed the survey method and used the stratified sampling technique to sample 187 students (116 males and 71 females).

The Economic Literacy Test (ELT) developed by NCEE was used to gather economic literacy data. The descriptive findings showed that students had a moderate level of economic literacy. Students who read courses in economics displayed a relatively higher economic literacy than those who did not read economics courses.

Again, in Turkey, Dilek, Kesgingöz, Konak and Halicioğlu (2018) examined the level of and investigated factors affecting students' (primary, secondary and university) level of Economic literacy. The stratified sampling technique was used to sample 481 students for the study. Questionnaires were used to test students' level of economic literacy in microeconomics, macroeconomics and real economics. Descriptive findings indicated, that the students had a low level of economic literacy. The study revealed that economic education and interest in the economy helped to increase students' level of economic literacy. Additionally, findings showed no significant relationship between economic literacy and economic wealth – knowledge of the economy is not enough to succeed in economic life.

Koshal et al. (2008) assessed the level of economic literacy among Indian Masters of Business Administration (MBA) students and investigated the factors which affected their Economic literacy. TEL and the standards in economics survey were used to test students' (n = 494) level of economic literacy. The study found that the students had a low level of economic literacy. Students who had at least one economics course in their undergraduate programme had a relatively lower level of economic literacy than students who did not take any economics

course during their undergraduate programme. Also, students with undergraduate majors in business scored higher in economic literacy than students with other majors (arts, engineering and science). Students' age, MBA class rank and work experience did not influence their Economic literacy.

In Albania, Bushati (2010) examined the level of high school students' understanding of economic concepts. A longitudinal research design was used for the study. Data were gathered from a random sample of 1,511 students through ELT and a questionnaire, which measured students' economic literacy and biographic data, respectively. A multiple regression model was used to analyse the relationship between students' characteristics that is gender and curriculum track (natural science and social sciences track) in a post-test course on the ELT. The study found that students in the natural science track performed better than students in the social sciences track. Also, female students scored higher in the ELT than the male students. The findings further indicated a significant increase in students' knowledge of Economics after completing the required economics course.

Butters and Asarta (2011) studied the economic understanding among high school students in the United States of America. The students were put into two groups that is Adam Smith – advanced students (n=2,149) which consisted of students in International Baccalaureate (IB), Advanced Placement (AP), Honors, two-semester or any other advanced course in economics and David Ricardo (regular) division which also consisted of students (n = 2,378) enrolled in single-semester courses or shorter courses in economics, general economics or courses

that included introductory economic concepts. The data collected through TEL, compared learning outcomes between both streams. The advanced students outperformed the regular students in three international economic concepts (comparative advantage, balance of payment, exchange rate and international growth and stability). The high performance among the advanced students was not attributed to the type of questions on the TEL but to factors such as economic training, resource availability and motivation level.

In Malaysia, Hashim and Kayode (2013) assessed the level of undergraduate students' economic literacy. Data were gathered from a random sample of 161 students. The TEL and the standards in economics survey were used to test students' level of economic literacy. The descriptive results showed that students' level of economic literacy was low. Research further revealed that male students had a higher economic literacy than female students. It was also revealed that students with an economics background had a higher level of economic literacy than students with no economics background. A further examination indicated, that there was no statistically significant difference in the mean scores of the economic literacy test between male and female students. There was no statistically significant difference in terms of the mean scores in their economic literacy test between students with or without economics backgrounds.

Again, in Malaysia, Ismail, Hussin and Muhammad (2019), studied how economic literacy matters for policy understanding. Data were gathered through TEL and a questionnaire and analysed with Descriptive (Percentages) and

inferential (One Way ANOVA and Post Hoc test) statistics. A total of 570 undergraduate students participated in the study through the simple random sampling method. The study found that the level of economic literacy among students was moderate. It was also revealed that female students showed a better score as compared to their male counterparts.

Lyn and Sahid (2021) examined the economic literacy of Malaysian Public university students (undergraduates and postgraduates). The study employed a survey method and gathered data from a random sample of 205 students through an economic literacy questionnaire. The study showed that students had a high level of economic literacy.

In Indonesia, As'Ad and Zulfikar (2020) examined undergraduate students' ($n = 513$) level of economic literacy. The study made use of macroeconomic and microeconomic test to examine the level of economic literacy of students. The study through the mean analyses found that the students possessed a moderate level of economic literacy. Their macroeconomic literacy level was relatively higher than their microeconomic level of literacy. Additionally, there was a weak relationship between their macroeconomic and microeconomic literacy levels. The independent samples t-test and one-way ANOVA revealed that their gender and age did not influence their economic literacy and therefore did not affect students' level of economic literacy. However, there was a significant difference in the macroeconomic test results based on the resident's location (rural and urban). The study showed that students

residing in urban areas had a higher level of economic literacy than students residing in rural areas.

Happ, Müller, Reinhardt and Troitschanskaia (2021) examined the level of economic literacy among students (327 international and 89 refugee) in Germany. Data were gathered through TEL and analysed with random and fixed effects. The study found that refugee students had a higher level of economic literacy than their international counterparts. Also, it was revealed that female students had a low level of economic literacy than male students. Further, students whose proficiency in the test language is equivalent to the mother tongue had a high level of Economic literacy.

Kimanzi (2021) assessed the influence of economic literacy levels on economic policies affecting South Africa. Data used in the study were gathered through field study, where a survey was done with 134 students using a simple random sampling method. The data were analysed using descriptive (frequencies, mean and standard deviation) and inferential (Independent t-tests) statistics. The study found that students' economic literacy level was medium. The findings also showed that while macroeconomic knowledge was medium, microeconomic knowledge was low. It was also revealed that the economic literacy level was medium across all levels of education. Respondents who scored the highest were in their third year of study, while the respondents who scored lowest were in their first year. Research further revealed that students majoring in economics scored higher than students who majored in non-economics.

Factors Affecting Students' Level of Economic Literacy

This section looks at factors that influence students' level of economic literacy such as family income, family occupation, level of parents' education and resident's location among others.

In Pakistan, Yasmin, Kouser, Hassan and Ahmad (2014) investigated the determinants of economic literacy among undergraduate students. Data were gathered from a random sample of 200 students through a questionnaire. Ordinary least squares (OLS) technique and Logit model were used to analyse the data. Male students were seen to possess a higher level of economic literacy than female students. The study found that spending (total spending in a month), age, level of father's education and student's level of education were positively related to the students' level of economic literacy; thus, the higher the level of these variables, the higher the level of students' economic literacy and vice versa. Again, the study indicated that the utilization of automatic teller machines (having an ATM or having no ATM), availability of internet connections, resident's location (urban or rural) and guardian's occupations (businessman, government or privately employed) did not have a significant influence on students' level of economic literacy.

Again, in Pakistan, Hussain and Manzoor (2022) analysed factors influencing economic literacy levels among undergraduate students in South Punjab. Data were gathered from a convenient sampling of 100 students (male = 56, female = 44) from different universities through a questionnaire. The study found that male students possessed higher level of economic literacy than their female counterparts. Students living in urban areas also had higher economic

literacy than those living in rural areas. The findings also indicated that students' level of economic literacy was positively related to their age, educational level and savings. Student's pocket money, mother's education and bank account (students having a bank or having no bank account) were inversely related to students' level of economic literacy. However, ATM usage (having an ATM or having no ATM), and guardian's occupation (businessmen, government employed and private employed) did not influence students' level of economic literacy.

In Portugal, Martins and Veiga (2019) examined the factors which affect the level of economic literacy among undergraduate students (reading Economics as a programme, a course in Economics and no course in Economics). The survey design was adopted and the purposive sampling technique was used to sample 494 students for the study. Data were gathered through questionnaires and analysed with the OLS and the Tobit model. The study found that male students possessed higher economic literacy than female students. Economic literacy level was high among students with higher admissions scores and family income. Also, the findings showed that studying economics at the university level positively influenced students' level of economic literacy; when the study of economics is more intense at the college level, it is associated with more knowledge about economic concepts.

Again, in Portugal, Ribeiro and Fernandes (2018) evaluated students' knowledge of economics. A cross-sectional study design was employed for the study. A census sampling of 95 students completed the questionnaire and the economic literacy test. The Descriptive statistics (mean, standard deviation,

percentage) revealed that students had a fair knowledge of Economics; this was influenced by students' sex, household income level, residence, parents' profession and parents' educational level. It was further revealed that students performed better on microeconomic issues and performed worse on macroeconomic issues.

In Malaysia, Nizam, Sieng and Sulaiman (2020) examined students' (secondary schools, vocational schools and tertiary institutions) level of economic literacy and factors affecting their level of economic literacy. Data were gathered from a random sample of 400 students through the questionnaire. Tobit regression model revealed that students across all levels of education had a low level of economic literacy, influenced by their household income and field of study (science and social sciences). Students in the social sciences field had a higher level of economic literacy. The findings, however, indicated that gender, resident's location (urban and rural) and ethnicity (Malaysian, Chinese and Indian) did not influence their level of economic literacy.

Cakmak et al., 2015 investigate the economic literacy level of students in the faculty of education at Inonu University in Turkey. Data were gathered from a convenient sample of 868 students. The level of economic literacy was assessed using the Council for Economic Education (CEE) economic Literacy scale called 'CEL (Campaign for Economic Literacy) quiz'. A personal information form was employed to gather data on the demographic variables. The analyses were conducted via t-test and ANOVA. The study revealed that there is no significant difference between the age and gender of students and students' economic literacy

levels. The findings further revealed Social Sciences students received low scores and therefore achieved a low level of economic literacy. Additionally, the study highlighted that students in the mathematics teaching department demonstrated higher levels of economic literacy.

In Turkey, Tekbaş (2021) examined the level of economic literacy of students (public and private sector employees, self-employed, pensioners and unemployed) and investigated factors affecting their level of economic literacy. A questionnaire was used to gather data from the students ($n = 385$). The economic literacy score was analysed against gender and marital status (single and married) through the independent samples t-test. Based on occupation, age, income and educational level (elementary, high school, undergraduate and graduate), their economic literacy scores were analysed through one-way ANOVA. Descriptive findings indicated that the level of economic literacy among the students was slightly above moderate. The study found that students with undergraduate and graduate degrees had the highest level of economic literacy compared to students at the pre-tertiary levels (elementary and high school). Economic literacy increased with educational level. Age, gender, marital status, and income level among students did not influence students' level of economic literacy. According to the study, boosting access to information and broadening economics education with the help of academic institutions and business organizations will help to increase the level of students' economic literacy.

Reichert-Schlax et al. (2022) examined the economic literacy among beginning higher education students in Japan ($n = 198$) and Germany ($n = 232$).

TEL was used to test students' level of economic literacy. The study employed the longitudinal research design. Differential item functioning, measurement invariance, mean and multi-level analyses were used to analyse the data. The study found that students' level of economic literacy was low. The male students had a higher level of economic literacy than female students in Germany. Students' interest in economics topics and age positively influenced their economic literacy. Students' age did not influence their level of economic literacy. Consequently, the study concluded that high schools and universities in Germany and Japan should make an effort to promote students' interest in Economics topics.

In Iraq, Huzayran, 2023 studied the impact of economic education on economic literacy among students (n=100). Descriptive and inferential statistics were used to analyse the data gathered. A test was used to examine students' economic knowledge. The test revealed respondents were less familiar with the concepts of economics. The study concluded that the interest in economic education was low among the general public, which was reflected in the level of economic literacy. The study further revealed no statistically significant relationship between economic education and level of economic literacy.

In Indonesia, Prasastianta, 2016 employed the explanatory research design to examine factors affecting students' (n=150) economic behaviour. A test (to measure the level of economic literacy) and a questionnaire (to assess the factors affecting economic behaviour) were used as the data collection instruments. The simple random sampling technique was used to sample the students. The data

were analysed by employing path analysis and structural equation modelling (SEM). The study revealed that parents' socioeconomic status has no significant effect on students' economic literacy and economic behaviour. It was further revealed that students' interest in economics subject has a significant effect on their economic literacy and economic behaviour. Students' economic literacy was seen to have a significant effect on their economic behaviour.

In Ghana, Nunoo and Afful (2015) examined undergraduate students' level of economic literacy and investigated the factors influencing it. The stratified sampling technique was used to sample 1,366 students for the study. A questionnaire and a Test for Economic Literacy (macroeconomics and general economics) were used to gather the biographic data of the students and their level of economic literacy respectively. The study found that undergraduate students' level of economic literacy was above average. Students' elective courses read at the SHS (Economics), cumulative grade point average (academic performance) at the university, interest in politics and attendance of economic and business conferences positively influenced their level of economic literacy. Also, students who read economics at the SHS level had a higher level of economic literacy compared to students who did not read economics. Students who were more interested in economics had a higher level of economic literacy. However, students' age, programme of study (economics or business) and work experience did not influence their economic literacy.

