

Positive learner attitude towards the study of career technology and motivational strategies at Nyanyano Kakraba District Assembly Junior High School, Gomoa East District, Ghana

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ABSTRACT

Motivation is the driving force behind learning, strongly influencing learner engagement and outcomes. Educational research identifies multiple strategies that teachers can use to foster motivation and positive attitudes towards learning. The purpose of this study was to determine the reasons why learners had low interest in Career Technology lessons and to identify how motivational strategies could be used to enhance their attitudes towards learning the subject. The study was guided by Lev Vygotsky's sociocultural theory of development and Deci and Ryan's self-determination theory. The study adopted a quantitative approach and a cyclical action research design. The researchers employed the simple random sampling technique to select the study subjects. Out of fifty learners, thirty-five were chosen as the sample size for the study. The researchers then used observation and a questionnaire to collect data from the subjects, thereby aiding the success of the study. SPSS (20) was used to analyse the quantitative data. From the analyses, the researchers discovered that the teachers of the subject in the institution lacked basic motivational strategies, and the few who were privy to them seldom used them. This contributed to low interest among learners. Since this study is action research, the researchers introduced a number of motivational strategies to the learners during the Career Technology lessons, where a significant improvement was recognised in the attitudes of learners in the course. Learners fell in love with the interventions and eventually showed great interest in the course. As a result, the researchers suggested that stakeholders uphold the deliberate introduction of the suggested motivational strategies, which include gamification, support from teachers, and practical sessions, among others.

Keywords: Career Technology Lessons, Learners' Attitude, Learners' Low Interest, Motivational Strategies

I. INTRODUCTION

Career technology education (CTE) plays a major role in shaping the future of learners, particularly at the Junior High School level, where they are introduced to various vocational skills that can lay the foundation for their professional growth in the future (Wang et al., 2023). Career Technology (CT) is one such subject in the Junior High School (JHS) curriculum that is part of what is taught in Ghana. However, learners' disposition towards learning Career Technology has not always been favourable (Ackon, 2017). Different studies have highlighted the role of motivation in shaping the performance and engagement of learners in a variety of courses, including CT (Earl, 2024; Bustamante-Mora et al., 2023).

Career Technology (CT) is globally being recognised as a foundation for economic and human capital development. Countries worldwide are investing in CT to bridge the skill gaps and promote innovation (United Nations Educational, Scientific and Cultural Organisation [UNESCO], 2023). For instance, in many advanced countries, CT programmes are being integrated with STEM (Science, Technology, Engineering, and Mathematics) education to provide learners with a holistic skill set relevant to modern industries (European Commission, 2022). However, challenges persist in fostering learner engagement and positive attitudes towards these critical subjects.

The need for effective CTE courses is especially acute in Sub-Saharan Africa, given the young population and the necessity for practical skills to stimulate industrialisation and reduce unemployment (African Union Commission [AUC], 2015). Despite this, many nations in the region, including Ghana, face challenges such as insufficient resources, outdated curriculum, and a prevalent academic-oriented mindset that frequently undervalues Technical-vocational training (Majgaard & Mingat, 2012). This might result in a lack of enthusiasm and negative attitudes among learners toward disciplines like Career Technology, which are critical for their future livelihoods and national growth. A pattern of poor interest and unfavourable attitudes toward Career Technology has been identified among Basic Seven learners at Nyanyano Kakraba District Assembly (D/A) Junior High School (JHS), reflecting a larger trend seen in many Ghanaian schools. Lipstein and Renninger (2007) noted that this is serious since learners' lack of interest and excitement in this subject may result in missed opportunities to gain skills important for personal and professional growth. Deci and Ryan (2008) believed that motivation was important in improving learner engagement and academic achievement. As a result, it is critical to explore ways to improve learners' attitudes toward Career Technology using various motivational strategies. Goal setting, rewards, and the use of technology are examples of motivational strategies that have been shown to increase learners' interest and involvement in learning activities (Deci & Ryan, 2000; Means et al., 2010; Locke & Latham, 2002). Teachers can use these strategies to create a more interactive and motivating learning environment, changing learners' attitudes toward the subject. This research sought to determine how motivational methods can influence the attitude of Basic Seven learners at Nyanyano Kakraba D/A JHS towards the study of Career Technology.

1.1 Statement of the Problem

In spite of numerous government programmes and interventions at improving the quality of basic education, the teaching and learning Career Technology at Nyanyano Kakraba D/A JHS has been difficult due to the lack of motivation and enthusiasm among Basic Seven learners. Also, despite the fact that Career Technology (CT) is critical in providing learners with skills relevant to their future occupations (Wang et al., 2023), learners have a negative attitude about the topic, which leads to poor marks and dissatisfaction. It is especially alarming since few learners are interested in obtaining such abilities, denying them the opportunity to gain competencies that are not only vital for their growth but also for contributing to the labour market in the next years (Ackon, 2017). There are several explanations for learners' negative views, such as the belief that CT is less significant than other courses. Additionally, the teaching approaches used in CT sessions may be unengaging and inadequately rigorous to encourage active learner participation. According to Zimmerman (2000), when learners feel unmotivated, they lose interest in the learning process, resulting in poor performance.

Previous study by Ackon (2017) found that Junior High School learners in Cape Coast had negative attitudes toward vocational subjects, owing to societal stigma and a lack of career assistance. Similarly, Brunner et al. (2019) highlighted how poorly organized curricula and a lack of compelling pedagogies reduce learners' motivation for skill-based learning. Despite these findings, very few studies have focused on the specific learning contexts and motivational problems encountered in CT courses at the basic school level, leaving a contextual gap in understanding how targeted interventions can improve learner attitudes.

