

RESEARCH ARTICLE

The Influence of Problem-Based Learning as an Emerging Instructional Strategy on Students' Drawing Achievements: The Case of Visual Arts Students at Simms Senior High School in Ashanti Region, Ghana

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Abstract

Drawing is an integral component of the Visual Art programs and has been instituted in the core subject, General Knowledge in Art (GKA), to be studied by all Visual Art students in Senior High Schools. Drawing plays a pivotal role in both students' academic performance and their professional careers as visual artists. Empirical studies have shown that drawing is becoming less of an essential fragment of the GKA subject due to inappropriate drawing experiences and the choice of precise instructional stratagems by teachers for the teaching of drawing in Senior High Schools (SHS). These issues reflect the extemporaneous drawing aptitudes of the students in the SHSs, from which Simms SHS is not exempted. This study adopted action and descriptive methods to identify and discourse the challenges with the existing instructional strategies used for the teaching and learning of drawing at Simms SHS; analyzed the strengths and weaknesses in student's ability to draw accurately; employed Problem-Based (PBL) Scaffolding instruction as an appropriate strategy for drawing, and evaluate the potency of the PBL strategy on students' acquisition of theoretical knowledge and empirical dexterity in the drawing. The convenience and simple random techniques were adopted, sampling 33 respondents (including 30 Year Two students, two teachers teaching the Year Two Visual Art classes, and the Head of Department (HOD) for the Visual Art Department in the school). Data were collected using classroom observations, structured interviews, and a questionnaire administered to both students and teachers. The study identified challenges that included the unavailability of a practical studio, inadequate drawing tools, materials, and equipment for drawing,

students' lukewarm attitude towards the drawing lessons, and teacher-centered instructional strategy deemed not suitable for teaching an activity-based subject like drawing. The evaluation of the PBL Scaffolding Instruction established an increase in theoretical knowledge and experiential aptitudes of students in drawings done by Year Two Visual Art students at Simms SHS. Based on the findings, it is recommended that Visual Arts teachers adopt PBL Scaffolding Instruction to improve students' understanding and drawing skills. The Ghana Education Service should consider making Drawing a core Visual Arts subject to allow for more focused instruction. Regular supervision and teacher training are also needed to support effective teaching strategies and improve learning outcomes.

Introduction

The Visual Art program is a skill-acquisition program studied in Senior High Schools that gives job opportunities to its learners. Edusei (2004) addresses that this is the rationale for adding the program to the Senior High School Curriculum. The program has two components: thus Two-Dimensional Art (2D), which constitutes Picture Making, Textiles, and Graphic Design, and Three-Dimensional Art (3D) also embraces Basketry, Ceramics, Jewellery, Leatherwork, and Sculpture; all of these constitute eight elective subjects (Ministry of Education (MoE), 2010). According to the MoE description, all Senior High Schools offering the Visual Art program are required to select two (2-D and 3-D) out of the eight elective subjects, in addition to the General Knowledge in Art (GKA) subject, which is a principal subject in the Visual Art program. The GKA is a core subject that is integrated with various components, including Art History, Appreciation, and General Art, along with applied skills to support Visual Art students with the required information, assistance, and proficiencies. The approaches that the program offers to its learners in support of national development (Evans-Solomon & Opoku-Asare, 2011). The practical component, also known as drawing, studied in GKA, aims to equip Visual Art students with the knowledge of the practical nature of all elective subjects, whether 2D or 3D, within the Visual Arts program (Curriculum Research and Development Division (CRDD), 2013).

Drawing is said to be the origin of the Visual Art program, dating back to the prehistoric era, and Adom (2016) explains that prehistoric humans used drawing as a medium of communication. Onoja (2014) also opines that drawing is the only way a Visual Art student can understand the nature of the area of study. Drawing, in the GKA syllabus, is designed in a mode to provide a suitable foundation for students who will advance their education in art and also train other students who may wish to dismiss their education after their SHS with the essential knowledge and skills to enable them to practice as self-employed professionals such as Graphic Designers, Textiles Designers, Painters, Jewelers, Sculptors, among others. Furthermore, the CRDD report (2013) emphasizes that drawing is a prerequisite skill needed to pass the West African Senior School Certificate Examination (WASSCE) for the Visual Art program, as well as being established in any of the delineated professions. Empirical studies have shown that the practice of drawing is fading out gradually in the Visual Art program (Alu, 2011; Chief Examiner's Report, 2013; Agyarkoh, Appiah, & Banfo, (2024). This is reflected in the drawing performance of Visual Art students in the GKA WASSCE across the years (Alu, 2011). However, Alu (2011) and Asare-Forjour (2009) specified that the situation is partly attributed to the impropriety of the instructional strategy employed by teachers teaching drawing in the Visual Art program and partly to students' inability to practice their drawing skills. Alu (2011) asserted that

drawing in the Visual Arts program is losing its strength, attributable to inappropriate instructional strategies adopted in SHS by Visual Arts teachers, from which Simms SHS is not exempt. In addition, the GKA syllabus entreats all GKA teachers to make the teaching and learning of the practical component (drawing) activity-based or learner-centered, where students are required to learn by themselves while the teacher acts as a guide on the side, facilitating the learning process and not vice versa (CRDD, 2013); but this is not transpiring in the Visual Art classroom.

