Instructional Scaffolding In Drawing: Prospects And Challenges For Skills Development, Creativity, Innovation And Sustainable Creative Careers

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Abstract

Drawing is fundamental to Visual Arts Education, visual literacy, design and creative careers. Effective drawing instruction requires a systematic approach that develops observation, technical competence, creativity and independent artistic judgement. This paper examines the prospects and challenges of instructional scaffolding for developing drawing skills, creativity, innovation, and sustainable creative careers in Nigeria. Using a conceptual and interpretive approach, it draws on Vygotsky's Zone of Proximal Development and the instructional scaffolding principles of Wood, Bruner and Ross. It proposes the Drawing Skills Scaffolding Model (DSSM), comprising six interconnected stages: diagnosis of drawing skills; demonstration and modelling; guided drawing practice; creative experimentation; independent drawing production; and creative enterprise and professional development. The model integrates structured instruction with creative exploration, learner autonomy and career awareness. Its implementation may, however, be constrained by inadequate materials and studio facilities, large classes, insufficient teacher preparation, limited practical time, financial constraints and unequal access to digital technologies. The paper argues that effective implementation requires contextual adaptation, improved teacher preparation, adequate resources and stronger links with the creative industries. It concludes that the DSSM provides a conceptual framework for strengthening drawing education in Nigeria, although its effects on technical competence, creativity, learner independence and career preparedness require empirical validation.

Keywords: Instructional scaffolding, drawing skills, Visual Arts Education, creativity, innovation, learner autonomy, creative careers.

Introduction

Drawing is fundamental to Visual Arts Education because it develops visual literacy, observation, technical competence, design and creative problem-solving. It serves as an essential means of visual communication through which learners observe, interpret and represent objects, ideas and experiences. Beyond its artistic value, drawing provides a foundation for several creative disciplines, including illustration, animation, fashion, graphic design, digital art and architecture. Its educational significance therefore extends beyond the acquisition of practical artistic skills to include intellectual development, visual expression and the ability to communicate ideas creatively. Drawing education consequently contributes to artistic development, further learning and preparation for diverse creative careers (UNESCO, 2024).

Effective drawing instruction involves more than the ability to reproduce images or imitate existing artistic examples. Learners need to develop the capacity to observe, analyse and accurately represent proportion, perspective, tonal values, spatial relationships and composition. These competencies require systematic instruction through demonstration, guided practice, constructive feedback, experimentation and reflection. Teachers must therefore provide learning experiences that enable students to understand drawing principles and apply them to different subjects and visual situations. Since learners differ in their abilities, previous experiences and levels of confidence, drawing instruction should provide appropriate support while gradually developing independent artistic judgement, creative expression and problem-solving abilities.

Instructional scaffolding offers a relevant framework for addressing these educational needs. Grounded in Vygotsky's (1978) Zone of Proximal Development and the tutoring principles of Wood, Bruner and Ross (1976), instructional scaffolding involves providing temporary assistance that enables learners to undertake tasks they may initially find difficult to accomplish independently. Such assistance may include demonstration, modelling, questioning, guided practice and constructive feedback, depending on the learning needs of individual students. As learners acquire the necessary knowledge and practical competence, the teacher gradually reduces the level of support to encourage greater autonomy and independent performance. In drawing education, this approach can guide learners from basic observation and representation to more complex technical exercises, creative experimentation and independent artistic production.

Research on visual arts education has highlighted the importance of instructional resources, teacher competence and technological access in improving teaching and learning outcomes. Odewumi (2020) examined the use of drawing instructional materials, providing relevant insights into the importance of appropriate resources for developing drawing skills. Osaigbovo and Osaigbovo (2023) discussed challenges affecting visual arts education in Nigerian tertiary institutions, while Ajayi and Luckay (2023) considered digital technology and technological literacy in Fine and Applied Arts education. Similarly, Idowu et al. (2024) and Oriola et al. (2024) examined issues relating to art teacher competence and the factors influencing effective art learning and practice. Related studies in Ghana have also explored creative and blended approaches to visual arts education (Quarshie et al., 2022; Swanzy-Impraim et al., 2023). Although these studies provide useful contextual perspectives on instructional practices, teacher competence and resource availability, they do not directly establish or validate the proposed Drawing Skills Scaffolding Model.