Conceptual Framework

To accomplish the more difficult life goals of today, economic literacy is one of the essential life skills that each person needs. Individual differences in economic literacy are notable, and it is primarily correlated with factors such as sex, age, education level, family income, location and educational attainment. Every person must achieve a specific level of economic literacy to acquire economic knowledge. Figure 1 depicts the conceptual framework guiding the study.

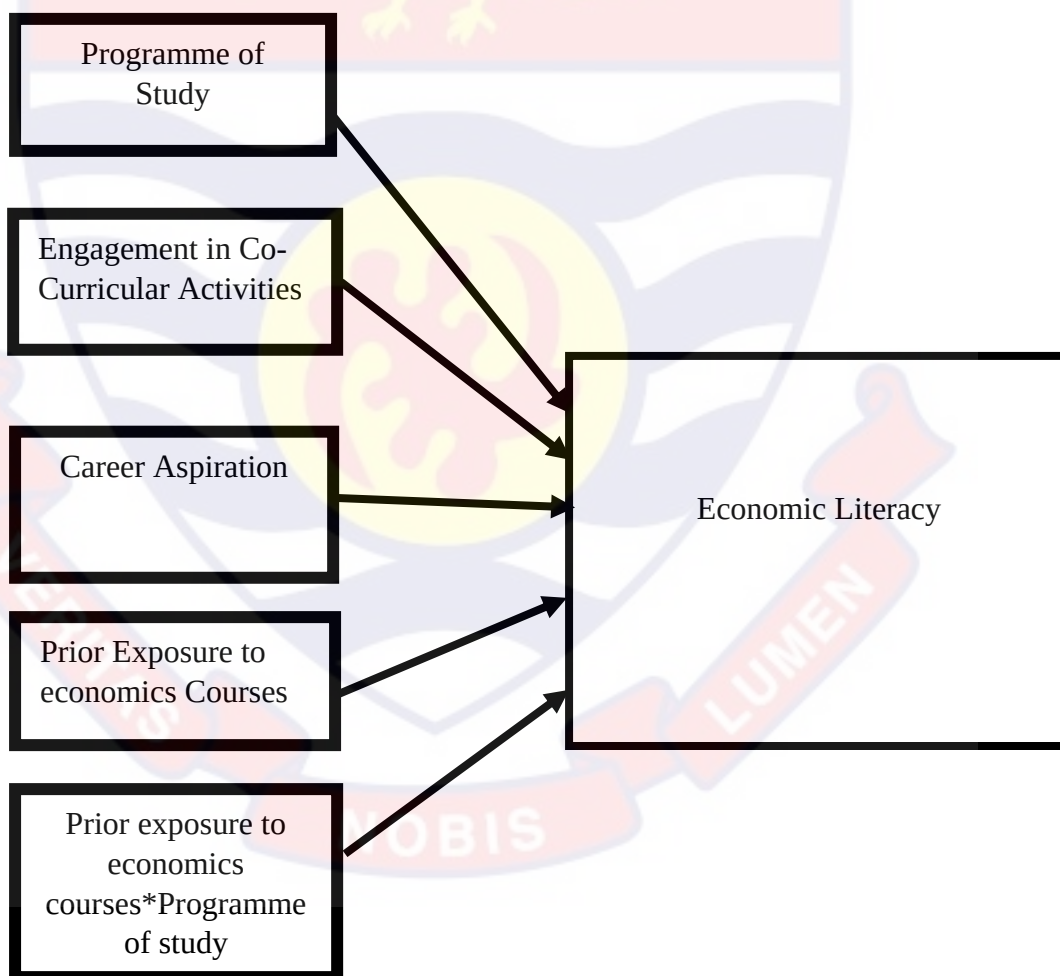


Figure 1:Conceptual framework

Source: Author's construct

The conceptual framework guiding this study is based on the premise that economic literacy among undergraduate education students is influenced by a combination of factors, including prior exposure to economics courses, career aspirations, programme of study, and engagement in co-curricular activities. These independent variables influence students' economic literacy, which serves as the dependent variable in this study.

Independent Variable

Prior exposure to economics courses: This variable encompasses the number and depth of economics courses taken by undergraduate students during their senior high school education. It is expected that students with greater exposure to economics courses will demonstrate higher levels of economic literacy due to increased familiarity with economic concepts and principles.

Career aspirations: Students' career aspirations may shape their interest in economics and motivation to develop economic literacy. Those aspiring to careers in economics-related fields may exhibit greater dedication to learning economic concepts, thus influencing their economic literacy level.

Programme of study: The choice of academic programme may also influence economic literacy, as students in disciplines closely related to economics (such as Economics, Business Administration, or Finance) may have more opportunities for exposure to economic concepts compared to students in unrelated fields.

Engagement in co-curricular activities: Participation in co-curricular activities, such as economics clubs, internships, or research projects, provides

additional opportunities for students to enhance their economic literacy beyond the classroom setting. Active engagement in such activities is expected to positively correlate with economic literacy level.

Dependent Variable

Economic literacy serves as the central focus of this study and represented students' understanding of economic concepts, their ability to interpret economic data, and their capacity to apply economic principles to real-world scenarios. Economic literacy was measured using the adapted Test of Economic Literacy (TEL), which is a standardised tool designed to assess students' understanding of economic concepts. The instrument included questions on microeconomics and macroeconomics. Descriptive statistics, including medians and interquartile ranges summarised the overall economic literacy level among the students.

Albert Bandura's social cognitive theory posits that learning occurs in a social context and can be influenced by observation, imitation, and modelling. According to this theory, students learn economic principles not only through direct instruction but also by observing and interacting with their environment, peers, and mentors. This theory explains how various factors such as programme of study, co-curricular activities, career aspirations, and prior exposure to economics courses interact to shape economic literacy as well as emphasize the role of social influence and self-efficacy.

The programme of study is crucial in this research because different academic disciplines provide varying levels of exposure to economic concepts, which can significantly influence students' economic literacy. Engagement in co-

curricular activities is another vital factor, as these activities offer practical experiences and opportunities that can reinforce and enhance economic learning. Career aspirations play a significant role in this study because economics is relevant in various career paths and therefore students need to be motivated to achieve the necessary economic knowledge and skills to succeed in their chosen fields. Prior exposure to economics courses is also an important factor, as pre-existing knowledge in economics provides foundational knowledge that is essential for developing one's economic literacy.

Summary and Implications to Current Study

The concept of economic literacy is supported by the theory of performance and the social cognitive theory. The literature review indicated that the level of economic literacy among undergraduate students was high, moderate or low. The key factors which influenced undergraduate students' level of economic literacy were age, gender, family income, education level, parents/guardian's education level/occupation and resident's location (e. g., Yasmin, Kouser, Hassan & Ahmad, 2014; Hussain & Manzoor, 2022; Martins & Veiga, 2019). The study revealed that male students possessed a higher level of economic literacy than female students (e. g Hashim & Kayode, 2013; Happ, Müller, Reinhardt & Troitschanskaia, 2021; Yasmin, Kouser, Hassan & Ahmad, 2014).

Several gaps (context, population and evidence) and reporting flaws were reported in some of the studies. In terms of context, the majority of research on undergraduate students' level of economic literacy was conducted in Europe and

Asia. The assessment of undergraduate students' level of economic literacy is important to improve students' ability to make personal decisions on economic issues and to monitor the government's economic policy decisions. This study is, therefore important in unearthing in Ghana, the level of economic literacy and factors influencing economic literacy. It appears studies on economic literacy were conducted on non-education students (Lyn & Sahid, 2021; Tekbaş, 2021) with studies on education students being under-researched. Also, there were contradictory findings on the level of economic literacy. Some studies tagged students as being economically uneducated (Koshal et al., 2008) whilst other studies claim students possessed a high level of economic literacy (Lyn & Sahid, 2021; Tekbaş, 2021). The majority of research disregarded other factors such as career aspirations, co-curricular activities that can have an impact on students' level of economic literacy as well as the interaction effect of prior exposure to economics courses and programmes of study on students' economic literacy level. Some of the studies that considered factors such as programme of study and prior exposure to economics courses produced contradictory findings.

In the findings, some of the studies stated that undergraduate students were economically literate without communicating the degree (Happ, Müller, Reinhardt and Troitschanskaia (2021). Other studies also did not indicate the sampling techniques and designs employed (Reichert-Schlag et al. (2022; Huzayran, 2023). The stated gaps in the literature informed the current study, the issues investigated and the overall design for the study. This study specifically

focussed on undergraduate education students and explored the influence of other potential factors on students' economic literacy.



CHAPTER THREE

RESEARCH METHODS

Overview

This study examined the level of economic literacy among undergraduate education students in DoBSSE at the University of Cape Coast. The study also explored the influence of undergraduate students' programme of study, co-curricular activities, career aspirations and prior exposure to economics courses on their economic literacy. This chapter describes the research philosophy, the research approach, the rationale for the choice of study design, population, sample and sampling procedures, data collection instruments, test for reliability and validity of the instruments, data collection procedures and data processing and analysis.

Research Philosophy

The selection of an acceptable research philosophy for a study informs the researcher's aim and intentions (Mackenzie & Knipe, 2006). The three basic research philosophies are positivism, interpretivism and pragmatism. The viewpoints of these philosophies are described from the ontological, epistemological and methodological perspectives. This study adopted the positivist philosophy.

Ontology deals with the idea that there's a real world out there that we can study and understand. In this study, economic literacy is a real thing that exists. Through this research, the study aimed to shed light on the level of economic literacy among undergraduate education students. Epistemology deals with how

we gain knowledge about things. The study aims to learn about economic literacy and what influences it by carefully studying and investigating it. The study therefore aimed to generate knowledge about economic literacy and its determining factors in a systematic and empirical way. Methodology refers to the approach or methods used to study and understand reality. The study employed specific methods such as questionnaire and test to delve into economic literacy level and examine the factors that shape them.

Ontologically, positivism is concerned with the nature of existence (Liamputtong, 2013). From a positivist perspective, the study considered economic literacy as an objective phenomenon and aimed to uncover the true level of economic literacy among undergraduate education students. Epistemology deals with the nature of knowledge (Liamputtong, 2013). The study's goal was to acquire knowledge about economic literacy and what factors influence economic literacy. Methodology is the range of approaches used in educational research to gather data (Cohen, Manion, & Morrison, 2007). Methodologically, the positivists gather quantitative data that can be analysed statistically. Krauss, 2005 stressed that survey design is employed in this paradigm. The study therefore adopted the quantitative approach and the descriptive cross-sectional survey.

According to Bryman (2015), positivism stands on the foundation of empiricism, advocating that knowledge is derived from observable facts and experiences. Positivists believe in analysing and measuring quantitative data and presenting real worth scientific proof that is unaffected by sociocultural factors

(Neuman, 2006). By adopting a positivist approach, the study aimed to obtain precise and objective data that can provide clear insights into the level of economic literacy and the factors that influence economic literacy. The philosophy ensured that the study's findings were based on objective evidence rather than subjective interpretations. Positivism's emphasis on quantifiable data and statistical rigour provides a solid foundation for deriving reliable and generalisable conclusions (Thompson, 2015). The study also aimed to produce results on the current level of economic literacy among a diverse sample of participants (DoBSSE) that were generalisable to a larger population (undergraduate education students at UCC).

Dzilah (2021) asserts the comparative approach is used in positivist research to seek correlations between two or more factors. Therefore, this study sought to demonstrate the connection between the factors influencing economic literacy and the level of economic literacy among undergraduate education students at the University of Cape Coast.

Research Design

In line with the positivism approach, the study adopted the descriptive cross-sectional survey design to assess the level of economic literacy among undergraduate education students at the University of Cape Coast. Creswell (2014) claims that a cross-sectional survey design offers a quantitative or numerical overview of the views of a population by examining a sample of that population. Osuala (2001) asserts that cross-sectional survey design is appropriate when the researcher aims to observe the situation without any intent to alter the

study's variables. Neuman (2006) shows that a cross-sectional study design involves investigating the relationship between multiple variables at a specific point in time and how variables affect one another. The study examined the economic literacy of students in DoBSSE and generalised it to the whole undergraduate education students at the University of Cape Coast. The study aimed to assess the level of economic literacy among undergraduate education students as it naturally existed without introducing external interventions or manipulating any variables. The study further examined how factors such as field of study, engagement in co-curricular activities, career aspiration and prior exposure to economics courses influenced students' economic literacy level.