The study aims to provide a solution to the declining standards of drawing by adopting and adapting an evidence-based, scientifically proven instructional strategy in the Simms SHS Visual Art program. Hence, the researcher adopted Problem-based Learning to introduce the concept of drawing to Year Two Visual Art students at Simms SHS, guided by the following objectives:

1. To identify and discuss the existing instructional strategies employed for the teaching and learning of drawing at Simms Senior High School in the Ashanti Region, Ghana
2. To propose and evaluate Problem-Based Learning as an instructional strategy for teaching and learning drawing at Simms Senior High School

The motivation for this research stems from several key factors. The researcher has over four years of experience working as a Graphic Design teacher in the Visual Arts Department at Simms Senior High School and as a Visual Art examiner at the West African Examination Council (WAEC) in Kumasi since 2013. According to the Visual Arts Chief Examiner's Report from WAEC (1999-2016), the researcher, through observation, confirmed that Visual Arts students indeed have difficulty in drawing. Their drawing challenges are most evident in the GKA Practical Paper 3A project work, where many students produce Still Life pieces that resemble Imaginative, Memory, or even Abstract drawings. Additionally, the preliminary drawing works for the Visual Art elective subjects project, which are mandatory, are poorly implemented.

The observed difficulty students face in drawing inspired the researcher to investigate the root causes of this helplessness and to explore practical solutions that align with the rationale behind offering vocational programs, such as Visual Arts, at the secondary school level (Edusei, 2004; CRDD, 2013). The secondary school curriculum includes Visual Art to equip learners with the knowledge and skills needed to become self-employed professionals, such as textile designers, graphic designers, painters, and jewelers, after graduation, thereby creating job opportunities for them. According to CRDD (2013), the General Knowledge in Art, aside from Art History, Appreciation, and General Art, includes a practical component—drawing—which helps students apply and reinforce what they learn in each of the elective subjects. Although drawing is important and is described as the root of all the Visual Art elective subjects, being 2-dimensional or 3-dimensional, Kozbelt & Kantrowitz (2019). (CRDD, 2013) explains that the most important basic knowledge and skill required for undertaking any of the Visual Arts elective subjects is 'Drawing.' Students' inability to draw significantly affects their WASSCE elective results and, as a result, renders a number of them 'useless' as they are unable to practice the electives learned in school even though the rationale of the Visual Arts program is not just about passing their WASSCE, but also to give them a professional career for the betterment of their life (Edusei, 2004).

The drawing was a serious challenge for the students in the sense that the (Chief Examiner's Report, 1999 and 2000) unveiled the fact that the student's inability to show enough evidence of their final project executed through drawing (preliminary sketches) prevented them from meeting the pass mark for the West Africa Senior Secondary Certificate Examination (WASSCE) elective subjects. (Alu,

2011) attested to it, and the 2013 results confirmed that there was no improvement in students' drawing skills, as was stated on Page 486: GKA paper 3A and Page 502: Graphic Design and Leatherwork subjects. The Visual Arts Chief Examiner reported that the drawings presented by the Visual Arts students are generally of low quality, with difficulty in shading and painting (Chief Examiner's Report, 2013). Numerous researchers also emphasize that Visual Arts students perform poorly in drawing because teachers use unsuitable instructional strategies when teaching drawing as a topic in the GKA subject. During the observation, the researcher identified several challenges that contributed to this problem, aside from the inappropriate instructional strategy used by the teachers handling drawing.

Thus, since drawing according to the GKA syllabus was to be studied within a period as the designed scheme planned by the teachers, immediately after that period is over, it is not considered much, and this is to be studied in the second year, first semester. After which, other topics must follow, a few of which involve drawing. By the time students reach the final year, many of them may have forgotten the skill and struggle to accomplish anything meaningful. Most SHS in Ghana, which Simms SHS' Visual Art Department, do not own any studio, hence making the teaching of the practical areas very uncomfortable and challenging. Students often use the traditional seating arrangement method for a drawing lesson, which is deemed inappropriate. Most students do not use the appropriate drawing tools for the exercise due to a lack of supervision, thereby making them use any tool they lay their hands on to do anything. For example, a student may use a drawing pencil, such as an HB or 2H, to draw and shade simultaneously. The researcher also observed that teachers did not guide Visual Arts students on how to use other shading media, such as crayons, acrylic paint, or poster colors, to render an artwork. Teachers delivered theoretical lessons but did not guide students on how to apply tonal values during shading or how to use various shading techniques such as hatching and cross-hatching. As a result, many students attempt smudging but lack the skill to execute it properly or as expected. The most frequent drawing work seen is Still-Life drawing. Teachers will arrange the objects on a table, ask the students to draw without any eye-hand coordination practices and instruct the class representative to collect and submit the drawings for marking without proper supervision. As a result, some students ended up doing the work on behalf of their peers, while others did not participate in the ongoing project at all.