This study sought to establish effective motivational strategies that teachers may use to improve the attitude and interest of Basic Seven learners in CT. It is important to investigate how measures such as reward, goal setting, involvement, and interactive learning might be used to improve learners' attitudes and perceptions of the subject. However, no empirical research in this area has been conducted at Nyanyano Kakraba D/A JHS. Informed by these gaps, this study seeks to investigate the subject of improving learners' educational experiences. Finally, the study is expected to offer a better understanding of how motivation might be strategically used to improve learning outcomes in CT education at the junior high school level.

1.2 Research Questions

The study was guided by the following questions.

- i. What are the current attitudes of Basic Seven learners towards the study of Career Technology at Nyanyano Kakraba D/A J.H.S.?
- ii. What motivational strategies can be applied to improve the attitude of Basic Seven learners towards the study of Career Technology?
- iii. How do the implemented motivational strategies impact the attitude and academic performance of the learners?

II. LITERATURE REVIEW

2.1 Theoretical Review

This study was framed by Lev Vygotsky's sociocultural development and self-determination theories. According to Lev Vygotsky's sociocultural development theory, knowledge is developed through communication, interaction, and group activities (Adams et al., 2024). With language and mediated discourse serving as cultural transmission tools, this viewpoint believes that learners' dynamic interactions with their surroundings alter their cognitive architecture (Radil et al., 2023). Learners absorb information through social interactions with more experienced classmates or instructors in the Zone of Proximal Development (ZPD) (Zhang & Ma, 2023). Modern educational psychology builds on Vygotsky's ideas by emphasizing learner autonomy and technology-mediated collaboration (Cullen & Oppenheimer, 2024). To encourage learner autonomy, modern "learning experience" models, for example, use scaffolding and feedback to shift the emphasis from static content to dynamic learning processes (Vieriu & Petrea, 2025). Current research shows that learning settings that promote autonomy and are linked by Vygotsky's "relatedness" and "mastery" principles greatly improve motivation, engagement, and accomplishment (Cullen & Oppenheimer, 2024; Howard et al., 2021).

The study was also backed by Deci and Ryan's (2000) self-determination theory (SDT), which proposes that intrinsic motivation is enhanced when people perceive autonomy, competence, and relatedness. The finding that learners responded most positively to strategies that entailed choice and meaningful involvement (choosing projects and experiencing success through simplified complex tasks) emphasizes the relevance of autonomy and competence in driving learning behaviour. The positive shift in learner conduct following the interventions demonstrates what SDT refers to as "internalisation," in which extrinsic motivators transform into intrinsic value for the learner. In conclusion, Career Technology education should be conceived through a sociocultural lens as a culturally appropriate, socially mediated experience that uses language, tools, and group projects to promote internalised motivation and positive learning attitudes.

2.2 Empirical Review

2.2.1 Career Technology

Career Technology is critical to a country's socioeconomic and political development since it provides learners with necessary industrial and technology skills. Career Technology is a body of knowledge derived from Pre-Technical skills and Home-Economics that aims to describe and analyse concepts, ideas, and experiences that provide opportunities for the creation of commodities and services (National Council for Curriculum and Assessment [NaCCA], 2021). Career Technology develops each learner's unique potential by encouraging creativity, innovation, critical thinking, and graphic expression. The programme aspires to generate persons who are technologically inclined, digitally savvy, and problem solvers capable of making meaningful contributions to society. By fostering talent and offering job-relevant training, Career Technology supports national development and prepares learners to be responsible local and global citizens, while expanding employment opportunities across various professions (NaCCA, 2021).

Career and technical education (CTE), also known as Vocational-Technical Education, aims to provide learners with employable skills (Bardoe et al., 2023). As economies throughout the world demand 21st century skills (such as STEM, digital literacy, and problem-solving), interest in CTE is resurging. International studies have observed the integration of technology in CTE as well as a shift toward competency-based, industry-aligned courses. Governments in Sub-Saharan Africa are beginning to make significant measures to enhance CTE. To bridge skill shortages, Ghana has integrated STEM and vocational topics into her curriculum and implemented a free Senior High School (SHS) programme (Adams et al., 2024). Ghana alone has around 700 senior high and technical-vocational schools. To meet labour market demands, significant investments have been made in STEM and TVET. Policies prioritize vocational education as a driver of economic growth; for example, Ghana's Educational Strategic Plan (2018-2030) seeks to improve Technical-vocational training in order to reduce unemployment (Bardoe et al., 2023).

Despite these endeavours, research shows that Ghana's CTE system continues to face challenges such as continued underfunding, out-of-date teaching tools, and a sociocultural bias that favours academic over vocational tracks (Adams et al., 2024). Furthermore, many learners regard CT as a "fallback option" rather than a viable professional path, which the study discovered undermines motivation and engagement from the start. Furthermore, discrepancies in rural and urban infrastructure, such as limited access to equipment, tools, or ICT laboratories, significantly impede the subject's practical components (Bardoe et al., 2023). These challenges demonstrate that in order to change attitudes about Career Technology in Ghana, systemic investment and policy realignment, as well as motivating approaches to elevate the subject's stature and accessibility, are required. However, the policy direction in Ghana and other contexts is clear: the curriculum is being modernized and brought in line with global trends in vocational education to boost learners' interest and chances in Career Technology areas (OECD, 2021).