The cross-sectional survey design has the advantage of facilitating the inclusion of diverse participant groups. This inclusivity not only enhanced the generalizability of findings but also enabled comparative analysis across different demographic or categorical groups. Cross-sectional designs are relatively easy to conduct and they tend to be cheaper to implement because they observe all variables at one point in time. However, cross-sectional surveys rely on self-reported data, which may have been subjected to response bias, and social desirability bias affecting the accuracy of the findings. Generalising the findings of the cross-sectional survey design to other populations or different periods may not always be valid.

Research Approach

There are three main research approaches: quantitative, qualitative and mixed approach. This study adopted the quantitative approach. The quantitative

research approach is predicated on a logical technique and motivated by the empiricist and positivist schools of thought (Bryman & Alan, 2012). The main tenets of the quantitative approach include formulating hypotheses, collecting numerical data, using statistical techniques for analysis, drawing conclusions based on evidence and generalizing it across groups of people (Quieros, Faria & Almeida, 2017; Babbie, 2010).

The quantitative approach enabled precise measurement of economic literacy levels among participants through structured tests. The quantitative approach also facilitated hypothesis testing through statistical techniques. Through statistical techniques, such as regression analysis, the strength and direction of the factors (career aspirations, engagement in co-curricular activities, programme of study and prior exposure to economics courses) influencing economic literacy were explored. Furthermore, the use of a quantitative research approach enhanced the generalisability of findings. The study collected data from a sample of students (DoBSSE) and generalised to the whole population of undergraduate education students at the University of Cape Coast. This approach ensured that the findings were based on concrete and measurable data rather than subjective interpretations.

Study area

The study was conducted at the University of Cape Coast. University of Cape Coast is located in the Central region of Ghana. The University of Cape Coast (UCC) serves as the focal study area for this research. Located in Ghana, UCC is one of the country's leading institutions of higher learning, renowned for

its strong emphasis on teacher education. Established in 1962, the university has since grown into a centre of academic excellence, offering diverse programmes that cater to students from various backgrounds.

The Department of Business and Social Sciences Education (DoBSSE) is dedicated to training future educators in economics, business, and social sciences. Given its emphasis on economics education, DoBSSE provides a unique environment for examining the extent of economic literacy among undergraduate students. The presence of students specializing in economics, as well as those studying it as an elective, allows for a comparative analysis of economic literacy levels across different academic disciplines.

The selection of UCC as the study area is further justified by the university's structured approach to economics education. The institution offers economics as a major subject in some programs while incorporating it as an elective in others. This structured framework enables students to develop a comprehensive understanding of economic concepts at both the microeconomic and macroeconomic levels. Microeconomics, which focuses on individual decision-making and market interactions, and macroeconomics, which deals with broader economic policies and national economic performance, are both integral components of the university's curriculum. This study seeks to assess how effectively these concepts are being taught and whether students are acquiring the necessary competencies to apply economic principles in real-life situations.

Population

The population of this study was all undergraduate students ($n = 2132$) in the Department of Business and Social Sciences Education for the 2022/2023 academic year. The undergraduate students in this Department were considered because observations at the University of Cape Coast showed that some undergraduate education students mismanage their financial resources. The total number of undergraduate students was 2132. Table 1 presented the population distribution of undergraduate students in the Department.

Table 1: Population Distribution of Undergraduate Education Students in DoBSSE

Programme of study	Level 100	Level 200	Level 300	Level 400	Total
B.Ed Management	65	64	143	106	378
B.Ed Accounting	120	120	171	141	552
B.Ed Social Studies	84	54	101	56	295
B.Ed Social Sciences	208	219	333	147	907
Total	477	457	748	450	2132

Source: Department of Business and Social Sciences Education 2022/2023,
University of Cape Coast

Sample and Sampling Procedures

Three hundred students were sampled for the study. The study's sample size was selected using Adam's (2020) sampling size determination table. According to Adam, the minimum sample that must be selected for a population of 2132 is 245. The researcher, therefore, selected additional 55 respondents

making the actual sample size, 300. This was done to ensure that the return rate of the instruments did not affect the representativeness of the sample to the population (external validity) as supported by Bartlett, Kotrlik & Higgins (2001). Adam's sample size determination formula was more appropriate as it considered a predetermined margin of error (3% in this instance) with a confidence level of 95%. This indicates the researcher's trust in the sample approximation precision and enhances the study's credibility.

The study employed multiple sampling techniques to select the sample units. The undergraduate students were placed into four strata based on their various programmes: Bachelor of Education Social Sciences, Bachelor of Education Accounting, Bachelor of Education Management and Bachelor of Education Social Studies. The stratification aimed to have a fair representation of undergraduate students from each category. The study employed the stratified proportionate sampling technique to ensure a representative sample. From each level of education and programme of study, the researcher calculated the proportion of students in that category relative to the total population and multiplied it by the sample size (300). This approach allowed for proportional representation across different educational levels and programmes of study, ensuring that the final sample accurately mirrored the overall population. A simple random sampling technique was used to obtain the individual sample units. Individual paper slips were prepared with 'yes' or 'no' options. The slips were placed in a box and thoroughly mixed to ensure randomness. Each student was invited to draw a single slip from a box. Each paper slip picked was put back into

the box. This was done till the sample size of 300 students was reached. The slip they drew indicated their participation in the study, 'yes' for those selected and 'no' for those who would not participate.

Table 2 showed the selected participants across the various programmes and levels of education.

Table 2: Distribution of Sample Size

Programme of study	Level 100	Level 200	Level 300	Level 400	Total
B.Ed Management	9	9	20	15	53
B.Ed Accounting	16	17	24	20	77
B.Ed Social Studies	12	8	14	8	42
B.Ed Social Sciences	29	30	49	20	128
Total	54	53	85	53	300

Source: Fieldwork (2023)

Data Collection Instrument

The test of economic literacy (TEL) and ecolit factor questionnaire (EFQ) were used to collect data. The TEL was used to examine the level of economic literacy whilst the EFQ was used to collect data on the factors influencing the economic literacy of undergraduate education students.

Test of Economic Literacy

The test of economic literacy developed by Kimanzi (2021) was adapted for the study. The TEL consisted of two sections, Section 1 comprised questions focusing on macroeconomics concepts, while Section 2 contained questions related to microeconomics. The TEL consisted of fifteen multiple-choice items,

with eight questions pertaining to macroeconomics and seven items on microeconomics. Each item offered respondents a choice of four alternatives requiring them to choose the most suitable response. Each question in the TEL carried a mark.

The adaptation of the TEL was deemed appropriate for the study. TEL was chosen for this study due to its widespread use and recognition in economics education research. This tool was appropriate as it provided quantifiable data that can be analysed to determine the economic literacy level of the undergraduate education students. The test was structured to ensure consistency in data collection as outlined by Leighton & Gierl, 2007. Measures were taken to establish the validity and reliability of the test providing a reliable and valid assessment instrument. The TEL was used in collecting data from a large number of respondents making it efficient for the research. However, it's important to note potential limitations, such as the possibility of respondents omitting questions or providing contradictory answers (Tourangeau, Conrad & Couper, 2018), as well as the risk of cheating during test administration. To mitigate these risks, instructions were provided to participants before the test. These instructions detailed guidelines on how to complete the test accurately and honestly.

Table 3 provides the modifications made to the test items.

Table 3: Examples of Modification Made on the TEL

Original Items	Items Modified
In South Africa, who determines what goods and services should be produced?	In Ghana, who determines what goods and services should be produced?

Table 3, continued

Which of the following are most	Which of the following entities are
---------------------------------	-------------------------------------

likely to be helped by inflation?	most likely to benefit from inflation?
If South Africa stopped importing automobiles from Germany, who would be most likely to benefit?	If Ghana stopped importing automobiles from Germany, who would be most likely to benefit?
The JSE is an example of an institution within our economy that exists to help people achieve their economic goals. The existence of this institution:	The Ghana Stock Exchange is an example of an institution within our economy that exists to help people achieve their economic goals. The existence of this institution:
South Africa grows fruits and vegetables and Botswana produces beef. If South Africa voluntarily trades fruits and vegetables in exchange for Botswana beef,	Ghana grows fruits and vegetables and Botswana produces beef. If Ghana voluntarily trades fruits and vegetables in exchange for Botswana beef,
The resources used in the production of goods and services are limited, so society must	The resources used in the production of goods and services are limited, therefore requiring society to

Source: Fieldwork (2023)

Ecolit Factor Questionnaire

The EFQ was used to collect data on the perceived factors influencing economic literacy. The EFQ was made up of two sections: Section A and Section B. Section A elicited responses on the demographic characteristics of the respondents with four items: sex, age, level of education, and programme of study of respondents. Section B elicited responses on the other factors influencing students' economic literacy and consisted of four items which included questions on the career aspirations of students, students' intentions regarding their career paths, engagement in co-curricular activities and students' prior exposure to economics courses.

The EFQ questionnaire was an effective tool for gathering survey data because it offered organized numerical data on the topic under study (Cohen et al., 2018). The questionnaire was used for the study because it gave respondents enough time to think about their responses to the factors influencing economic literacy (Kothari, 2004). It also saved time for both researchers and respondents as it didn't require real-time interaction. However, when respondents decide not to respond for various reasons, the response rates are significantly low as posited by Payne & Payne (2004). The EFQ did not provide the researcher with an opportunity to probe beyond the given response.

Validity and Reliability Test

Validity and reliability test were conducted for the data collection instruments. This was done to guarantee that reliable data for the study was collected via the data collection instruments (Sim & Wright, 2000). To ascertain the face and content validity, the EFQ and TEL were handed to the researcher's supervisors who went through them. The corrections primarily involved refining the wording of questions and clarifying instructions on the instruments. The instruments were piloted on randomly selected undergraduate students ($n = 40$) in the School of Business. This was consistent with Baker's (1994) assertion that a suitable sample size for pilot testing be between 10 and 20 percent of the sample size for the main study. During the pilot test, the researcher used Cronbach's Alpha to determine the reliability of the EFQ whilst Kuder-Richardson Formula 21 was computed to examine the reliability of the TEL. According to Pavot et al. (1991), any scale with a Cronbach's Alpha of more than 0.7 can be considered

reliable. The alpha value for the EFQ was 0.728. Using the Kuder-Richardson formula, the value for the TEL was 0.730 thus the EFQ and TEL were deemed reliable and acceptable for data collection. Cronbach's Alpha and the Kuder Richardson were calculated again after the actual data was collected to determine the instruments' reliability for the actual data collected. The EFQ had a reliability coefficient of .762 (N of items = 8) whilst the TEL had a reliability coefficient of .800 (N of items = 15).

Table 4 presented the reliability for the study's instruments.

Table 4: Reliability for the Ecolit Factor Questionnaire and the Test of Economic Literacy

Scale			Reliability coefficient (pilot test)	Reliability coefficient (actual study)
Factors influencing economic literacy			.728	.762
Test of economic literacy			.730	.800

Source: Field Survey (2023)

Ethical Considerations

The study adhered to all ethical procedures established by the University of Cape Coast. Ethical clearance was sought from the University of Cape Coast Institutional Review Board to carry out the research. Additionally, a letter of introduction was acquired from the researcher's department to seek permission from the relevant authorities. Ethically, respondents had to voluntarily provide their consent to participate in a study without being coerced. Hence, an informed

consent form was given to all the research participants. All participants were informed about the purpose of the study and were not forced to partake in the study. In addition, the cover letter to the research instruments stated that their responses would be kept confidential and their demographic information as well as their scores on the test would not be revealed. They were again informed that they had the liberty to withdraw themselves at any stage of the study if they desired.

Ethical considerations were also ensured during the study's data processing and analysis stage. The data gathered through the TEL and EFQ were sorted and cleaned without altering the responses provided by the respondents. The appropriate statistical tools were used and their assumptions were thoroughly checked and reported. It should, however, be noted that the statistical tools were used within the researcher's knowledge framework. Lastly, the researcher avoided any known instances of plagiarism.

Data Collection Procedure

After obtaining ethical clearance (ID: UCCIRB/CES/2023/190) from the University of Cape Coast, the researcher visited the lecturers (whose classes were used) with a letter of introduction (Appendix D) from the Head of Department, Department of Business and Social Sciences Education of the University of Cape Coast.

To ensure the smooth execution of the study, four research assistants underwent rigorous training. The training regimen was designed to familiarize them with the study's instruments, which encompassed understanding the

questionnaire and test items, facilitating the distribution and collection processes, and proctoring during test taking.