Therefore, all of the above explains the researcher's interest in employing Problem-Based Learning (PBL) as a suitable Instructional Strategy for the teaching and learning of drawing at Simms Senior High School. The intention of this research is not only to enable the students to pass their WASSCE elective subjects but since the PBL Instructional Strategy is student-centered and according to Trilling & Fadel (2009), it is the best strategy that enables students to be useful to themselves and Lei (2010) adds that it gives students an in-depth understanding of the knowledge learned and develop a transferable skill as this helps them in building up their confidence to apply the acquired knowledge to a new situation. The students are encouraged to learn independently, share ideas as a team, brainstorm, and solve problems collaboratively. At the same time, the instructor/teacher supervises, guides, and assists learners until they can create meaningful and useful projects independently (Nasaza, 2016).

Research Gaps

In the context of Visual Arts education, particularly within the General Knowledge in Art (GKA) program in Ghana, drawing remains a fundamental component (Ministry of Education (MoE), 2010). However, students often struggle with acquiring and applying the necessary skills in drawing effectively. While traditional teacher-centered methods are still dominant, there is limited integration

of modern, learner-centered strategies such as Problem-Based Learning (PBL) in addressing these drawing challenges. Problem-based Learning is a learner-centered approach that facilitates research, integrates theory with practice, and encourages the application of course content to explore and resolve clearly defined problems (Doyle, 2012).

As a top educational strategy, PBL supports the development of both knowledge and life skills, enabling students to address real-world challenges (Dole, Bloom, & Doss, 2017). Within a PBL environment, students take ownership of their Learning by discovering necessary knowledge through meaningful collaboration and exploration, while the teacher assumes the role of a facilitator (Wyness & Dalton, 2018). PBL principles align with the GKA syllabus, which mandates that teachers guide, assist, and motivate students, allowing for their individual and group-based engagement (CRDD, 2014). A key element of PBL is its emphasis on knowledge transfer, encouraging students to apply what they have learned to various contexts and personal experiences (Rosinski & Peebles, 2012). This objective corresponds directly with the goals of the Visual Arts curriculum. To support the effective implementation of PBL in drawing instruction, educators incorporated Scaffolding Instruction. Scaffolding enables teachers to design activities that help students bridge gaps in their knowledge and skill sets (Soares & Vannest, 2013), providing a structure that enhances their instruction in a project-based learning (PBL) setting. It promotes deeper understanding by providing guided support that learners gradually shed as they gain confidence and independence (Tiantong & Teemuangsai, 2013; Kreber, 2013).

Building on the work of Ge, Law, and Huang (2016), educators structure the PBL process using Scaffolding Instruction into three phases: Planning, Implementation, and Assessment. In the planning phase, the teacher introduces a “driving question” that defines the problem students must solve, thus setting the learning trajectory (Mihardi, Harahap, & Sani, 2013). During the implementation phase, the teacher acts as a guide, focusing on facilitating content exploration, sustaining student motivation, and encouraging collaborative knowledge construction (Ge, Law, and Huang, 2016). Students spend a significant amount of their time working independently or in small groups (Dunlosky & Rawson, 2013). The assessment phase in a PBL context is not limited to summative evaluation. Larmer, Mergendoller, and Boss (2015) emphasize that assessment should begin with the introduction of the problem and continue throughout the project. Thus, this study addresses the gap in instructional practice by employing Problem-Based Learning supported by Scaffolding Instruction to enhance students’ drawing skills at Simms Senior High School’s Visual Arts program. It proposes that moving beyond conventional teaching methods to learner-centered strategies can empower students to overcome their drawing challenges more effectively.

Literature Review

Senior High School Visual Art Program and the concept of drawing

Gannaway (2010) explains that curriculum developers designed the Visual Art program to equip students with a range of vocational skills that prepare them for various careers, making it a career-focused program. According to Asare-Bediako (2016) and Gannaway (2010), students studying this program at the SHS, apart from students sitting for the WASSCE to attain the qualification to further their education, are also trained to get the opportunity to practice their area of specialization as the profession provides. Biney (2018) states that educators make General Knowledge in Art (GKA) a compulsory subject for all Visual Arts students and incorporate drawing, which is considered the bedrock of the Visual Arts program, into the GKA curriculum. Adinyira (2012) stipulated that drawing as a topic in the GKA subject is designed to enrich students with the necessary skills and knowledge in

drawing, as well as the attitudes that the Visual Art program promotes for individual and national development. Drawing, according to McCarthy (2012), is described as a language of its own. Based on this, McCarthy interpreted drawing as an aid to thinking and a tool for solving problems. Kozbelt & Kantrowitz (2019): The importance of drawing as the root of all Visual Art subjects and based on the discussion, drawing forms the foundation of the Visual Art program. Therefore, Alu (2011) argued that educators and stakeholders must closely examine the teaching and learning of drawing to eliminate challenges that may lead to poor academic and job-related performance. Research has shown that the strategy employed in the teaching and learning of drawing does not yield suitable results, contributing to students' poor performance in exams and denying them the opportunity to specialize in their subject area after completing the program (Kozbelt & Kantrowitz, 2019). Alu (2011) also emphasizes that a poor standard of drawing is a result of the unsuitable instructional strategies employed by the teachers teaching the drawing content in the GKA subject. According to Alu (2011), the strategies employed by teachers deny students the opportunity to express themselves creatively, resulting in difficulties for Visual Art students when drawing. Teachers usually arrange objects and ask students to draw without proper training or supervision, and even monitor how the students draw the objects, the medium used, and other aspects. The Chief's Examiners' Report confirmed this challenge in their 1999 and 2000 reports, and the same in 2013 (Chief Examiner's Report, 2013). It is, however, very necessary to address the instructional strategies employed in the teaching and learning of drawing.