In Nigeria, the effective teaching and learning of drawing may be constrained by inadequate instructional materials, limited studio facilities, large class sizes, restricted practical teaching time and unequal access to digital technologies. These challenges can limit opportunities for individualised instruction, continuous practice, constructive feedback and meaningful interaction between teachers and learners. Consequently, some learners may experience difficulties in developing essential drawing competencies, applying acquired techniques creatively and progressing towards independent artistic production. There is therefore a need for a drawing-specific instructional framework that connects the acquisition of technical skills with creativity, innovation, learner autonomy and awareness of sustainable creative careers. In response to this need, this paper proposes the Drawing Skills Scaffolding Model as a conceptual framework for strengthening drawing instruction through systematic guidance, progressive skills development, creative experimentation and professional preparation in Nigerian Visual Arts Education.

Theoretical Framework

The paper draws on Vygotsky's (1978) sociocultural theory, particularly the Zone of Proximal Development, and the instructional scaffolding principles of Wood, Bruner and Ross (1976). These perspectives explain how structured assistance, feedback and guided participation can support learners' progress towards independent performance.

Vygotsky's Zone of Proximal Development: Vygotsky's (1978) sociocultural theory views learning as a socially mediated process through which knowledge and skills develop through interaction with teachers, peers and the cultural environment. The Zone of Proximal Development describes the difference between what learners can accomplish independently and what they can achieve with appropriate guidance or collaboration. In drawing, a learner may represent simple objects but require assistance with proportion, perspective, composition or tonal values. Through demonstration, guided exercises, questioning and feedback, the teacher helps the learner address these difficulties. As competence develops, the learner becomes more capable of applying drawing principles independently. The Zone of Proximal Development informs the diagnosis of existing drawing skills and the selection of appropriately challenging tasks. Peer observation and critique can also enable learners to exchange ideas and consider alternative visual solutions. Odewumi's (2020) discussion of drawing instructional materials provides relevant Nigerian context for considering the resources needed to support practical learning, although it does not directly validate the Drawing Skills Scaffolding Model.

Instructional Scaffolding, Wood, Bruner and Ross: Wood et al. (1976) examined how tutoring enables learners to undertake tasks they may initially be unable to complete independently.

Scaffolding involves temporary assistance that helps learners manage complex tasks, attend to important features and develop the competence required for independent performance. Assistance may include modelling, breaking tasks into manageable steps, maintaining motivation and providing feedback. In a perspective lesson, for example, the teacher may demonstrate how to establish a horizon line and vanishing point before guiding learners through the construction of basic forms. Feedback helps learners recognise errors in proportion and spatial relationships. As understanding improves, the teacher reduces direct assistance and encourages application to new subjects.

Scaffolding must be responsive rather than rigid. Learners experiencing difficulties may need further demonstrations, while those who demonstrate competence can progress to more demanding tasks. Stone (1998) provides a broader discussion of scaffolding in learning and development. The purpose is to develop autonomy rather than permanent dependence on the teacher.

Application to Drawing Education: The Zone of Proximal Development provides a rationale for identifying what learners can achieve with support, while scaffolding principles explain how that support can be organised and adjusted. Applied to drawing, the combined approach involves diagnosing current skills, modelling techniques, providing guided practice and feedback, encouraging experimentation and supporting independent production. These practices are consistent with concerns about pedagogy and resources in visual arts education. Ahmed (2019) examined visual arts pedagogies in relation to creativity and innovation, while Osaigbovo and Osaigbovo (2023) discussed challenges affecting visual arts in Nigerian tertiary institutions. Such studies provide contextual reasons to examine teaching approaches and resource provision, but they do not establish the effectiveness of the Drawing Skills Scaffolding Model (DSSM).

The proposed model extends the instructional process to portfolio development and career awareness. Its stages are interconnected rather than rigidly linear; teachers may revisit earlier stages when learners encounter difficulties. Drawing competence alone, however, cannot guarantee employment or sustainable income.

Implementation of Instructional Scaffolding in Drawing Education

Implementation involves diagnosing learners' abilities, demonstrating techniques, providing guided practice, encouraging experimentation and developing independent production. The amount of assistance should reflect learners' needs and progress (Vygotsky, 1978; Wood et al., 1976). These stages can be adapted to different drawing activities and levels of competence. In Nigerian institutions, their application should also consider available instructional resources,

studio facilities and teachers' practical knowledge. The following areas illustrate how scaffolding can be applied to drawing instruction.

Observational Drawing: Observational drawing develops learners' ability to represent objects, people and environments through attention to contour, shape, proportion, negative space, perspective and tone. Teachers can use initial drawing exercises to identify learners' existing abilities and difficulties. Demonstrations can then show how to observe visual relationships and translate them into accurate representations. Guided practice and feedback help learners correct errors and improve their observation skills. As competence develops, learners undertake more complex studies with reduced assistance.