2.2.2 Motivation and Learning Attitudes

Motivation is that which causes or forces and drives learning; has a major impact on learner engagement and outcomes (Khoshnoodifar et al., 2023). According to contemporary educational research, learning for interest, personal value, or intrinsic motivation consistently predicts higher achievement and well-being than merely extrinsic rewards (Liu et al., 2024; Radil et al., 2023). Even though these findings are strong, some research suggests that extrinsic motivators can be beneficial when combined with intrinsic ones, especially for learners who initially show little interest or come from under-resourced environments with little opportunity for self-directed learning (Howard et al., 2021). This suggests that relying just on one technique may be less effective than a hybrid strategy that properly blends both extrinsic and intrinsic strategies.

According to a major meta-analysis, intrinsic motivation and identified-regulation (personal value) are the best indicators of academic achievement and perseverance, unlike extrinsic incentives, which have a smaller impact on performance and may even jeopardize well-being. In contrast, motivation, or a lack of motivation, is linked to poor performance and dropout. The learner's attitude toward learning tasks is directly related. According to research, a positive attitude toward learning is associated with more effort and higher outcomes (Liu et al., 2024). For example, junior high school learners who expressed "active" learning attitudes outscored their peers who had apathetic attitudes toward examinations (Khoshnoodifar et al., 2023). Researchers also note that boosting emotional engagement and intrinsic motivation results in improved performance in blended and tech-rich learning contexts (Vieriu & Petrea, 2025).

However, it is important to emphasise that the majority of these findings come from quite well-resourced settings. Applying these motivational ideas in low-income and resource-constrained settings, such as Ghana's rural schools, can be problematic due to overcrowded classrooms, insufficient teaching resources, and teacher shortages. Thus, even well-established strategies must be adapted to local situations to be effective. Finally, motivation and attitude interaction strategies that raise learners' sense of competence and significance are more likely to promote positive attitudes and academic accomplishment (Howard et al., 2021).

2.2.3 Motivational Strategies

Education research has discovered a number of strategies that teachers can use to boost motivation and positive attitudes toward learning. Key categories include:

Intrinsic Motivation: Encourage curiosity, mastery, and interest in learning. When learners encounter tasks that are naturally interesting or meaningful, their engagement and performance improve (Howard et al., 2021). Interventions include connecting knowledge to learners' interests, presenting appropriate challenges, and facilitating self-directed projects. Empirical data suggest that learners with stronger intrinsic drive are more persistent and successful (Liu et al., 2024).

Autonomy and Choice: Giving learners control over their education (for example, topic choices, timing, or activities) boosts internal motivation. Autonomy, according to Self-Determination Theory, is a fundamental necessity for motivation, and research shows that policies that promote autonomy have demonstrable benefits. Allowing learners to select attendance alternatives or tasks, for example, has been shown to boost attendance, effort, and mastery (Howard et al., 2021). Meta-analyses show that autonomy gives "positive motivational, well-being, and educational benefits," such as greater interest and performance (Cullen & Oppenheimer, 2024).

Project-Based Learning (PBL): Curriculum based on long-term, real-world projects that engage learners in hands-on inquiry. Learners work together to learn and solve challenges throughout time, which naturally generates intrinsic interest and relevance (Zhang & Ma, 2023). A recent meta-analysis of PBL (66 research) found that, when compared to traditional education, PBL significantly improves learner learning outcomes such as academic success, higher-order thinking, and affective attitudes (Zhang & Ma, 2023).

Gamification: Including game design features in lessons (points, badges, levels, story, and challenges) can make learning more engaging and motivating (Khoshnoodifar et al., 2023). According to empirical studies, gamification frequently results in slight to moderate boosts in motivation and learning outcomes. For example, learners in a gamified statistics course exhibited more positive views towards difficult subjects and felt more competent (Vieriu & Petrea, 2025). Meta-analyses suggest that gamified learning "can improve cognitive, motivational, and behavioural outcomes" (Khoshnoodifar et al., 2023).

Teacher-Learner Relationships and Classroom Environment: Motivation is heavily influenced by the classroom's social environment. According to studies, helpful, caring relationships between teachers and learners that acknowledge their feelings and foster a sense of belonging are "almost foundational to learner motivation" (Radil et al., 2023). Teachers' excitement, sensitivity, and high standards transmit to learners the importance of learning. A positive classroom culture, in which mistakes are accepted as part of the learning process, decreases anxiety and encourages risk-taking (Howard et al., 2021).

Process-Oriented (formative) Feedback: Feedback that focuses on the learning process and strategies rather than final grades encourages motivation and self-regulation. According to research, timely, relevant feedback helps learners understand how to improve and builds confidence. When teachers emphasize learners' efforts and strategies rather than their outcomes, they are more likely to remain motivated and develop a growth mindset (Howard et al., 2021).

Technology Integration in Education: The use of digital technologies and artificial intelligence (AI) can transform instruction and capture learners' attention. Artificial intelligence-powered platforms (such as adaptive tutoring systems or personalized learning apps) tailor content to each learner's level, enhancing proficiency and engagement (Vieriu & Petrea, 2025). Virtual labs, simulations, and educational games can help make abstract career-technology concepts more concrete and exciting. Early research on learners who use AI technologies indicates greater self-efficacy and efficiency (Vieriu & Petrea, 2025).

2.2.4 Challenges and Contextual Considerations

There are significant challenges to implementing these motivational strategies in Ghana and other low-income contexts. Many schools have limited resources, including basic infrastructure, materials, and equipment (Adams et al., 2024). Ghanaian vocational schools usually have inadequate facilities and a shortage of trained teachers (Bardoe et al., 2023). According to surveys, textbooks, laboratories, and ICT resources are still in insufficient supply (Ghana Ministry of Education, 2023). Such shortcomings make it difficult to use technology-rich or hands-on approaches like project-based learning and gamification. Large class sizes and demanding curricula also limit individual attention. Teachers in basic schools may have 50 or more learners and limited time, making it impossible to provide personalised options or comments.