Participants were provided with an informed consent form two weeks before the day of data collection outlining the purpose of the study, confidentiality measures and voluntary participation. Participants were given ample time to read and ask questions before providing their written consent. Participants were encouraged to seek clarification on any aspects they found unclear or had questions about. In addition to the informed consent process, participants were provided with the contact information of the researcher. This enabled participants to reach out if they had any further questions or concerns.

The data collection session was arranged to coincide with a time when all sampled students were to participate. On the designated day (28th March, 2024) that is, students at the Old Site campus gathered at the Old Assembly Hall, whereas students at the new site convened at Celt. As the students settled in to take part in the survey, the researcher with a trained research assistant introduced the study, answered any questions and obtained informed consent before proceeding with data collection. With the help of four trained research assistants, the TEL and EFQ were administered in person. The advantage of administering in person is summarized by Osuala (1982) in that the researcher has the opportunity to brief respondents to understand exactly what the items mean to obtain the right responses. The TEL was first administered to the respondents and given 20 minutes to complete it. The EFQ was distributed to participants after completing the test. Participants used about 5 minutes to complete the EFQ. The allotted time

for completing the TEL (20 minutes) and the EFQ (approximately 5 minutes) was based on feedback from pilot testing to ensure respondents had adequate time to provide thoughtful and accurate responses without feeling rushed. In all, the data collection procedure took about 30-35 minutes.

Model Specification

To study the factors that influence undergraduate education students' economic literacy level, we employed a linear regression model. We hypothesised that student's economic literacy (ELS) was a function of programme of study (PROG), engagement in co-curricular activities (CC), career aspiration (CA), prior exposure to economics courses (PE). The relationship may be stated as:

$$\text{ELS} = f(\text{PROG}, \text{CC}, \text{CA}, \text{PE}) \quad (1)$$

Specifically, we assume that the relationship is linear in nature and may be written as: $\text{ELS} = a + b_1\text{PROG}_i + b_2\text{CC}_i + b_3\text{CA}_i + b_4\text{PE}_i$ (2)

Data Processing and Analysis

The quantitative data gathered through the TEL and EFQ were screened to remove any unrelated responses. The data were coded and entered into SPSS 22.

The statistical tools employed for data analysis were median and Interquartile range; multiple regression analyses; and factorial ANOVA. Data gathered on research Question One were analysed through median and interquartile range. This provided a clear summary of students' economic literacy levels as measured by the TEL, enabling the categorisation of respondents into levels (e.g., fair, satisfactory, good). Research Question One required the respondents' level of economic literacy. The median was seen as a suitable

statistical tool since the distribution of scores in the dataset did not follow a perfectly normal distribution. The distribution of scores appeared to be negatively skewed that is, the median score (73.33) was greater than the mean score (66.11). Statistically, the best indicator of dispersion when the median is presented is the interquartile range. The IQR measures the range between the first quartile (25th percentile) and the third quartile (75th percentile). It indicates the spread of the middle 50% of data, providing insights into the variability of the data set, especially when the data is skewed. Data on research hypotheses were analysed through regression analyses due to its robustness in examining the influence between independent variables (such as programme of study, engagement in co-curricular activities, career aspirations, prior exposure to economics courses, and the interaction effect of prior exposure to economics courses and programme of study) and the dependent variable (economic literacy level). Factorial ANOVA was used to explore the interaction effect of programme of study and prior exposure to economics courses on students' economic literacy to determine if the influence of one independent variable (programme of study) on the dependent variable depends on the other independent variable (prior exposure to economics courses).

Table 5: Summary of Data Analysis

Research Hypotheses	Question/Research	Instrument	Analytical Technique
Examine the level of students' economic literacy		Test	Median and Interquartile Range
H ₀ : There is no statistically significant influence of undergraduate education students' programme of study		Questionnaire	Multiple Linear Regression Analyses

on their level of economic literacy

H₀: There is no statistically significant influence of undergraduate education students' engagement in co-curricular activities on their economic literacy level.

Questionnaire

Multiple Linear Regression Analyses

H₀: There is no statistically significant influence of undergraduate education students' career aspirations on their level of economic literacy.

Questionnaire

Multiple Linear Regression Analyses

H₀: There is no statistically significant influence of undergraduate education students' prior exposure to economics courses on their economic literacy level.

Questionnaire

Multiple Linear Regression Analyses

H₀: There is no significant interaction effect of prior exposure to economics courses and programme of study on students' economic literacy level.

Questionnaire

Factorial ANOVA

Source: Fieldwork (2023)

Chapter Summary

The study, rooted in positivism, adopted the descriptive cross-sectional survey design to study the level of economic literacy as well as the factors influencing economic literacy among undergraduate education students. The selection of this design allowed quantitative data to be gathered (through TEL and EFQ) from undergraduate education students (N=300) to describe their economic literacy level. The sample size for the study was determined using multiple sampling techniques that included the stratified proportionate sampling technique

and simple random sampling technique. Descriptive (frequency and percentages, median and interquartile range) and inferential (regression analyses and factorial ANOVA) statistics were used to analyse the data gathered on the research questions and hypotheses. Tables and/ or figures were used to report the results where applicable. The next chapter presents the results obtained and its discussion to address the research problem.



CHAPTER FOUR

RESULT AND DISCUSSION

Overview

This chapter presents and analyses the findings concerning undergraduate education students' economic literacy and the factors influencing it. Quantitative data were collected through 300 questionnaires and tests, of which 285 were deemed valid for analysis. The results are discussed in relation to the research question and hypotheses formulated for the study. Descriptive statistics, including frequency and percentages, were employed to analyse the demographic data. To address the research question, median and interquartile range were used, while multiple regression analysis and factorial ANOVA were applied to test the research hypotheses.

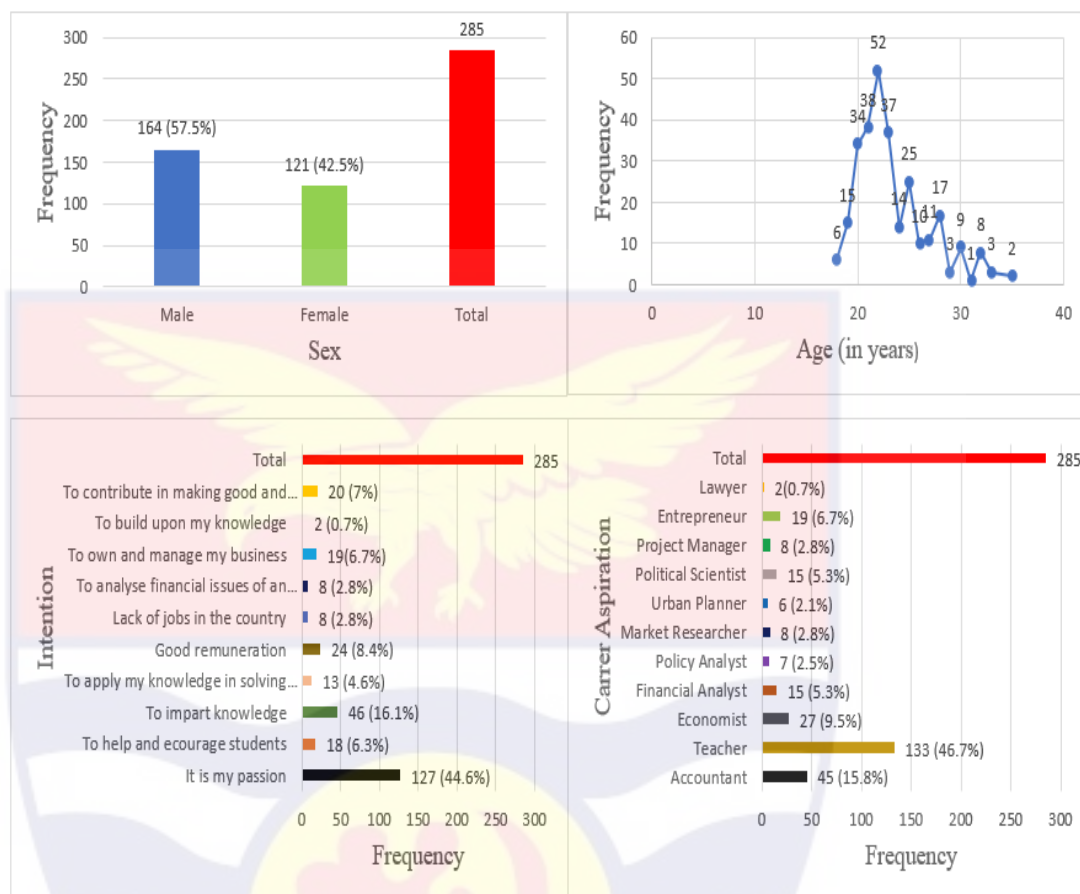


Figure 2: Analysis of demographic characteristics of respondents

Source: Fieldwork, 2023

In the study, male respondents ($n = 164$, 57.5%) outnumbered female respondents ($n = 121$, 42.5%) among the undergraduate students in the Department of Business and Social Sciences Education. This male predominance is a recurring trend in educational settings, potentially influenced by cultural and societal norms that traditionally channel males towards business-related fields. Conversely, females may encounter discouragement or insufficient support in pursuing these disciplines. Additionally, there may be a perception that business and social sciences are more aligned with male-oriented careers, which could contribute to lower female enrolment. This underscores the need for targeted

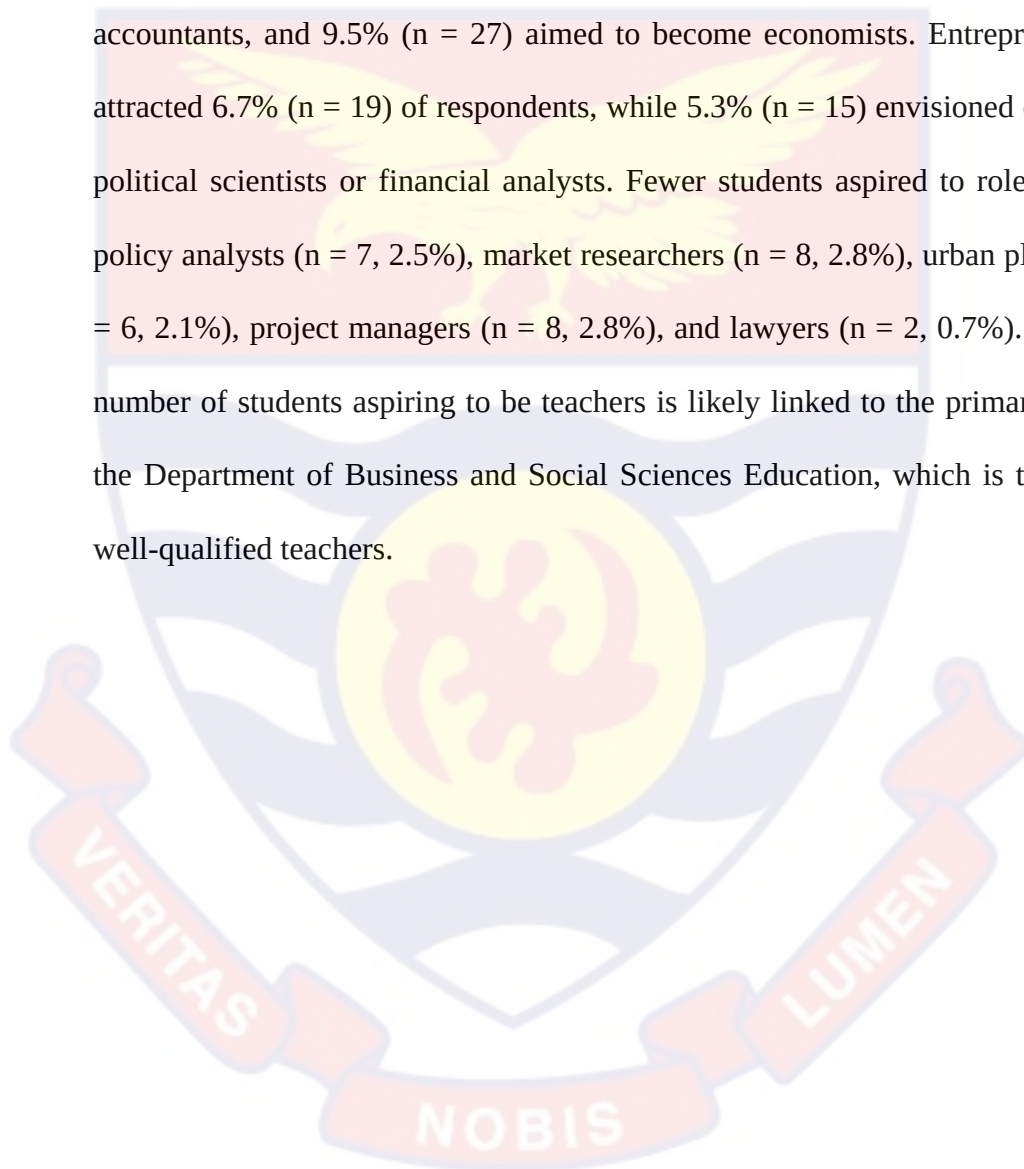
initiatives to encourage and support female students in Business and Social Sciences Education, such as scholarships and mentorship opportunities.