The Rationale for Studying Drawing in the Visual Art Program

According to the General Knowledge in Art syllabus, the following are the reasons for studying Drawing:

1. It is the root of all the Visual Art elective subjects, and according to Hetland (2013), it enables Visual Artists the means to think, explore, record, reflect, experiment, collect, teach, and, in effect, help accomplish design tasks.
2. It is used as a problem-solving tool (Kozbelt & Kantrowitz, 2019).
3. Serves as an evidence checker in designing; this is why idea development is compulsory for all Visual Art students by WAEC standards when executing any of the elective subjects' projects. It is through that those teachers and examiners can understand the students' concepts or ideas behind the artwork produced (CRDD, 2013; Dorn et al., 2014).

These are the more reasons why Drawing must be taught well at the SHS for the students to have an in-depth understanding of the Drawing concept to produce meaningful works. Research has confirmed that the instructional strategy employed in the teaching and learning of Drawing is not effective and has resulted in poor performance in Visual Art students' elective practical WASSCE examination. Also, several Visual Art students become unproductive after completing the program. The researcher, therefore, deems it necessary to address the instructional strategies employed in the teaching and learning of drawing to help students overcome the challenges they face.

Problem-Based Learning

Problem-based learning is a learner-centered approach that facilitates research, the integration of theory into practice, and the application of course content to discover and provide suggestions for solutions to a specifically defined problem (Doyle, 2012). Problem-based learning (PBL) is also considered the top educational strategy that helps students acquire knowledge and life skills applicable

to solving real-world problems (Dole, Bloom, & Doss, 2017). In the PBL environment, students take responsibility for their learning by actively collaborating with peers to discover the knowledge they need in meaningful and applicable ways. At the same time, the teacher facilitates the process (Wyness & Dalton, 2018). The value of problem-based learning in learning for sustainability: Undergraduate accounting student perspectives. *Journal of Accounting Education*, 45, 1-19. as the GKA syllabus requires. According to Rosinski & Peeples (2012), one key component of problem-based learning is the act of students being able to reflect or apply what they have learned in other situations (transfer of knowledge) and how they will apply it in their personal lives, which is the hallmark of the Visual Arts program (CRDD, 2014). Therefore, the study aimed to employ Problem-Based Learning (PBL) as an instructional strategy in the teaching and learning of drawing, a vital component of the Visual Arts program. The General Knowledge in Art (GKA) syllabus stresses that, for the students to obtain the needed knowledge and skills in drawing in the Visual Arts program, the teachers must serve as facilitators to motivate, assist, and guide their students in various ways as they encourage and allow them to work in groups and on individual bases in the teaching and learning process.

For effective and efficient work done using Problem-Based Learning as an instructional strategy for teaching and learning drawing, the Scaffolding Instruction was adopted, as this approach enables teachers to design activities that provide sufficient Scaffolding to help students overcome any gaps in their knowledge and skills. According to Soares & Vannest (2013), Scaffolding helps shape the way students relate in a PBL environment by providing additional structure to their learning. According to Tiantong & Teemuangsai (2013), Scaffolding Instruction is a learning approach that is provided during the learning process to encourage a more profound understanding in students. Kreber (2013) suggests that students can manage their learning as they work continuously, with the teacher gradually withdrawing from the learning process.

Theoretical Framework – PBL Scaffolding Instruction

Planning, Implementation, and Assessment of the Problem-Based Scaffolded Instruction

Ge, Law, & Huang (2016) argue that the PBL process, facilitated by Scaffolding Instruction, follows three phases: the Planning phase, the Implementation phase, and the Assessment phase. These three phases have been adopted and adapted for this study, as shown in Figure 1 below.

The General Context of PBL

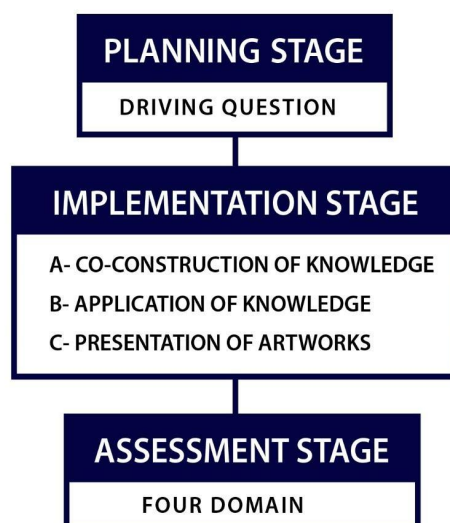


Figure 1. Source adopted and adapted from the PBL Scaffolding process and the Four Domains of Ge, Law, & Huang (2016)