Cultural and societal issues limit motivational attempts. Ghana has a diverse ethnic and linguistic population; therefore, curriculum and examples must be culturally suitable to interest learners. Traditional attitudes can undervalue vocational education, deterring learners and families from pursuing Career Technology seriously. Gender norms have an impact on motivation as well. Motivational strategies must be culturally sensitive, such as connecting Career Technology projects to local livelihoods and actively encouraging underrepresented groups. Finally, educator capacity remains a challenge. Many rural/basic school teachers have had insufficient training in modern pedagogy and technology. Ambitious projects (such as PBL or AI technologies) may fail if they are not supported and developed professionally. In conclusion, even evidence-based motivating strategies must be adjusted to low-resource, diverse situations.

2.2.5 Synthesis and Implications

The literature emphasizes that developing a positive attitude toward Career Technology (CT) learning requires an integrated strategy based on sociocultural pedagogy and motivational strategies. Vygotsky's theory states that learning is most effective when it is social, scaffolded, and meaningful (Adams et al., 2024). In actuality, this requires transforming CT teaching into active, collaborative experiences that capitalize on learners' interests and community context. Research shows that strategies that encourage intrinsic interest, learner choice, supportive relationships, and formative feedback regularly boost motivation and outcomes (Howard et al., 2021; Radil et al., 2023). There is strong evidence that project- and game-based strategies increase performance and attitudes (Khoshnoodifar et al., 2023; Zhang & Ma, 2023). However, resource and cultural constraints in Ghana's basic schools need adaptive implementation. Future research should look into how to tailor these methods, such as low-tech PBL models, culturally relevant gamification, and peer-led scaffolding, to local needs. Practitioners should prioritize developing a learner-centered teaching environment while innovating within constraints. Educators can achieve their goal of more positively inspired, engaged learners in Ghana's Career Technology programmes by aligning motivational strategies with sociocultural principles and contextual realities.

III. METHODOLOGY

3.1 Research Paradigm and Design

The study adopted a positivist paradigm, perceiving reality as objective and measurable using quantitative approaches (Creswell & Creswell, 2018). In line with this worldview, data collection devices were designed to elicit participants' perspectives while minimising researchers' bias. Thus, the researchers used a quantitative method for this study (Cohen et al., 2018), quantifying participants' replies. The study used a cyclical action research approach, which involves iterative cycles of planning, acting, observing, and reflecting (Kemmis et al., 2014). This design is ideal for educational settings because it allows researchers to test interventions, analyse their effectiveness, and improve strategies based on real-time input (Mertler, 2020). To provide ample time for implementation and evaluation, the research is divided into three iterative cycles that last six months (October 2024 to March 2025). The study's practical

approach guarantees that learners and their co-teachers contribute to creating interventions, instilling a sense of ownership and relevance. This approach aligns with Stringer's (2014) emphasis on community involvement in action research, ensuring that solutions are contextually appropriate for Nyanyano Kakraba D/A JHS.

3.2 Study's Population, Sample and Sampling Technique

The population for this study comprised all Junior High School learners, with the accessible population being learners in Nyanyano Kakraba D/A Junior High School located in the Gomoa East District in the Central Region of Ghana. The quality of a piece of research stands or falls not only on the appropriateness of methodology and instrumentation but also on the suitability of the sampling strategy that has been adopted (Cohen et al, 2007). The simple random, a probability sampling technique, was employed to select learners from the Basic Seven classroom who formed part of the subjects of the study. The technique was chosen because it gives all subjects an equal opportunity to be part of the study group (Creswell & Creswell, 2018). Out of fifty learners, thirty-five were selected as the sample size for the study. The sample size ($n=35$) was determined using Krejcie and Morgan's (1970) table for a population of 50, ensuring a 95% confidence level and 5% margin of error.

3.3 Research Instrument

The instruments used for this study were observation and a researchers-designed questionnaire. The researchers observed the body language, reactions and other gestures of learners when it was time for Career Technology lessons. Through the observation, the researchers understood that the learners had a low interest in participating in the lessons. Meanwhile, the researchers could not tell what was absent. The questionnaire consisted of items asking for learners' experiences with the learning of Career Technology. The questionnaire was a straightforward one with both open-ended and closed-ended questions. While the closed-ended questions focused on specificity, the open-ended questions focused on identifying other possible outcomes of the study. The questionnaire dealt with questions that help address the research questions posed by the researchers for the intervention stage.

3.4 Data Collection Procedure

The researchers obtained an introductory letter from the Ghana Education Service and the appropriate authorities of the selected school to be able to conduct the study. The consents of the head of the Nyanyano Kakraba D/A JHS and relevant teachers were duly sought before the administering of the instrument. Teachers were also involved in the data collection process, in that the researchers observed the learners with the teachers and discussed their experiences together. The purpose of the study was explained to the respondents by the researchers. In this study, the researchers identified fifty learners for the study, all from the Basic Seven classroom. The researchers observed the attitude of the learners towards the study of Career Technology (CT) for the first two weeks of the internship period. During this period, the researchers saw the low interest of learners through their participation. While some of the learners skipped some CT classes, others slept during those lessons. Meanwhile, yet another group of learners did not find the lessons productive, hence declaring it a waste of time. This low interest in the lesson is a major reason the researchers sought to identify the necessary caveat. After two weeks, the researchers had set research questions and objectives to carry out the study. The research questions led the researchers to develop a questionnaire to solicit the opinions of the learners to facilitate the smooth running of the study. The researchers addressed the class on the research project they were undertaking. The researchers assured the learners that this project is aimed at helping them improve in their academics.