Regarding age distribution, the majority of respondents were 22 years old ($n = 52$). While the study did not examine the direct impact of age on economic literacy, understanding the age profile of the respondents can provide insights into the stage of their academic development. Students at this age are typically deepening their grasp of economic concepts, which could influence their level of economic literacy. The age-related context helps frame the interpretation of the findings by indicating that respondents are likely engaged in advanced stages of their education, where their economic literacy is expected to be more developed.

For 44.6% of the students ($n = 127$), their career aspirations were primarily driven by passion. Another 6.3% ($n = 18$) chose their career paths with the intention of helping and encouraging students, while 16.1% ($n = 46$) aimed to impart knowledge. Additionally, 6.7% ($n = 19$) were motivated by the desire to own and manage businesses, and 8.4% ($n = 24$) were influenced by the potential remuneration associated with these careers. Some respondents, 7% ($n = 20$), chose their careers to contribute to the formulation of informed and sound policies. A smaller proportion, 2.8% ($n = 8$), cited a lack of job opportunities in the country as a factor in their career choice, with an equal percentage intending to analyse financial issues in institutions. Furthermore, 0.7% ($n = 2$) aimed to build on their existing knowledge, and 4.6% ($n = 13$) expressed the intention to apply their knowledge to solve economic issues. This distribution underscores the significant role of intrinsic motivation in career choices, suggesting that many undergraduate

students pursue careers aligned with their passions. Such intrinsic motivation is likely to enhance job satisfaction and professional fulfilment.

Regarding career aspirations, the majority of students ($n = 133$, 46.7%) expressed a desire to become teachers. In contrast, 15.8% ($n = 45$) aspired to be accountants, and 9.5% ($n = 27$) aimed to become economists. Entrepreneurship attracted 6.7% ($n = 19$) of respondents, while 5.3% ($n = 15$) envisioned careers as political scientists or financial analysts. Fewer students aspired to roles such as policy analysts ($n = 7$, 2.5%), market researchers ($n = 8$, 2.8%), urban planners ($n = 6$, 2.1%), project managers ($n = 8$, 2.8%), and lawyers ($n = 2$, 0.7%). The high number of students aspiring to be teachers is likely linked to the primary goal of the Department of Business and Social Sciences Education, which is to prepare well-qualified teachers.



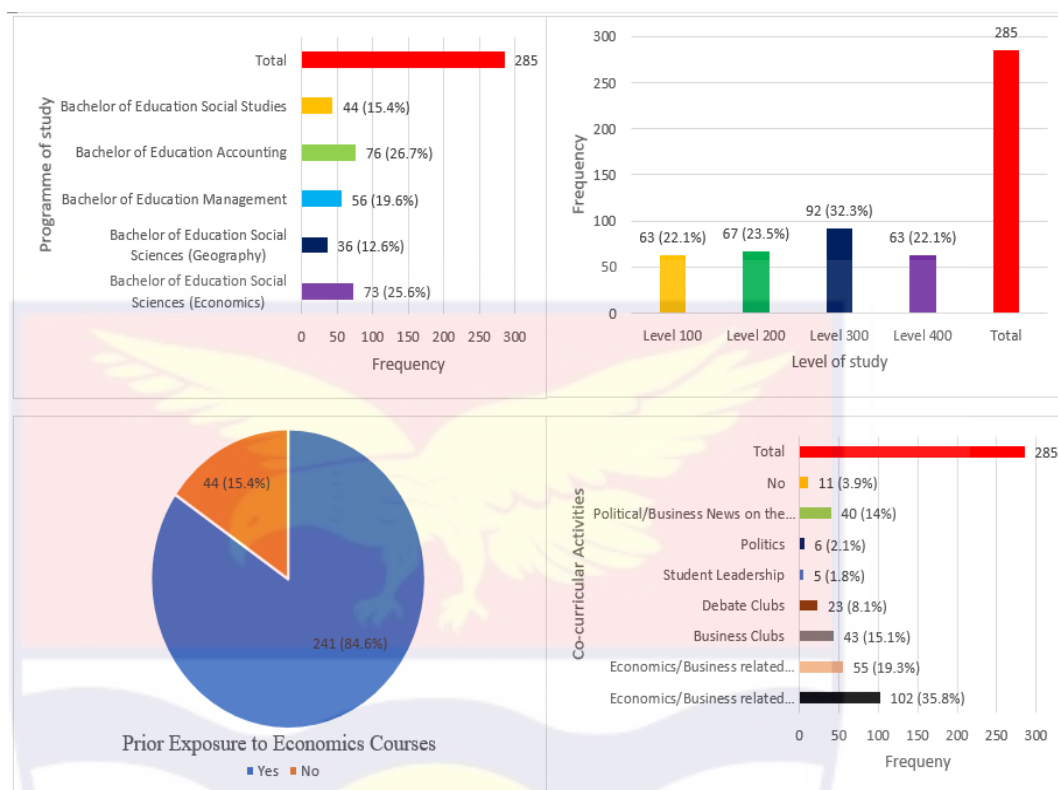


Figure 3: Analysis of demographic characteristics

Source: Fieldwork, 2023

The distribution of undergraduate education students across academic levels is as follows: Level 100 ($n = 63$, 22.1%), Level 200 ($n = 67$, 23.5%), Level 300 ($n = 92$, 32.3%), and Level 400 ($n = 63$, 22.1%). Regarding co-curricular interests, the majority of students ($n = 102$, 35.8%) showed a preference for workshops related to economics and business. Additionally, 19.3% ($n = 55$) expressed interest in participating in economics or business-related conferences, and 15.1% ($n = 43$) were interested in joining business clubs. Smaller proportions of students were interested in student leadership roles ($n = 5$, 1.8%) and politics ($n = 6$, 2.1%). Forty students (14.0%) indicated that they stay informed through political and business news on television, while 11 students (3.9%) reported no engagement in co-curricular activities contributing to their economics knowledge.

The findings revealed that 84.6% ($n = 241$) of respondents studied economics at the senior high school level, while 15.4% ($n = 44$) did not. In terms of programme distribution, the majority of respondents were enrolled in the Bachelor of Education (accounting) programme ($n = 76$, 26.7%). Seventy-three students (25.6%) were in the Bachelor of Education Social Sciences (economics) programme, and 36 students (12.6%) were in the Bachelor of Education Social Sciences (geography). The Bachelor of Education (management) programme included 56 students (19.6%), while the Bachelor of Education (social studies) programme comprised 44 students (15.4%).

The predominance of students studying economics or related fields, and their engagement in relevant co-curricular activities, suggests a strong foundation in economic literacy among this cohort. The high percentage of students with prior economics education from senior high school indicates a solid baseline of economic knowledge, which may enhance their understanding and application of economic concepts throughout their undergraduate studies. Additionally, their active interest in workshops, conferences, and business clubs highlights a commitment to deepening their economic literacy beyond the classroom. However, the small proportion of students with no engagement in such activities could point to areas where increased support and encouragement might be beneficial for fostering a more comprehensive economic understanding.

Results

This section presents the results related to the research question and hypotheses formulated for the study. To analyse these aspects, both descriptive

and inferential statistics were employed. Descriptive statistics, including measures such as means, frequencies, and percentages, provided a clear overview of the data distribution and demographic characteristics of the respondents. Inferential statistics, specifically multiple regression analysis, were used to test the research hypotheses and examine the relationships between variables. This approach allowed for an evaluation of the factors influencing economic literacy and the effectiveness of various predictors.

Level of Economic Literacy among Undergraduate Education Students at the University of Cape Coast

The level of economic literacy among undergraduate education students was assessed to gauge their understanding of economic concepts. This assessment involved a test covering both microeconomics and macroeconomics, designed to evaluate students' grasp of these topics. Responses were classified as correct or incorrect, with correct answers indicating knowledge of the question and incorrect answers signifying a lack of understanding. The results of this assessment are presented in Figure 4 and Table 6.

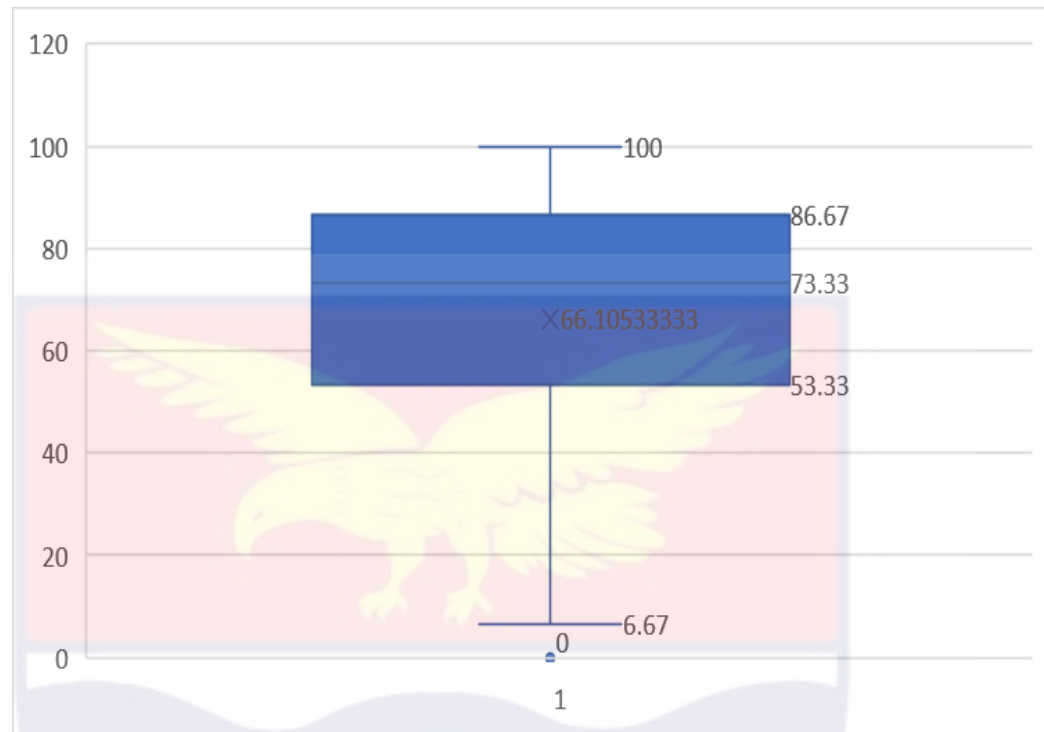


Figure 4: Box plot

Source: Fieldwork, 2023

The box plot was used to assess the distribution of students' levels of economic literacy and revealed several key statistics. The median score was 73.33, while the mean score was lower at 66.11, indicating a left-skewed distribution of economic literacy levels. The first quartile (25th percentile) was 53.33, and the third quartile (75th percentile) was 86.67, resulting in an interquartile range (IQR) of 33.34. This IQR represents the spread of the middle 50% of the students' scores, highlighting significant variability in economic literacy among the respondents. The minimum and maximum scores ranged from 0 to 100, reflecting a broad range of economic literacy levels among the students.

Table 6: Frequency Distribution Table of Undergraduate Education Students' Scores on Economic Literacy

Score Range	Frequency	Percent
80-100	124	43.5
70-74	34	11.9
65-69	22	7.7
60-64	21	7.4
50-54	18	6.3
0-49	66	23.2
Total	285	100.0

Note: Mean score = 66.11; Median score = 73.33; Interquartile Range = 33.34; 0-49 (Fail); 50-54 (Fair); 60-64 (Satisfactory); 65-69 (Very Satisfactory); 70-74 (Good); 80-100 (Excellent)

Overall, the economic literacy level among undergraduate education students was generally good, with a median score of 73.33. However, there was notable variation in economic literacy levels among students, as evidenced by the categorisation into different ability groups. The majority of students ($n = 124$, 43.5%) were classified in the excellence group. Conversely, 56.5% ($n = 161$) were distributed across good to poor ability groups. Specifically, 23.2% ($n = 66$) of students fell into the failed group, a higher percentage than those in the satisfactory group (15.1%) and the fair performance group (6.3%). This indicates a significant dispersion in economic literacy levels, as reflected by the high dispersion estimate ($SD = 24.60$), suggesting a heterogeneous distribution among students. The median score thus effectively represents the central tendency of the distribution, indicating a generally good level of economic literacy. Consequently,

based on Figure 4 and Table 6, it can be concluded that undergraduate education students at the University of Cape Coast have a good level of economic literacy. Table 7 provides a statistical summary of economic literacy levels across various programmes.