The planning stage in the PBL classroom is where the teacher initiates a lesson centered on a "driving question," which prompts students to answer by solving a problem (Mihardi, Harahap, & Sani, 2013). At the implementation stage in the PBL Scaffolding classroom, teachers adopt a guiding role while simultaneously attending to many different aspects of the school (Ge, Law, & Huang, 2016). The teacher has the most significant responsibility, which primarily relates to managing their students by keeping their focus on the content, supporting them in co-constructing knowledge, and maintaining student motivation through generating good discussions. Students are allowed to spend the majority of their time working independently or in small groups (Dunlosky & Rawson, 2013). Larmer, Mergendoller, and Boss (2015) emphasize that educators should begin assessing student academic performance in PBL from the first day they introduce the problem and continue until they review the final artifact. Barrett (2015) argues that teachers should avoid designing assessments solely based on students' learning outcomes, specifically summative assessments that occur at or near the end of a learning period. Instead, assessments should align with the ongoing learning process, happening continuously throughout the instructional period, a practice known as formative assessment.

METHODS

The researcher employed a qualitative research approach for the study. According to Kohlbacher (2006), qualitative research focuses on the interpretation of findings, allowing researchers to gain an in-depth understanding of underlying reasons, opinions, and motivations. This approach helps uncover the true meanings of educational challenges and contributes to the development of more effective strategies (Wyse, 2012). Within this qualitative framework, action research was adopted as a method to identify challenges in the existing instructional strategies used in teaching and learning drawing at Simms SHS. Action research, as noted by Groundwater-Smith and Mockler (2016), enables teachers and educational practitioners to explore and improve their practices. Sam (2017) explains that this study employed action research to analyze the strengths and weaknesses of current teaching strategies regarding students' ability to draw accurately and to implement interventions that address the declining standards of drawing at Simms SHS. In addition, Mbogo and Muturi (2014) employed the descriptive research method to provide a detailed account of the situation as it naturally occurs. It

enabled the study to examine the nature of existing instructional strategies critically, provide an accurate explanation of the proposed Problem-Based Learning Scaffolding Instruction (PBL-SI), and describe its application within the selected school context.

Participants in the Study

The study employed convenience and simple random sampling techniques to select a sample size of 33 respondents; students were sampled based on their availability for the study. However, the sample comprised two (2) teachers teaching drawing in the Year Two Visual Art classes, the Head of the Department for the Visual Art program, and 30 Year Two Visual Art students, with 15 students each from the Year Two Visual Art classes (2V1 and 2V2) respectively as presented in Table 1.0 below:

Accessible Population	Total
2V1 students	15
2V2 students	15
Teacher	2
HOD	1
Grand Total	33

Table 1. Source Field Work, 2017

Survey Instruments

Due to the nature of the study, the participant-as-observer method was used to personally observe the teaching and learning activities of drawing in the Year Two Visual Art classroom. This enabled a critical study of the lesson notes prepared on drawing, learning outcomes, teachers' and students' attitudes, and the mode of assessment. It also gave an accurate description of the instructional strategies that are employed to teach and learn drawing by the two teachers at Simms Senior High School. Primary data was collected through a face-to-face interview to find precise answers on the instructional strategies used for teaching and learning drawing in the Visual Art Department, specifically the Year Two classroom at Simms SHS. The survey activities for the study lasted for 12 weeks, which was equivalent to an academic term of a calendar year.

Due to the nature of the study, the participant-as-observer method was used to closely observe the teaching and learning of drawing in the Year Two Visual Art classroom. This enabled a critical examination of lesson notes, learning outcomes, classroom attitudes, and assessment methods. It also

provided insight into the instructional strategies used by the two teachers at Simms Senior High School. Primary data was collected through face-to-face interviews to gather detailed information on the strategies used in the Visual Art Department. The survey activities spanned 12 weeks, equivalent to one academic term.

Ethical clearance was ensured by obtaining informed consent from all participants, assuring confidentiality, and allowing voluntary participation. For data analysis, thematic analysis was employed to identify patterns and insights from the observational notes and interview transcripts, aligning them with the research objectives.

Findings

Existing instructional strategies employed for the teaching and learning of drawing at Simms Senior High School

The researcher observed that the classroom activities were primarily instructor-led; the students perceived the teacher as a sage on stage. The Visual Arts teachers primarily used demonstration and Direct instruction methods to teach drawing. The participant-observer method was employed, and the primary data collected through the interview revealed that students are *often left to complete their drawing work with little to no assistance from the instructor*.

In most lessons, teachers leave the classroom and have the class prefects collect students' drawing books (sketchpads) and submit them once students finish their classwork. The researcher observed that soon after the teacher left, some students continued working while others disrupted the class or fell asleep. Others sit without taking part, while some try to do the work for others as a favor, and many more do the same.

Teaching and Learning

1. Institutional and Instructional Challenges:

- **Lack of Teaching Resources and Facilities:** Teachers cited the absence of a well-equipped studio and insufficient resources as significant barriers to effective instruction in the practical components of the Visual Arts curriculum. This limitation impeded their ability to demonstrate and guide students through essential drawing exercises.
- **Lack of Supervision:** The HOD admitted that no consistent supervision occurred during lessons. The HOD justified this by trusting that teachers knew what was best for students. However, the lack of oversight led to teachers missing out on accountability and pedagogical support.