The researchers also instilled some confidence in the learners and assured them of utmost privacy. Afterwards, the researchers gave out the four-page questionnaire to all fifty learners. This was on a Friday. The researchers entreated the learners to endeavour to return the data collection instrument the following Monday. On Monday, only thirty-five (35) of the learners returned the instrument. This represented 70% of the accessible population and formed the analytic sample. The researchers then took the next three weeks to analyse the data received from the respondents of the questionnaire. After the period of analysis, the researchers, based on the outcomes, devised an intervention to address the problem at hand. The researchers tried out nine different motivational strategies over a period of nine weeks, one strategy for each week. The long duration was to ensure that there was enough time to critically deal with each of the strategies. Adequate time allocation increases intervention efficacy by ensuring fidelity (Durlak & DuPre, 2008) and minimising rush-induced errors (Proctor et al., 2011).

3.5 Data Analysis

The data was organised into various themes and categories based on the research questions and the purposes of the study, such that each section provided answers for each of the research questions. Prior to tabulating the questionnaire for analysis, all the items were checked. This helped the researchers to know if instructions had been followed uniformly and whether all items had been responded to. The responses to the questionnaire were then coded



in SPSS version 20 by assigning numbers to the various categories of responses for analysis. This provided a guide for the interpretation of the variables in the analysis. The data was then examined for any errors. The researchers used statistical tables, charts, percentages, and graphs to present and analyse the quantitative data.

3.6 Ethical Considerations

Concern for the protection of the participants from any adverse effects that may result from their participation in the study was addressed. Ethical clearance was obtained from the College for Distance and e-Learning (CODEL-UEW), Ghana and the Ghana Education Service (GES)- Gomoa East District before the recruitment of the participants. After obtaining the ethical approval, an introductory letter was obtained, and a request for permission was submitted to the headteacher of the Nyanyano Kakraba D/A JHS. Participants were provided with clear information on the information sheet and consent form regarding the purpose of the study. The consent was explained in the best understandable language (English) to the participants. The voluntary and confidential nature of the study was emphasised. The questionnaire was administered at a place and time that was convenient to the participants. Confidentiality was ensured by using code numbers in place of participants' names during the collection and analysis of data, and only the researchers had access to information about how names were matched with the codes.

IV. FINDINGS & DISCUSSIONS

4.1 Bio Data of the Respondents

Out of the 35 learners, five (14.29%) were males, while thirty (85.71%) of them were females. All 35 learners were in basic seven. The demographic distribution of respondents, predominantly female, aligns with the general enrolment trends observed in some basic schools in Ghana, where female learners often constitute a larger proportion in certain academic streams (GES, 2021).

4.1.1 What are the current attitudes of Basic Seven learners towards the study of Career Technology at Nyanyano Kakraba D/A JHS?

To answer the first research question, the researchers asked a few provocative questions. The table below represents the responses of the learners when the questionnaire asked for their opinions on the aspects and state of the subject.

Table 1
Aspects of the Subject

Aspect	Number
Hands-on projects	7
Technology use	12
Career exploration	8
Theory-based learning	29

From Table 1, seven (7) learners admitted that there are hands-on experiences in the subject, twelve (12) admitted that there is the use of technology in teaching the subject, eight (8) said that the subject allows them to explore their career prospects, and twenty-nine (29) said that the whole subject is predominantly theory-based.

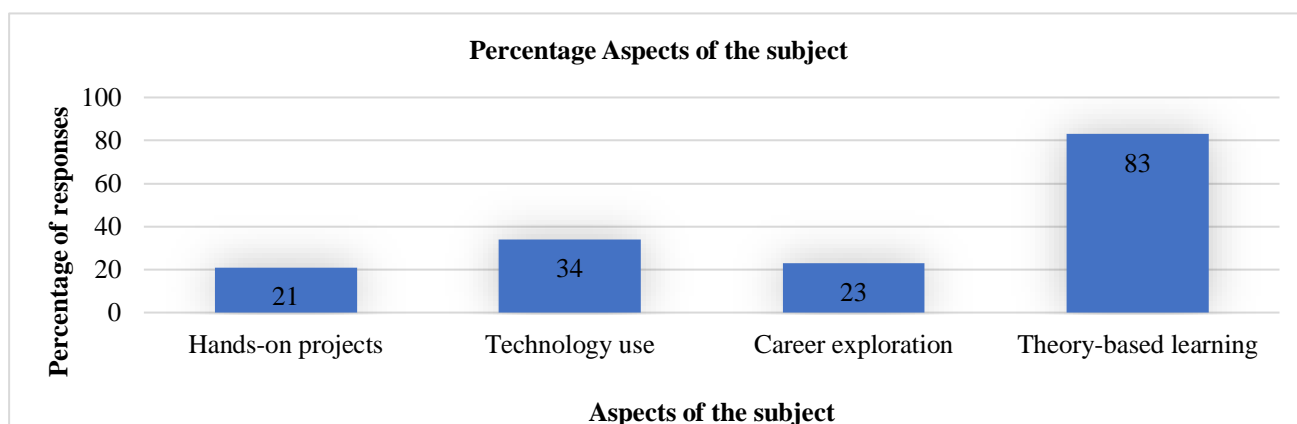


Figure 1
Bar Chart of Learners' Perceptions of Career Technology Lesson Aspects



This bar chart presents the percentage distribution of Basic Seven learners' views on Career Technology (CT) lesson components: theory-based learning (83%), technology use (34%), career exploration (23%), and hands-on projects (20%). The visual contrasts the heavy emphasis on theoretical instruction with limited practical or technological engagement. The chart underscores a significant imbalance, with theory-based learning dominating (83%) while hands-on projects (20%) and technology use (34%) remain underrepresented.