Table 7: Economic literacy level across the various Programmes of Study

Bachelor of Education	Mean	Median	Minimum	Maximum
Economics	72.05	73.33	00.00	100.00
Geography	68.52	73.33	00.00	100.00
Management	61.67	63.33	00.00	100.00
Accounting	71.49	80.00	00.00	100.00
Social Studies	50.61	46.67	00.00	93.33

Source: Fieldwork (2023)

While the overall level of economic literacy among undergraduate education students at the University of Cape Coast was generally good, significant differences were observed across various programmes. Students in the economics and accounting programmes demonstrated the highest levels of economic literacy, followed by those in geography and management. In contrast, social studies students exhibited the lowest levels of economic literacy. These findings underscore the need for targeted interventions to enhance economic literacy in programmes where students are struggling, aiming for a more consistent level of understanding across all fields of study. The presence of a minimum score of 0.00 in every programme highlights challenges faced by at least one student in each area, indicating potential areas for improvement. Conversely, the achievement of a maximum score of 100.00, except for social studies where the highest score was

93.33, reflects the presence of highly knowledgeable students. Table 8 provides a statistical summary of economic literacy levels across various programmes and academic levels.

Table 8: Economic Literacy Level of the Various Programmes of Study and Levels of Study

	Mean	Median	Minimum	Maximum
Economics*Level 100	68.63	73.33	0.00	100.00
Economics*Level 200	58.89	70.00	0.00	93.33
Economics*Level 300	77.62	80.00	40.00	100.00
Economics*Level 400	86.00	90.00	66.67	100.00
Geography*Level 100	67.50	70.00	46.67	80.00
Geography*Level 200	54.67	53.33	26.67	86.67
Geography*Level 300	76.36	80.00	53.33	100.00
Geography*Level 400	77.14	86.67	13.33	100.00
Management*Level 100	56.97	66.67	0.00	86.67
Management*Level 200	53.89	56.67	0.00	100.00
Management*Level 300	67.78	66.67	33.33	100.00
Management*Level 400	64.00	73.33	0.00	93.33
Accounting*Level 100	65.83	73.33	0.00	93.33
Accounting*Level 200	63.33	80.00	0.00	86.67
Accounting*Level 300	82.73	86.67	46.67	100.00
Accounting*Level 400	71.00	76.67	20.00	93.33
Social Studies*Level 100	59.39	66.67	0.00	93.33
Social Studies*level 200	60.74	80.00	0.00	93.33
Social Studies*Level 300	42.56	46.67	13.33	66.67

Source: Field Survey, 2023

Students in the economics programme demonstrated a clear progression in their understanding of economic concepts as they advanced through their studies. First-year students exhibited a good level of economic literacy, which improved significantly by the third and fourth years. This improvement is likely due to the increased number of economics courses taken as students' progress through their studies.

First-year geography students began with a solid grasp of economic concepts, but their literacy level declined in the second year before improving again in the third and fourth years. By their final year, students generally achieved a good level of economic literacy.

Management students displayed moderate economic literacy throughout their studies. First-year students started with a moderate level, and despite some fluctuations in the second year, there was a noticeable improvement by the third year. However, performance in the final year was notably lower.

Accounting students exhibited strong economic literacy. They began with a good understanding in the first year, maintained this level in the second year, and showed significant improvement by the third year. Although there was a decrease in performance in the fourth year, overall, accounting students demonstrated a high level of economic literacy.

Social Studies students had the lowest level of economic literacy among the programmes analysed. They started with a moderate understanding in the first year and showed some improvement in the second year. However, their literacy level declined significantly in the third and fourth years, likely due to the lack of economics courses in their curriculum during these years.

These results suggest that programmes like economics and accounting have effective curricula that support and enhance students' understanding of economic concepts, leading to high levels of economic literacy. In contrast, programmes like social studies may benefit from reviewing and potentially revising their curricula to better support the development of economic literacy

throughout students' studies. Table 9 presents the undergraduate education students' performance in microeconomics and macroeconomics.

Table 9: Undergraduate Education Students' Performance in Microeconomics and Macroeconomics

Aspects	Mean	Median	SD
Microeconomics	4.71	5.00	1.97
Macroeconomics	5.21	6.00	2.08

Source: Field Survey, 2023

The comparison of student performance in microeconomics and macroeconomics revealed some intriguing insights. The results indicated a higher average score in macroeconomics, suggesting that students generally performed better in this area compared to microeconomics. The greater dispersion estimate in macroeconomics reflects a wider variation in students' performance, implying that while some students excel in macroeconomics, others face significant challenges, resulting in a broader range of scores. This variation highlights the need for targeted support and interventions to address the disparities in student performance across these two economic areas.

Programme of Study, Engagement in Co-Curricular Activities, Career Aspiration, Prior Exposure to Economics Courses and Students' Economic Literacy.

The second objective aimed to determine the influence of students' programmes of study on their economic literacy. The programmes considered included Bachelor of Education in economics, geography, management, accounting, and social studies.

The third research objective examined the influence of undergraduate education students' engagement in co-curricular activities on their economic literacy. The co-curricular activities considered included conferences, workshops, debate clubs, business clubs, politics, political/business news, and student leadership.

The fourth research objective investigated how students' career aspirations influence their economic literacy. Career considered included teaching, financial analysis, market research, economics, accounting.

The fifth objective examined how prior exposure to economics courses influenced students' economic literacy levels, emphasising the significance of early exposure.

The findings are presented in Table 10, which details the influence of each factor on students' level of economic literacy. Multiple regression analysis was used to examine this influence.

Table 10: Influence of Undergraduate Education Students' Programme of Study, Engagement in Co-Curricular Activities, Career Aspiration and Prior Exposure to Economics Courses on their Economic Literacy

Model	B	SE	B	T	Sig	Tolerance	VIF
Constant	1.078	.042		25.572	.<000		
What is your career aspiration	-.003	.006	-.041	-.515	.607	.564	1.775
Do you	-.011	.007	-.128	-1.533	.127	.500	1.998

engage in any

co-curricular

activity

Table 10,

continued

Programme of study	-.019	.009	-.140	-2.190	.029	.851	1.175
Did you read Economics at the Senior High School level	.000	.035	.001	.008	.993	.854	1.171

Note: $F(4, 270) = 4.092$, $p = 0.000$, $R = .043$, $R \text{ Square} = 5.7\%$

The multiple linear regression analysis was conducted to determine the extent to which programme of study, career aspiration, participation in co-curricular activities, and prior exposure to economics courses at the senior high school level influence undergraduate students' economic literacy level. The model was statistically significant, $F(4, 270) = 4.092$, $p = .003$, indicating that, collectively, the independent variables significantly influence students' economic literacy.

The R-squared value of 0.057 suggests that only 5.7% of the variation in economic literacy scores is explained by the independent variables in the model, with the remaining 94.3% attributed to other factors.

Among the independent variables, only programme of study had a statistically significant influence on economic literacy scores ($B = -0.019$, $p = .029$). On the other hand, career aspiration ($p = .607$), participation in co-curricular activities ($p = .127$), and prior exposure to economics at the senior high school level ($p = .993$) were not statistically significant. This indicates that these factors, while possibly relevant to students' broader educational experiences, do not appear to significantly influence their economic literacy in this study context.

The Durbin-Watson statistic of 1.627 indicates no substantial autocorrelation in the residuals. Additionally, collinearity diagnostics revealed Variance Inflation Factors (VIFs) below 2, suggesting that multicollinearity among the factors is not a concern.

Consequently, the null hypothesis for the second research objective was rejected, as the p-value was less than .05. The null hypothesis for the third, fourth and fifth research objective were accepted, as the p-value was greater than .05.

Interaction Effect of Prior Exposure to Economics Courses and Programme of Study on Students' Economic Literacy Level

The sixth research objective aimed to examine the interaction effect of prior exposure to economics courses and the programme of study on students' economic literacy levels. This objective is crucial for understanding how both the

programme of study and prior exposure to economics courses jointly influence students' economic literacy. The regression model which was used to assess this interaction yielded results detailed in Table 14. The analysis highlights the importance of these two factors working together to shape students' understanding of economic concepts.

Table 11: Tests of Between-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	<i>p</i>	η^2
Corrected Model	19700.216 ^a	9	2188.913	3.955	<.001	.115
Intercept	259374.199	1	259374.199	468.615	<.001	.630
Programme	12886.950	4	3221.738	5.821	<.001	.078
PE	.289	1	.289	.001	.982	.000
Programme * PE	2762.935	4	690.734	1.248	.291	.018
Error	152209.959	275	553.491			
Total	1417333.333	285				
Corrected Total	171910.175	284				

Note: R squared (0.115) Adjusted R-squared = .086, PE (Prior Exposure)
Source: Fieldwork (2023)

In examining the null hypothesis, the test of between-subjects effects revealed that the corrected model was statistically significant, with an F statistic of $F(9, 275) = 3.955$ and a p-value < 0.001 (partial $\eta^2 = 0.115$). The programme of study significantly influenced students' economic literacy, as evidenced by an F statistic of $F(4, 275) = 5.821$ and a p-value < 0.001 . However, no significant influence was found for the main effect of prior exposure to Economics courses or

the interaction effect between prior exposure to economics courses and the programme of study.

The model accounted for only 11.5% of the variance in economic literacy, suggesting that other unmeasured factors might also significantly affect students' economic literacy levels. Consequently, the null hypothesis that there is no interaction effect between prior exposure to economics courses and the programme of study on economic literacy is not rejected.

Discussion

Economic Literacy Level among Undergraduate Education Students at the University of Cape Coast

The first research question explored the level of economic literacy among undergraduate education students at the University of Cape Coast. The results indicate that students generally exhibited a good level of economic literacy. Notably, those pursuing a Bachelor of Education with an economics major demonstrated higher economic literacy compared to their peers in the social studies programme, who had the lowest levels of economic literacy. Additionally, students performed better in macroeconomics than in microeconomics.

This overall good level of economic literacy suggests that students are effectively exposed to economic principles through their coursework. Furthermore, co-curricular activities such as workshops and conferences likely enhance their understanding by providing practical applications of the theoretical concepts learned. Students with career aspirations in economics or business may be particularly driven to deepen their knowledge of economic concepts.

These findings are consistent with Elger's theory of performance, which posits that performance is influenced by foundational knowledge. Despite variations across different programmes – with economics students outperforming their social studies counterparts – the general trend indicates a solid baseline level of economic literacy among the undergraduates. This is in line with the Theory of Performance's (ToP) emphasis on knowledge as a cornerstone of performance. The students' proficiency in essential economic skills, such as basic data analysis, critical thinking, and problem-solving, further supports the ToP's focus on skills development as integral to performance. While programme specialisation, such as in economics, may enhance certain competencies, the overall level of economic literacy reflects a commendable acquisition of fundamental knowledge and skills across the student body.

These results align with previous studies that have reported satisfactory levels of economic literacy among undergraduates (Kimanzi, 2021; Lyn & Sahid, 2021). Both Kimanzi (2021) and Lyn & Sahid (2021) observed that students generally achieved a competent understanding of economic principles, which supports the current study's finding of a good level of economic literacy among students at the University of Cape Coast. The consistency with these studies underscores the effectiveness of economic education programmes in equipping students with a solid foundation in economic concepts.

In contrast, the findings of Ismail et al. (2019) present a different perspective, as their study indicated that undergraduate students' economic literacy levels were below 50 percent, reflecting a lower level of economic

understanding. This discrepancy suggests that there may be significant variations in economic literacy levels across different institutions or educational contexts. Factors contributing to such differences could include variations in curriculum design, teaching methodologies, or student engagement with economic studies.

The contrasting results highlight the importance of considering contextual factors when evaluating economic literacy levels. While the current study and previous research show positive outcomes in economic literacy, Ismail et al.' (2019) findings call attention to the need for further investigation into the factors that may contribute to lower literacy levels in some educational settings. Understanding these factors can help in developing targeted interventions to enhance economic literacy more uniformly across different contexts.