These factors collectively hindered the effective delivery of the practical aspects of the Visual Arts curriculum, which are crucial for skill acquisition and performance improvement in drawing.

2. Pedagogical Approach and Learner Engagement

Despite the drawing component being inherently activity-based and requiring student-centered strategies (CRDD, 2014), the classroom observations revealed a predominant use of teacher-centered instructional approaches. The following are some of the implications:

- **Seating Arrangements and Classroom Setup:** Both observed classrooms utilized traditional, lecture-style seating arrangements, which are not conducive to activity-based learning. Rose and Rammer (2009) argue that such arrangements do not support effective engagement in practical lessons. They emphasize the importance of seating activity-based subjects, such as drawing.
- **Limited Instructional:** Although teachers provided students with comprehensive notes on drawing, they focused narrowly on still-life drawing, using only the mass-shading technique and pencils as the sole medium. This neglect of other drawing forms, shading techniques, and media restricted students' creative exploration and holistic understanding of drawing.
- **Students' Attitudes during Drawing Lessons:** The duration allotted on the timetable and the scheme of work prepared by the teachers for the term display inadequacy for the effective teaching and learning of drawing, particularly in classrooms with traditional rows and columns seating arrangements used for activity-based topics like drawing. They contributed to teachers giving drawing assignments to students, while a few sat diligently to do the work. Some students, however, were just disturbing the class, while others seemed to be sleeping, and some sat without participating. Meanwhile, others tried to do the work for others as a favor, and many more.

Teachers' Attitudes during Drawing Lessons: Observations also indicated that teachers mostly attended to only a selected group of students, the 'good ones,' during practical lessons. This selective engagement made other students feel neglected, which lowered their interest, participation, and attendance in class. As a result, overall performance in drawing declined among the students.

Assessment

- a. The researcher observed that the teachers did not adhere to defined criteria for assessing the drawings produced by the students. The teacher evaluated the drawings carefully and awarded marks based on their aesthetic qualities.
- b. The study reveals evidence of inadequate supervision by teachers during drawing lessons in the classroom. Teachers either leave the classrooms after giving students a practical exercise or assist only a few students, which makes the others feel unloved and kills their interest in drawing. All these, in the end, prevented students from acquiring the requisite knowledge and skills for accurate drawing.

Strengths of the Instructional Strategy

- a. Students followed instructions from the classroom.

- b. In each classroom, approximately 30% of the students were consistently present and had their sketchpads and pencils ready to work.

Weaknesses of the Instructional Strategy

- a. Unavailability of a practical studio, lack of TLMs, inadequate drawing tools, materials, and drawing equipment, students' lukewarm attitude towards the drawing lessons, congestion in the classroom, and inadequate time to teach the drawing subject: all these impacted negatively on teachers' ability to effectively teach drawing and students ability to acquire the requisite knowledge and skills in drawing.
- b. There was considerable pressure on the practical lessons, as the duration of the times allotted in the timetable and the scheme of work designed by the teachers was not adequate for the practical nature of drawing to be effectively taught and learned by students.
- c. The researcher observed that in terms of instructional strategies, the drawing lessons were predominantly teacher-centered, with students primarily acting as passive spectators who followed instructions without actively engaging or participating in the learning process. From the researcher's perspective, however, presenting a variety of activities could have encouraged more active participation from the students. For instance, teachers often compose objects and instruct their students to draw without assisting in the development of complex skills, such as higher-order thinking, problem-solving, collaboration, and communication skills, to solve the drawing tasks outlined in the GKA syllabus efficiently.
- d. Most students in the two classes used only mass shading techniques in their work, often relying on a single type of pencil, such as 2H, 2B, or 3B, for both drawing and shading. Some students drew from imagination or memory instead of observing the still-life objects, while others disturbed the class by sleeping, roaming, or talking with friends.

Main Findings

Pre-Test

The images below showcase drawing projects completed by Year Two Visual Art students using the existing instructional strategies before the introduction of the PBL Scaffolding Instruction. These samples serve as a visual benchmark to evaluate the impact of the new instructional approach.

Source: Samples or Photographs of Drawing Projects Executed by the Year Two Visual Art students with the Existing Instructional Strategies before the introduction of the new instructional strategy, PBL, are presented in figure 2,3, and 4.

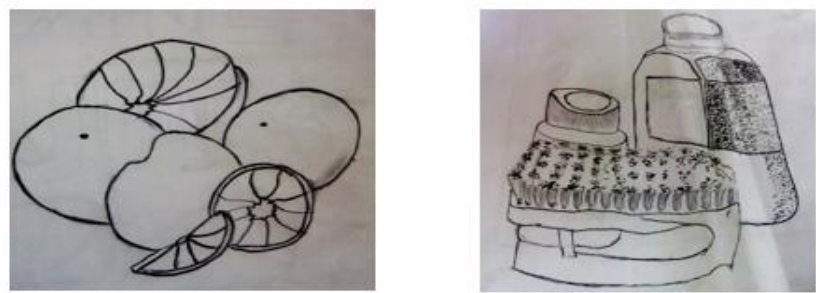


Figure 2: Some students’ drawings of an Outline Drawing exercise.