This finding indicates a strong perception among the learners that CT lessons are predominantly theoretical, with limited practical application, technology integration, or career exploration opportunities. This aligns with broader challenges in CTE education in Ghana, where resource constraints often limit the provision of hands-on activities and modern technological tools (Abedi et al., 2024). These constraints reflect Ghana's learning crisis, where only 19–25% of learners meet proficiency targets despite high enrolment rates (UNESCO IICBA, 2024).

Table 2
State of the Subject

State of the subject	Number
Course content	20
Teacher support	20
Classroom environment	5
Practical sessions	15
Fun activities	8
Easy to understand	17

From Table 2, twenty (20) learners admitted that the content of the course was good, 20 admitted that the teachers were supportive, and five (5) of them responded affirmatively that the classroom environment was conducive to the learning process. With practical sessions, 15 said they enjoyed them, while eight (8) of them said the lessons had fun activities. Finally, 17 learners said that the lessons were easy to understand.

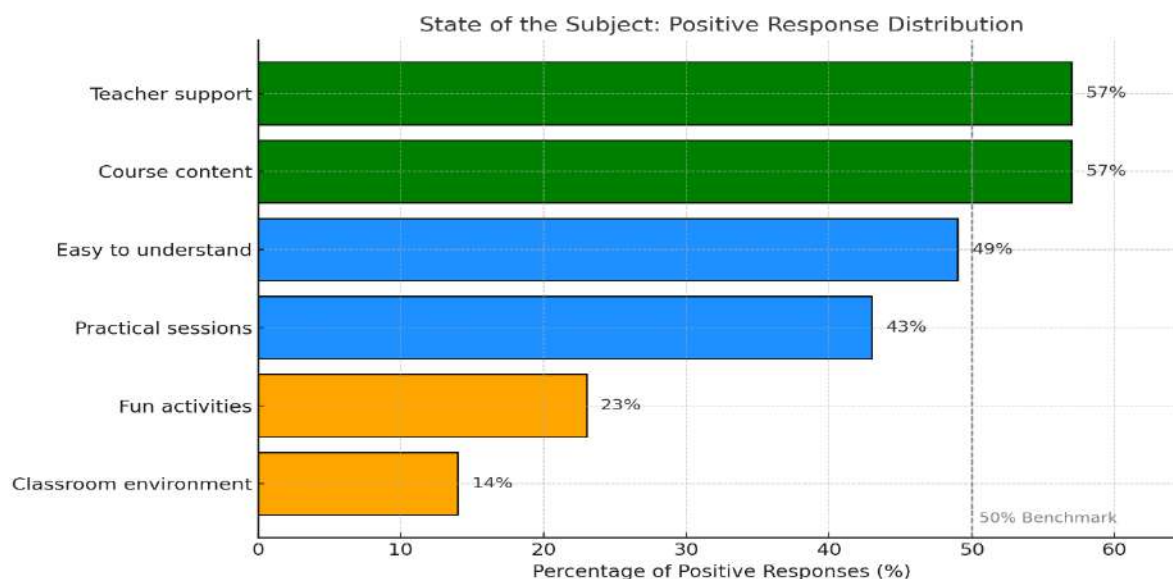


Figure 2
Clustered Bar Chart of Learner Perceptions of Career Technology Learning

Figure 2 is a horizontal bar chart that illustrates the percentage of learners (n = 35) who agreed with statements about various aspects of their Career Technology learning environment. Teacher support and course content emerged as the highest-rated factors (57%), while classroom environment was rated the lowest (14%), highlighting a 43-percentage-point gap. A visual benchmark line at 50% aids interpretation.

While a significant portion of learners found the course content good and perceived teachers as supportive, the low numbers for a conducive classroom environment, practical sessions, and fun activities suggest areas for significant improvement in pedagogical approaches. The discrepancy between the high number of learners finding the content good and the low engagement with practical and fun activities further emphasises the theoretical nature of the current instruction, which may not be appealing to all learning styles (Abedi, 2024). These constraints reflect a systemic gap

where professional development prioritises technical literacy over pedagogical innovation (Abedi, 2024), hindering practical and technology-enhanced learning.

4.1.2 What Motivational Strategies can be Applied to Improve the Attitude of Basic Seven Learners towards the Study of Career Technology?

For research question 2, the researchers analysed learner responses to identify preferred motivational strategies. The table below displays the number of learners who agreed or disagreed with specific strategies, revealing clear patterns in what drives their engagement.

Table 3
Effectiveness of Motivational Strategies

Motivational Strategy	Agree	Disagree	Total
Rewards	24	11	35
Peer support	21	14	35
Encouraged by teachers to do more	16	19	35
Allowed to make my choices	26	9	35
Complex activities are made to look like fun games	22	13	35
Activities can be easily related to real-life experiences	19	16	35
Activities are engaging and lively	5	30	35
Modern technology is used	1	34	35
Artificial intelligence is used	0	35	35

From Table 3, it is clear that out of the 35 learners who submitted their questionnaires, 24 agreed that rewards are good motivators, while eleven disagreed. On the support from peers as a motivation, 21 agreed, but 14 disagreed. 16 said that they are motivated when their teachers encourage them, while 19 disagreed with that. 26 said that they are motivated to study and work hard when they make their own choices without being forced to do so. Meanwhile, nine (9) others disagreed. When complex activities are made to look fun, it is a motivation to 22 but not to 13. Again, 19 agreed that classroom activities should be related to real-life experiences, while 16 others think otherwise. With the other forms of motivation, like activities being lively and engaging, use of modern technology, and use of artificial intelligence, a minimum of 30 learners disagreed with their relevance.