Programme of Study and Undergraduate Education Students' Level of Economic Literacy

The first research hypothesis aimed to investigate how the programme of study influenced the level of economic literacy among undergraduate education students. The study revealed a significant influence of programme of study on economic literacy, indicating that different academic programmes have varying impacts on students' economic understanding.

Programmes focused on economics or business-related fields are designed to impart in-depth knowledge and skills related to economic theory, principles, and applications. The curricula of these programmes are specifically structured to provide a thorough understanding of economic concepts, leading to enhanced economic literacy. The results highlight the considerable effect of programme

choice on economic literacy, suggesting that specialised content and emphasis within these programmes contribute significantly to students' comprehension of economic issues.

This finding aligns with the Social Learning Theory by Bandura (1977), which posits that individuals learn by observing and interacting with their environment. In this context, students in economics or related fields may benefit from greater exposure to economic content through coursework, lectures, and peer interactions. This exposure can facilitate a deeper understanding of economic concepts and principles, thereby improving their economic literacy.

The study's findings corroborate previous research indicating that programme of study influences economic literacy (Gerek & Kurt, 2008; Koshal et al., 2008; Kimanzi, 2021). These studies consistently show that students in economics or business-related programmes tend to achieve higher levels of economic literacy. However, this study contrasts with Nunoo and Afful's (2015) findings, which suggested that programme of study had no significant impact on economic literacy, attributing more influence to factors such as education level and cumulative grade point average. This discrepancy highlights the complexity of factors influencing economic literacy and underscores the need for further research to explore how various elements, including programme content and structure, contribute to students' economic understanding.

Engagement in Co-Curricular Activities and Undergraduate Education Students' Level of Economic Literacy

The study investigated whether participation in co-curricular activities influences economic literacy among undergraduate education students. Contrary to expectations, the results showed that participation in co-curricular activities did not have a statistically significant influence on students' economic literacy.

This finding challenges the theoretical assumptions of Social Cognitive Theory (Bandura, 1977), which posits that learning occurs through observation, imitation, and social interaction. From this perspective, co-curricular activities such as economic clubs, debates, workshops, or business competitions are expected to provide environments for experiential and peer-to-peer learning. These settings often offer practical applications of economic knowledge, which reinforces formal instruction and improve critical thinking relevant to economic literacy.

The insignificant result suggests that either the nature of students' co-curricular involvement was not aligned with economic learning, or that participation levels were too minimal to yield a meaningful impact. For instance, if students were more engaged in social, religious, or sports-related activities that did not integrate economic concepts, the potential benefits to economic literacy would be limited.

This finding contrasts with previous studies that identified a positive relationship between co-curricular engagement and economic literacy (e.g., Nunoo & Afful, 2015; Dilek et al., 2019; Acquah & Partey, 2014), which highlighted the value of extracurricular learning opportunities in enhancing

students' knowledge in economics. However, it is more consistent with the findings of Huzayran (2023), who reported that activities such as attending economic conferences or following media-based economic content had no influence on students' economic literacy. This may be attributed to differences in the types, quality, or intensity of co-curricular activities available to students across different contexts.

Overall, the result emphasises the importance of alignment of co-curricular opportunities with academic performance. For co-curricular activities to serve as effective tools for economic learning, they must be structured to reinforce basic economic concepts and provide real-world applications. Without this alignment, such activities may have limited or even unintended influence on students' economic literacy.

Career Aspiration and Undergraduate Education Students' Level of Economic Literacy

In addressing Research Hypothesis Three, the study explored whether students' career aspirations influence their level of economic literacy. The regression analysis revealed that career aspiration was not statistically significant ($B = -0.003$, $p = .607$). The negative coefficient, though very small and statistically insignificant, suggests that students who aspired to certain careers may have slightly lower levels of economic literacy.

This finding challenge expectations rooted in Social Cognitive Theory, particularly the component of self-efficacy, which emphasizes how beliefs about one's capabilities influence motivation and learning outcomes (Bandura, 1977). The theory would suggest that students aspiring to careers closely tied to economics such as economist, financial analyst, teacher, accountant would be more motivated to understand economic concepts and therefore exhibit higher economic literacy. These students might be expected to actively seek knowledge, enrol in relevant courses, or engage in learning activities that support their career goals.

However, the absence of a significant influence in this study indicates that career aspirations alone may not be sufficient to influence economic literacy among undergraduate education students. Several factors could explain this outcome. Students may not perceive a strong connection between their future careers and the economic knowledge being taught.

This finding contrasts with prior research that has found a positive relationship between career aspirations and economic literacy. For example, Mwaura (2019) and Magaji et al. (2023) reported that students with aspirations in economics related fields tend to invest more effort in acquiring relevant knowledge. These studies suggest that clear career goals can shape learning behaviour and outcomes. On the other hand, the results of this study align more closely with Sapra et al. (2021), who found no significant relationship between

career aspirations and academic performance among undergraduates, pointing to other factors such as academic environment or individual learning styles.

Ultimately, the findings suggest that while career aspiration may reflect students' interests or goals, it does not independently drive economic literacy in this study. This calls for a more nuanced understanding of how aspirations translate into learning outcomes and highlights the need for career guidance and curriculum alignment to ensure that students recognise and pursue the knowledge necessary for their future professions.

Prior Exposure to Economics Courses and Undergraduate Education Students' Level of Economic Literacy

The study examined whether prior exposure to economics at the senior high school (SHS) level significantly influences undergraduate students' economic literacy. The results showed that prior exposure to economics did not significantly influence economic literacy ($B = 0.000$, $p = .993$). The regression coefficient was nearly zero, indicating no measurable difference in economic literacy scores between students who studied economics in SHS and those who did not.

This finding challenge common assumptions and appears to contradict Social Cognitive Theory (Bandura, 1977), which posits that previous learning experiences particularly those involving observation, interaction, and structured instruction contribute meaningfully to future learning outcomes. One would

expect that students with prior exposure to economics would have developed foundational knowledge of the basic economic concepts thereby facilitating more advanced learning and higher economic literacy.

The content taught in SHS may not align well with the economic literacy test used in this study, reducing the relevance and applicability of what students previously learned. University level economics may require a different set of cognitive and analytical skills than those typically emphasised in high school settings.

This finding contrasts with previous studies such as those by Cameron and Lim (2011) and Edwards (2000), who found that students with prior knowledge of economics achieved higher levels of economic literacy. These researchers argued that early exposure builds foundational skills and confidence that support advanced learning. However, the present study is more aligned with the findings of Smith and Edwards (2007) and Hashim and Kayode (2013), who reported that prior study of economics in high school had no significant impact on students' academic performance in the university.

While prior exposure may provide a potential advantage, it does not guarantee improved understanding unless it is coupled with effective teaching, curriculum alignment, and student engagement. It is also important to consider that other factors such as programme of study, teaching methods, or motivation may play a more decisive role in shaping students' economic literacy than prior course exposure alone.

In summary, this study's findings suggest that prior exposure to economics at the SHS level, in isolation, does not significantly influence economic literacy. This calls for a critical evaluation of SHS economics curricula and teaching practices, as well as closer coordination between secondary and tertiary economics education to ensure meaningful learning progression.

The Interaction Effect of Prior Exposure to Economics Courses and Programme of Study on Students' Economic Literacy Level.

The study revealed no significant interaction effect between prior exposure to economics courses and programme of study on economic literacy. This indicates that the combined influence of these two factors did not have a substantial influence on students' economic literacy levels. This finding suggests that economic literacy is more resilient to the influences of prior academic experiences and programme-specific instruction than anticipated. Alternatively, it could indicate that other factors, such as individual differences in learning styles, motivations, or external experiences, play a more significant role in shaping economic literacy. Furthermore, the lack of interaction effect raises questions about the effectiveness of programme-specific instruction in economics. If prior exposure to economic courses and programme of study do not interact to influence economic literacy as supported by Koshal et al. (2008), it may be necessary to reexamine the curriculum and instructional methods used in these programmes to ensure they are adequately addressing learners' needs in promoting economic literacy. Overall, the absence of a significant interaction effect highlights the complexity of economic literacy development.

Chapter Summary

The current study examined undergraduate education students' economic literacy. The findings show that undergraduate education students' level of economic literacy was good, with economics students achieving the highest level of economic literacy whilst social studies students achieved the lowest level of economic literacy. The study also found that there was a significant influence between undergraduate students' programme of study on their economic literacy. There was no significant influence between engagement in co-curricular activities, career aspiration and prior exposure to economics courses on their economic literacy. There was, however, no interaction effect between undergraduate education students' programme of study and prior exposure to economics courses on students' economic literacy. The next chapter provides the summary, conclusions and recommendations.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Overview

This chapter provides a summary of the study on economic literacy among undergraduate education students at the University of Cape Coast. It details the research methods employed for data collection and analysis, which were essential in addressing the research question and testing the hypotheses. The chapter presents the key findings derived from the study and draws conclusions based on these results. Recommendations are offered for policy formulation and practical implementation to enhance economic literacy. Additionally, the chapter outlines suggestions for future research to further explore and address identified gaps.

Summary of the Study

This study seeks to investigate the level of economic literacy among undergraduate education students at the University of Cape Coast, amidst concerns about their perceived economic literacy, with the ultimate goal of providing actionable insights to inform policy decisions that enhance economic literacy among undergraduate education students. The objectives were to assess their economic literacy and examine the influence of career aspirations, programme of study, engagement in co-curricular activities, and prior exposure to economics courses on their economic literacy. To achieve these objectives, the following research question and hypotheses guided the exploration of the issues.

Research Question

1. What is the level of economic literacy among undergraduate education students at the University of Cape Coast?

Research Hypotheses

1. H_0 : There is no statistically significant influence of undergraduate education students' programme of study on their level of economic literacy.
2. H_0 : There is no statistically significant influence of undergraduate education students' engagement in co-curricular activities on their level of economic literacy.
3. H_0 : There is no statistically significant influence of career aspiration of undergraduate education students on their level of economic literacy level.
4. H_0 : There is no statistically significant influence of undergraduate education students' prior exposure to economics courses on their level of economic literacy.
5. H_0 : There is no significant interaction between prior exposure to economics courses and programme of study on students' level of economic literacy.

The study drew knowledge and support from the theory of performance (Elger, 2007) and Bandura's Social Cognitive Theory (Bandura, 1977). These theories assisted in examining the level of economic literacy and establishing the influence of factors influencing economic literacy among undergraduate education students at the University of Cape Coast.

Rooted in positivism, the study utilised a descriptive cross-sectional research design. The population comprised all undergraduate education students in the Department of Business and Social Sciences Education for the 2022-2023 academic year. Respondents were selected using a multiple sampling techniques, with a final sample size of 285 students. To assess economic literacy, the study adapted the TEL developed by Kimanzi (2021), and the EFQ was used to explore the factors influencing economic literacy. The initial reliability coefficients for the TEL and EFQ were 0.73 and 0.728, respectively. After data collection, the reliability coefficients were updated to 0.80 and 0.762. Both descriptive and inferential statistics were employed to analyse demographic information and address the research questions and hypotheses of the study.

Key Findings

The following findings emerged from a thorough analysis and investigation using the proposed methods.

1. The overall level of economic literacy among undergraduate education students in the Department of Business and Social Sciences was good. Students in the economics, accounting, geography, and management programmes performed better than those in the social studies programmes. Notably, final-year economics students achieved the highest scores, while third-year social studies students had the lowest level of economic literacy. Additionally, the students demonstrated a stronger understanding of macroeconomics compared to microeconomics.

2. The study revealed that the programme of study significantly influenced undergraduate education students' level of economic literacy. Specifically, students enrolled in economics programmes demonstrated the highest level of economic literacy, followed by those in accounting, geography, and management programmes.
3. The study found that engagement in co-curricular activities did not influence undergraduate education students' level of economic literacy.
4. The study revealed that career aspirations did not significantly influence undergraduate education students' level of economic literacy.
5. The study revealed that prior exposure to economics courses did not significantly influence undergraduate education students' level of economic literacy.
6. The study identified no significant interaction effect between undergraduate education students' programme of study and prior exposure to economics courses on their level of economic literacy.

Conclusions

The study enhanced the understanding of economic literacy levels among undergraduate education students at the University of Cape Coast, revealing several key insights into the factors that influence economic comprehension. One notable finding is that students generally exhibited better performance in macroeconomics compared to microeconomics. This disparity may be attributed to the broader appeal and more intuitive nature of macroeconomic concepts, such as national income, inflation, and unemployment. To address this, it is essential to

employ innovative teaching methods for microeconomics to improve student understanding and ensure a balanced grasp of both macroeconomic and microeconomic principles.