Figure 3. Still Life drawings of a cup and spoon of some students

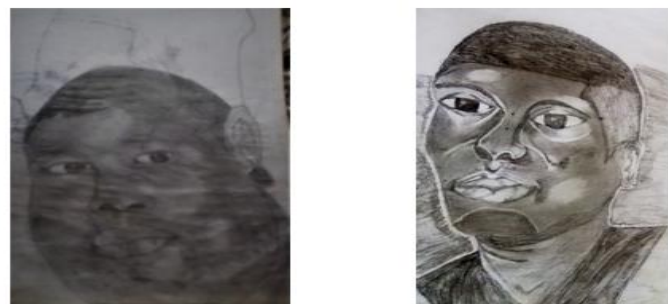


Figure 4. A Portrait drawing and shading exercise by some students

The weaknesses identified in traditional instructional strategies influenced the adoption of Problem-Based Learning Scaffolding instruction as an alternative strategy for teaching drawing at Simms Senior High School.

Planning, Implementation, and Assessment of Problem-Based Learning as an instructional strategy for the teaching and learning of drawing at Simms Senior High School

The planning, implementation, and assessment of PBL Scaffolding instruction for teaching drawing followed the 3-Stage Problem-Based Learning approach. The approach builds on the PBL Scaffolding process and Kreber’s (2013) Four Domains: Collaboration, Communication, Independent Learning, and Knowledge Acquisition is displayed in the table II below.

THE FOUR DOMAINS FOR PBL SCAFFOLDING ASSESSMENT

Domains	Learning Outcomes	Skills Developed
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Collaboration	Plan and monitor his/her work	Discuss Collaborate with others in the group
Communication	Communicate knowledge and ideas	Listening Share information
Independent learning	Know when to seek help	Plan and manage when working Do self-motivation
Knowledge acquisition	Search, filter, and categorize information. Find whether identified information is relevant to the project or interconnected.	Explore Investigate Analyze and Create

Fig. II: The Four Domains for PBL Scaffolding Assessment. Source Kreber (2013)

Planning Stage

The researcher formulated a driving question to kick-start the first of the 3-stage PBL learning approach adopted for the study. The **driving question** was, “*How do I display a 3-dimensional Effect in a 2-dimensional Drawing?*”. The researcher introduced students to the task objectives and learning outcomes through instructor-led demonstration activities. These activities are directly related to the driving question.



Figure 5. Source photograph of the TLM for the lesson used by the researcher.

The purpose of the activity demonstration was to help students build their interest in the given drawing task and also to challenge and encourage them to adopt a critical thinking disposition.

Implementation of Problem-Based Learning as an instructional strategy for the teaching and learning of drawing at Simms Senior High School.

The researcher followed the following processes to ensure the effective implementation of PBL in teaching drawing:

1. The instructor organized students into groups of five and supervised their work. Group members brainstormed ideas for the project question, drawing on their relevant prior knowledge.

2. The instructor guided groups in assigning research roles to individual members. Each member identified resources whether from textbooks, the internet, or predecessors to help address the driving question.
3. The researcher observed the group members meeting to review their research findings with the assistance of the teachers. The groups engaged in critical discussions, extracting relevant knowledge to complete the assigned task.
4. Representatives from each group reported their findings to the entire class. The teachers then helped refine the project ideas and gave final approval for the projects to begin.
5. The instructor exposed students to the proper use of drawing and shading tools and materials. They also taught students how to hold these tools correctly and how to critically observe tonal values (light and dark tones) through demonstration techniques.
 - The activities helped students understand tonal values in drawing, enabling them to define the form of the objects they were drawing.
 - Students completed various drawing projects, including Still Life, Portrait, and Real-Life drawings, as part of the project.
 - The project's practical sections took place in two locations the classroom and the dining hall depending on the activities and media used since the school lacks an art studio.
 - Different shading media, such as pencil, pen, crayon, and acrylic paint, were used for shading.
 - The solid shading media (pencils, crayons, and pens) and various drawing styles (portrait, outline, and others) were experimented with.
 - Students ultimately presented their projects in class after the stipulated duration to synthesize their learning.
 - In the presentation, students did a self-assessment to identify the work's strengths and weaknesses.

Assessment of Problem-Based Learning as an instructional strategy for the teaching and learning of Drawing at Simms Senior High School

Source: Samples of Photographs of Drawing Projects executed by the same Year Two Visual Art students after continuous work with the use of the new instructional strategy - PBL **Scaffolding Instruction** display below:



Figure 6. Students work on outline drawing exercises.



Figure 7. Some students work on shading with a pen.



Figure 8. A Portrait with pencil shading by some students



Figure 9. Still Life and Imaginative drawing with crayon and acrylic paint as media for shading.

To measure the impact of the PBL Scaffolding Instruction employed, the researcher based the evaluation of students' acquisition of knowledge and skills for drawing accurately on the Profile Dimensions outlined in the GKA syllabus Degraft-Yankson (2010) and the Four Domains stipulated by (Bailey, 2014), see table 2 (above) and the table 3 below:

Table 3: Profile Dimensions Outlined in the Gka Syllabus

Profile Dimension	Percentage (%)
Knowledge and understanding	25%
Application of Knowledge	35%
Practical Skills	40%

Source: CRDD (2014).