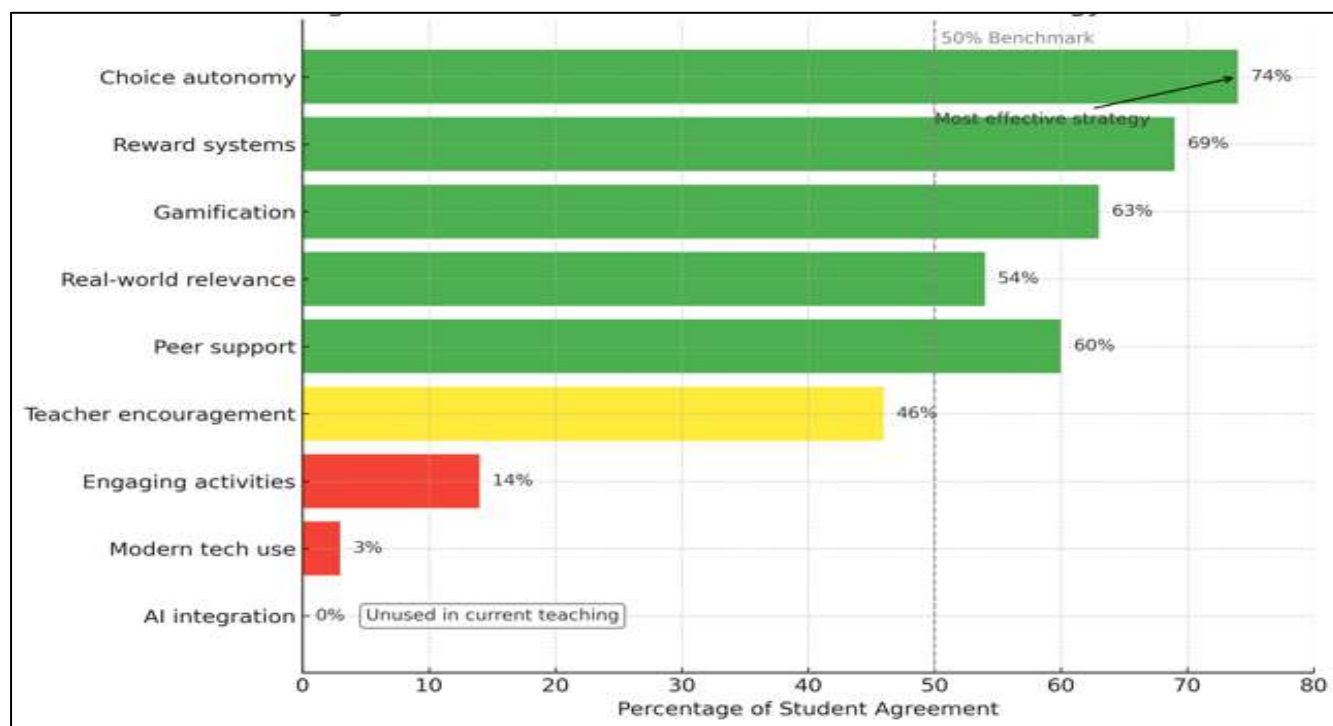


Figure 3
Clustered bar Chart of Motivational Strategy Effectiveness

The chart reveals three distinct tiers of motivational strategy effectiveness among Basic Seven learners. First, the most effective (50-74% agreement): learner choice (74%), rewards (69%), gamification (63%), peer support (60%), and real-world relevance (54%). Second, the moderately effective (30-49%): teacher encouragement (46%). Finally, the least successful (<30%) were engaging activities (14%), technology use (3%), and AI (0%).

According to the responses, the learners consider "allowing learners to make their own choices" (26 agreed) and "rewards" (24 agreed) to be the most successful motivational strategies. This is consistent with Self-Determination Theory, which emphasises autonomy and external motivators (Ryan & Deci, 2000). "Complex activities disguised as fun games" garnered strong support (22 agreed), indicating gamification's potential. In contrast, "activities are engaging and lively," "modern technology is used," and "artificial intelligence is used" obtained extremely low agreement, showing a huge gap in present teaching strategies and a lack of exposure to contemporary educational technologies. The low agreement on teacher encouragement as a motivator is particularly interesting, implying that existing teacher-learner interactions may not be effective motivators.

4.1.3 How do the Implemented Motivational Strategies Impact the Attitude and Academic Performance of the Learners?

The data results analysed in answer to study question 3 show that all of the learners' Career Technology (CT) performance improved significantly following the intervention period. The average improvement rate in learner performance, as reported through tests, exercises, and exams, was 78%. Participation improved by 100% because all learners attended class on a regular basis, contributed effectively, and recognized the relevance of CT in their academic, social, and future professional life. These had materialized because learners had more fun in the classroom, understood the overall ideology behind the study of CT, the practicality of the subject was well unveiled and introduced to the learners, and, most importantly, in terms of motivation, the learners saw the study of CT as a promising way to make a living. The significant improvements in both academic achievement (78% average improvement rate) and involvement (100% improvement) clearly illustrate the effectiveness of the motivational strategies used. This finding clearly supports the hypothesis that a lack of motivation was a significant barrier to learner engagement and accomplishment in CT, and that targeted interventions can effectively address this. The learners' enhanced enjoyment, knowledge of the subject's relevance, and perception of future career opportunities all contribute to the effectiveness of the motivational strategies.