The programme of study significantly affects economic literacy level, as evidenced by economics and accounting students achieving the highest scores. This finding underscores the importance of incorporating economics content within various programmes to enhance students' economic understanding.

Co-curricular activities did not significantly influence students' economic literacy levels. Although such activities can serve as valuable supplementary learning experiences, their impact appears to depend on the nature and relevance of the activities to the subject matter. Institutions may consider redesigning or promoting more economics-focused co-curricular programmes to make them more impactful. The findings further point out that efforts to promote economic literacy among students should focus on targeted interventions that leverage the most effective co-curricular activities. For example, institutions may consider allocating resources to support the organisation of economics and business-related workshops.

Career aspirations were not found to significantly influence economic literacy. While it was expected that students with career aspirations in fields like economics, accounting, or financial analysis would result in higher economic literacy, the findings suggest that career aspirations alone do not influence . This suggests that integrating economic education into all programmes and providing

career counselling could help students connect their career goals with their economic knowledge, thereby increasing their understanding in economics.

Moreover, prior exposure to economics at the senior high school level did not significantly influence students' economic literacy scores. This result points to possible gaps in the quality or depth of economics education at the high school level, or misalignment between high school content and university level expectations. It also emphasizes the importance of providing adequate foundational support to all undergraduate education students, regardless of their prior exposure.

Overall, the study suggests that while only one factor was statistically significant, the insights gained provide a foundation for rethinking how economics is taught, supported, and integrated across various educational levels and contexts. The findings also underscore the need for targeted interventions and curriculum reforms aimed at promoting economic literacy as a critical skill for all undergraduate education students.

Recommendations

The findings and conclusions suggest several crucial measures. Accordingly, the following recommendations are offered in light of the findings and conclusions.

1. Lecturers who teach microeconomics should make the teaching of the topics more practical to promote deeper understanding in undergraduate education students.

2. Educational policymakers and curriculum developers should ensure that economics taught at the SHS level provides a strong foundation that aligns with university standards.
3. The university through the various departments should organise co-curricular activities that can complement formal coursework and provide additional opportunities for undergraduate education students to enhance their level of economic literacy.
4. Career counselling sessions should be provided by lecturers and counsellors to help undergraduate education students understand the relevance of economics in various career paths and motivate them to improve their economic literacy. Additionally, workshops featuring professionals from diverse careers should be organized to demonstrate how economic principles are applied in their work and highlight the benefits of economic literacy.

Suggestions for Further Research

Based on the findings and conclusions of the study, the following recommendations for future research have been made.

1. Other studies should analyse the influence of other factors on students' economic literacy.
2. Future studies should incorporate qualitative methodologies, such as interviews or focus groups, to complement quantitative findings.
3. Other studies should broaden the study context to provide an eclectic understanding of students' economic literacy.



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APPENDIX A

TEST OF ECONOMIC LITERACY

Duration: 20 minutes

This test is to determine the level of economic literacy. The test consists of 15 questions in total. There are 8 questions on Macroeconomics and 7 questions on Microeconomics. For each question, please choose the correct option by circling it.

GENERAL MACROECONOMICS KNOWLEDGE

1. In Ghana, who determines what goods and services should be produced?

- A. Producers and government
- B. Consumers and government
- C. Producers, consumers, and government
- D. Don't Know.

2. An increase from 5% to 8% in the interest rates charged by banks would most likely encourage:

- A. Businesses to invest.
- B. People to purchase housing.
- C. People to save money.
- D. Don't Know.

3. If Ghana stopped importing automobiles from Germany, who would be most likely to benefit?

- A. Automobile manufacturers in Germany
- B. Consumers in Ghana
- C. Automobile manufacturers in Ghana
- D. Don't Know.

4. When governments supply products and services, these products and services usually benefit:

- A. More than one person at a time whether they have paid for it or not.
- B. Only the people who pay for these products and services.
- C. Business at the expense of consumers.
- D. Don't Know.

5. When the government's expenditures for a year are greater than its revenue for that year, the difference is known as:

- A. The national debt.
- B. A budget deficit.
- C. A budget surplus.
- D. Don't Know.

6. Which of the following are most likely to be helped by inflation?

- A. People living on a fixed income.
- B. Banks that loaned money at a fixed rate of interest.
- C. People who borrowed money at a fixed rate of interest.
- D. Don't Know.

7. Which of the following would be most likely to accelerate innovation in the computer industry?

- A. Placing a tax on all new inventions in the computer industry.
- B. Increasing government regulation of the computer industry.
- C. Investing in more research and development in the computer industry.
- D. Don't Know.

8. The Ghana Stock Exchange is an example of an institution within our economy that exists to help people achieve their economic goals. The existence of this institution:

- A. Results in an increase in the price of stocks.
- B. Brings people who want to buy stocks together with those who want to sell stocks.
- C. Helps predict stock earnings.
- D. Don't Know.

KNOWLEDGE OF MICROECONOMICS

9. For most people, the largest portion of their personal income comes from:

- A. Wages and salaries from their jobs.
- B. Interest from stocks and bonds they own.
- C. Rent paid to them from property they own.
- D. Don't Know.

10. If the price of beef doubled and the price of poultry stayed the same, people would most likely buy:

- A. More poultry and less beef.
- B. Less poultry and more beef.
- C. The same amount of poultry and beef.
- D. Don't Know.

11. If Rent Control Department sets a maximum amount landlords can charge in rent, what is the most likely result?

- A. There will be more apartments available than people want to rent.
- B. There will be fewer apartments available than people want to rent.
- C. The number of apartments available will be equal to the number of people that want to rent.
- D. Don't Know.

12. Ghana grows fruits and vegetables and Botswana produces beef. If Ghana voluntarily trades fruits and vegetables in exchange for Botswana beef,

- A. Both Ghana and Botswana benefit from the trade.
- B. Both Ghana and Botswana lose from the trade.
- C. Ghana benefits and Botswana loses from the trade.
- D. Don't Know.

13. The resources used in the production of goods and services are limited, so society must:

- A. Make choices about how to use resources.
- B. Try to obtain additional resources.
- C. Reduce their use of resources.

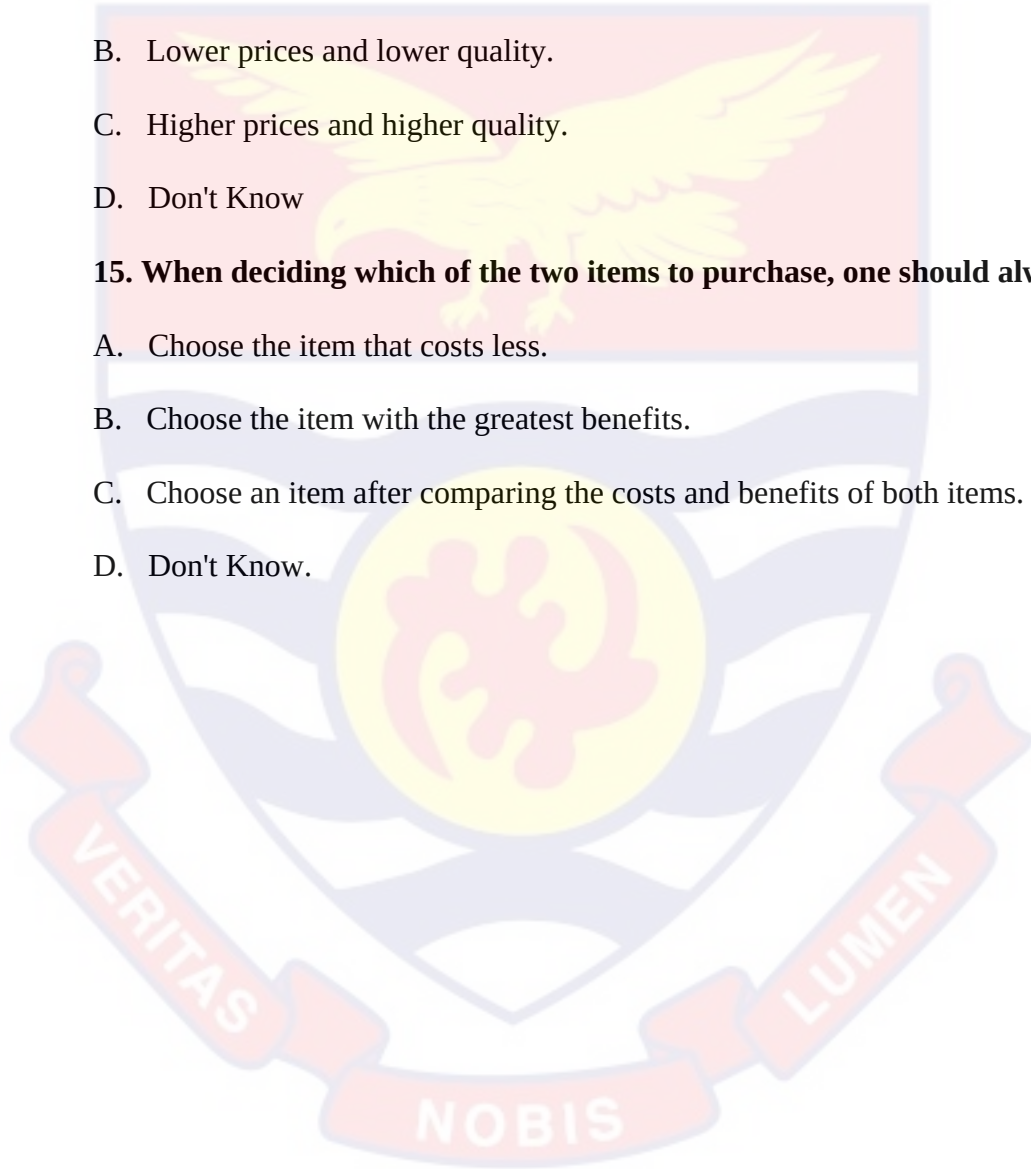
D. Don't Know.

14. A large increase in the number of fast-food restaurants in a community is most likely to result in:

- A. Lower prices and higher quality.
- B. Lower prices and lower quality.
- C. Higher prices and higher quality.
- D. Don't Know

15. When deciding which of the two items to purchase, one should always:

- A. Choose the item that costs less.
- B. Choose the item with the greatest benefits.
- C. Choose an item after comparing the costs and benefits of both items.
- D. Don't Know.



APPENDIX B

QUESTIONNAIRE

UNIVERSITY OF CAPE COAST

FACULTY OF HUMANITIES AND SOCIAL SCIENCES EDUCATION

DEPARTMENT OF BUSINESS AND SOCIAL SCIENCES EDUCATION

QUESTIONNAIRE FOR STUDENTS

Dear Respondent,

This questionnaire is to help the researcher to collect data on the level of Economic literacy among undergraduate students. The study is solely for academic purposes. Please, kindly provide sincere and objective responses to the questions. I assure you that any information provided will be treated as strictly confidential.

Section A: Demography of Respondents

Please put a check mark (✓) where appropriate in the box corresponding to your choice concerning each statement.

1. Sex: Male [☐] Female [☐]

2. Age:

3. What is your level of education?

Level 100 [☐] Level 200 [☐] Level 300 [☐] Level 400 [☐]

4. Programme of study

Bachelor of Education Social Sciences (Economics) [☐]

Bachelor of Education Social Sciences (Geography) [☐]

Bachelor of Education (Management) [☐]

Bachelor of Education (Accounting) []

Bachelor of Education (Social Studies) []

Section B: Other determinants

1. What is your career aspiration?

Accountant []

Teacher []

Economist []

Financial Analyst []

Policy Analyst []

Market researcher []

Others, please specify.....

2. Why do you intend to take this career path?

.....

.....

.....

.....

.....

3. Do you engage in any co-curricular activity that contributes to your knowledge of Economics?

Economics/business related workshops []

Economics/business related conference []

Business clubs []

Debate clubs []

Others, specify.....

4. Did you read Economics at the Senior High School?

Yes []

No []

APPENDIX C

ETHICAL CLEARANCE LETTER



APPENDIX D

INTRODUCTORY LETTER



APPENDIX E

CONSENT FORM

Dear Respondent,

I am conducting a research study and would like to ask for your assistance. If you are willing to participate, it would take about 20-30 minutes of your time. I would be much grateful if you could complete the attached instruments, which seeks to assess the economic literacy among undergraduate education students at the University of Cape Coast, Ghana.

You can be confident that the responses you provide will remain anonymous, and that no personal information about you will be used in any way.

Please sign the space provided below.

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Thank You