The emphasis of this study was to facilitate a student-centered approach to learning rather than a teacher-centered approach, as Wynn Sr., Mosholder, and Larsen (2014) assert that PBL focuses on students' learning outcomes and cognition compared to traditional lecture-based Instruction. These domains synthesize the learning outcomes expected from students, specifically Visual Art students, in each stage of the learning activities and students' academic performance. The four domains in the PBL process were ideal for evaluating the impact and effectiveness of the PBL Scaffolding Instruction on students' drawing skills, as they align with the behavioral changes or expectations outlined in the GKA syllabus. The syllabus outlines a learning outcome, as described in the Profile Dimension of Visual Art for students at the Senior High School, which aligns with the four domains proposed by Bailey (2014).

Discussions

Effective Administration of the PBL Instructional Strategy

The study aimed to evaluate the effectiveness of Problem-Based Learning (PBL) supported by Scaffolding Instruction in improving students' performance in drawing within the Visual Arts program. The findings revealed that the traditional teacher-centered methods led to passive learning, limited student engagement, and poor drawing outcomes. However, the strategic implementation of PBL introduced a student-centered approach, fostering active participation, collaboration, and critical thinking. Conspicuously, the PBL Scaffolding Instruction proved to be highly effective, as it increased students' involvement in both individual and group tasks, which is essential for a practical-oriented subject like drawing.

Strategic planning, guided implementation, and ongoing assessment drove the success of the PBL strategy, with scaffolding instruction reinforcing each of these elements. These stages provided a clear structure for both teachers and students, allowing for meaningful engagement with drawing tasks. Teachers transitioned into facilitators of learning, offering support without dominating the learning process. Dole, Bloom, and Doss (2017) argue that project-based learning effectively promotes independent thinking and deep understanding when students take full responsibility for their learning, a view supported by the findings of this study. With PBL as an effective instructional strategy, students engaged in real-world art problems that required them to apply their drawing skills creatively. They worked in groups to brainstorm, explore different shading techniques, and present solutions using various materials beyond pencils, thereby moving away from the limitations of still-life and mass-shading focus observed in traditional methods. The findings of this study confirm Rosinski and Peeples's (2012) assertion that project-based learning promotes knowledge transfer and application across different contexts, an essential aspect of art education.

The use of scaffolding instruction during the PBL process helped bridge the knowledge gap identified at the beginning of the study. Teachers provided initial guidance and gradually reduced support as students gained confidence and competence. Tiantong and Teemuangsai (2013) argue that scaffolding deepens understanding and boosts long-term retention, as shown by students' increased participation and better drawing results. This approach facilitated the progressive acquisition of knowledge and skills, as evidenced by the improved quality of student artworks. The instructional shift enabled teachers to function as facilitators, offering structured guidance while promoting learner autonomy. Moreover, Stefanou et al. (2013) highlight that the proposed PBL Scaffolding Instruction best supports teaching and learning drawing by actively boosting students' participation, involvement, and engagement in both individual and group work. Wynn Sr., Mosholder, & Larsen (2014) opine that PBL is a well-suited instructional model that supports students as energetic learners, as it positions learning in a practical problem by making them take responsibility for their learning.

Conclusions

Observations from both pre-test (Figures 2–4) and post-test (Figures 6–9) drawing projects by the same Year Two Visual Art students at Simms SHS indicate that the proposed instructional strategy Problem-Based Learning Scaffolding Instruction is more suitable and adequate for teaching a practical-oriented subject like drawing in Senior High School Visual Art programs.

The findings lead to the following recommendations:

- *Provision of Resources:* School authorities should provide well-equipped art studios and a diverse range of drawing materials to support practical instruction.

- *Teacher Training*: Visual Arts teachers should receive targeted training in PBL and scaffolding techniques to transition from teacher-centered to student-centered learning, thereby enhancing learner autonomy (Dole, Bloom, & Doss, 2017).
- Ross and Rammer (2009) recommend redesigning the physical classroom environment to support collaborative learning.
- *Active Supervision*: Heads of Departments should play active roles in monitoring and reinforcing innovative instructional strategies.
- *Curriculum Alignment*: Drawing content should integrate activity-based and problem-solving methods to stimulate creativity and critical thinking (Tiantong & Teemuangsai, 2013).

As Dole et al. (2017) and Tiantong and Teemuangsai (2013) assert, scaffolding within PBL promotes more profound understanding and long-term retention. However, as Kek and Huijser (2017) cautioned, the success of this strategy depends on teacher commitment, a suitable studio setup, instructional materials, and adequate supervision.

In conclusion, this study confirms that the traditional teacher-centered approach hinders students' engagement and drawing performance. The introduction of a structured PBL approach, enhanced by scaffolding instruction, led to a notable improvement in participation, creativity, and drawing outcomes. To sustain PBL as a transformative instructional strategy in Visual Arts education, institutional support, adequate resources, and ongoing teacher training must be prioritized.

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