4.2 Discussion

The findings from this study confirm that motivating strategies have an important role in improving learners' attitudes and academic performance, particularly in technical and vocational topics like Career Technology (CT). According to initial observations, Basic Seven learners at Nyanyano Kakraba D/A JHS showed little enthusiasm and passive engagement in CT lectures. However, the implementation of several motivating interventions, such as rewards, autonomy in task selection, and gamified instructional methods, resulted in a significant improvement in learner involvement and achievement.

These findings are consistent with Deci and Ryan's (2000) Self-Determination Theory (SDT), which states that intrinsic motivation is enhanced when individuals perceive autonomy, competence, and relatedness. The fact that learners responded most positively to strategies including choice and meaningful involvement (e.g., choosing projects and experiencing success with simplified complex tasks) emphasizes the importance of autonomy and competence in driving learning behaviour. The positive shift in learner behaviour following the treatments illustrates what SDT refers to as "internalisation," in which external motivators grow into intrinsic value for the learner (Deci & Ryan, 2008; Ryan & Deci, 2000).

From a sociocultural theoretical perspective, Vygotsky's (1978) idea that learning is mediated by social interactions and culturally relevant circumstances provides an explanatory framework for the treatments' success. CT became more culturally and socially significant when taught in ways that paralleled learners' daily circumstances, such as through hands-on, project-based work and real-world applications. This lends support to Vygotsky's claim that effective learning is socially constructed and scaffolded through interaction within the Zone of Proximal Development.

This study's findings on gamification and project-based learning support growing empirical studies. Dahalan et al. (2024) and Samah et al. (2022) discovered that gamified learning environments greatly increase engagement, especially in technical and vocational education. Learners in this study responded positively to classroom tasks disguised as games, showing that such strategies might transform normally uninteresting content into meaningful, stimulating experiences.

Furthermore, the incorporation of project-based learning (PBL) confirms the findings of Deng and Shi (2024) and Lee and Lee (2024), who claim that PBL improves both academic motivation and future career orientation.

Through this lens, the learners' reported increased interest in and perceived relevance of Career Technology can be linked to the use of real-world problem-solving tasks that allowed them to relate theory to practice.

The effectiveness of motivational strategies is further reinforced by constructivist learning theories, which emphasize that learners learn best when they may actively construct information through meaningful experiences (Schunk et al., 2014). Giving feedback that emphasized progress and effort rather than just outcomes encouraged a growth mindset, which is another well-documented motivator that motivates learners to continue in the face of adversity (Dweck, as cited in Ormrod, 2016).

Nonetheless, the survey identified some motivational gaps, particularly in the usage of current technology and artificial intelligence (AI), which were mostly unfamiliar to the learners. This could reflect deeper systemic issues in Ghana's basic education system, such as limited technology infrastructure and inadequate teacher training (Adams et al., 2024). While AI-enhanced instruction and immersive technologies such as AR/VR are transforming Career and Technical Education around the world (Business Insider, 2025; Supriyanto et al., 2023), their underutilization in the Philippines highlights the digital divide and the need for targeted investments in education technology.

Interestingly, teacher encouragement was not viewed as a powerful motivator, implying that educators should develop more effective interaction strategies. This is consistent with Wentzel's (2009) findings, which show that the quality of teacher-learner connections has a considerable impact on learners' motivation and classroom engagement. The difference may be due to teaching practices that are still mostly teacher-centred rather than learner-focused, limiting opportunities for relationship involvement and emotional support.

Overall, the improvement in learners' attitudes and performance, as indicated by a 78% rise in academic scores and full participation rates, indicates strategic motivation's ability to influence educational experiences. The study confirms that when learners feel relevance, are given voice and choice, and achieve success, they are more likely to interact positively with academic information. These insights are especially important in Career Technology education, where connecting classroom learning to future employment is key to learner engagement and long-term success.

V. CONCLUSION & RECOMMENDATION

5.1 Conclusion

This action research at Nyanyano Kakraba D/A Junior High School was to investigate the application of motivational strategies to improve learners' attitudes toward Career Technology. The study discovered that learners' indifference in Career Technology sessions was caused by a lack of excitement, a misconception about the subject's future value and job opportunities, and inventive teaching methods. Initial research demonstrated passive interest, with some learners skipping courses or dozing during instruction, while others saw the subject as a waste of time. However, implementing several motivational interventions resulted in significant increases in both academic achievement (78% average improvement rate) and involvement (100% improvement). These approaches included rewards, task autonomy, and gamified teaching strategies. The effectiveness of these strategies was demonstrated by learners' increased enjoyment, knowledge of the subject's relevance, and views of future career prospects. According to the study, when learners feel relevant, have a voice, and experience achievement, they are more likely to interact positively with academic knowledge.

5.2 Recommendations

Curriculum developers should try to combine informative and engaging Career Technology lessons, as well as a variety of motivational strategies, to keep learners involved in the classroom. Parents are encouraged to instil in their children a positive outlook and self-motivation, as this can result in self-directed learners in all aspects of life, including academics. Furthermore, junior high school teachers must focus on learner motivation, which is crucial to academic performance. Teachers should be the major source of help for demotivated learners, serving as mentors and counsellors to those failing academically. Finally, learners should adopt a positive attitude about all topics, recognizing their importance and become more engaged in subjects that bring real-world relevance and practical skills for their future.

The study was limited to only one school, which limits the ability to generalise the findings; thus, the study proposes employing a large number of schools to provide a more comprehensive perspective. Future research could investigate the long-term consequences of these motivational strategies on learners' career choices and professional growth. Furthermore, a qualitative method that includes in-depth interviews with both motivated and unmotivated learners may provide more thorough information about their ideas and experiences. It would also be important to investigate the role of teacher training programmes in offering effective motivational strategies to educators, particularly in resource-constrained contexts.

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