Drawing Techniques and Tonal Rendering: Drawing techniques require control of line quality, pencil pressure, tonal gradation, cross-hatching, stippling and shading. Teachers can demonstrate these techniques using basic geometric forms before progressing to still-life objects, portraits and more complex subjects. Guided exercises help learners understand how light, shadow and mark-making communicate form and texture. Feedback enables them to identify technical weaknesses and improve their application of different techniques. Learners can subsequently combine these methods to achieve intended visual effects independently.

Perspective and Spatial Representation: Perspective enables learners to represent three-dimensional space on a two-dimensional surface. Teachers can introduce the horizon line, vanishing points and basic geometric forms through demonstration and guided exercises. Learners can apply these principles to roads, buildings, interiors and other spatial arrangements. Questioning and constructive feedback help them identify errors in alignment, proportion and spatial relationships. As understanding improves, learners can undertake more complex perspective drawings independently.

Figure Drawing and Human Proportions: Figure drawing develops learners' understanding of human structure, proportion, gesture, balance and movement. Instruction progresses from basic geometric forms and gesture lines to more complex poses and anatomical relationships. Teachers demonstrate human proportions and guide learners through exercises on posture, body alignment and movement. Live models, photographs and peer critique can strengthen observation and improve figure representation. With continued practice, learners develop independence and incorporate expressive qualities into their drawings.

Creativity and Visual Problem-Solving: Scaffolding should promote originality, visual communication and creative problem-solving beyond accurate representation. Learners need opportunities to explore alternative compositions and experiment with line, shape, texture and

tonal values. Teachers can support this process through open-ended activities, guided discussions, questioning and constructive feedback. These strategies encourage critical thinking, experimentation and individual artistic expression. Research highlights the importance of creativity and critical thinking in visual arts education (Ademuyiwa & Emeriewen, 2023; Idowu & Gandonu, 2024), although the effectiveness of the proposed model requires empirical investigation.

Digital Drawing and Illustration: Digital drawing enables learners to apply foundational drawing skills through contemporary technological tools and creative processes. Instruction may cover digital brushes, layers, selection tools, image transformation and file export, depending on available resources. Teachers can demonstrate these functions before guiding learners through practical exercises and independent illustration activities. Such experiences connect drawing education with professional fields such as illustration, animation, concept art and graphic design (Ajayi & Luckay, 2023). Where digital resources are unavailable, traditional materials such as pencils, charcoal, pens and paper should remain central, while learners are encouraged to respect copyright when using visual references.

Assessment, Feedback and Portfolio Development: Assessment and feedback enable teachers to monitor learners' progress and identify areas requiring improvement. Practical assessment may involve studio observation, sketchbook reviews, formative exercises, peer critique and completed drawings, focusing on proportion, line quality, tonal control, composition and representation of form. Constructive feedback helps learners recognise errors and improve their artistic performance. Self-reflection and portfolio development enable learners to document technical progress, creative experimentation and artistic achievements. Well-presented portfolios can support applications for further education, exhibitions and employment opportunities.

Prospects of Instructional Scaffolding in Drawing Education

Instructional scaffolding offers opportunities to strengthen drawing education by connecting practical competence with creativity, learner independence and professional preparation. Its potential benefits extend beyond the acquisition of drawing techniques to the development of transferable skills relevant to contemporary creative practice. The approach can also support different levels of learner ability through appropriate instructional assistance. In Nigerian Visual Arts Education, these prospects depend on teacher preparation, institutional support and access to practical resources (Odewumi, 2020; Osaigbovo & Osaigbovo, 2023).

Its major contributions are considered below.

Technical Skills and Confidence: Structured drawing instruction can strengthen learners' technical competence and confidence in handling practical tasks. Progressive learning experiences help learners develop greater control of proportion, perspective, composition, form and tonal values. Successful completion of increasingly challenging activities can also improve their confidence in approaching unfamiliar drawing problems. The ability to recognise personal progress may encourage sustained practice and greater participation in studio activities. These potential benefits require empirical investigation to establish their actual effects on learners' performance.

Creativity, Innovation and Artistic Judgement: Scaffolding can provide the technical foundation needed for originality, experimentation and informed artistic judgement. Learners who understand drawing principles are better positioned to develop alternative compositions, interpret subjects and solve visual problems. This creates opportunities to move beyond imitation towards individual artistic expression. The ability to evaluate alternatives and make independent decisions is particularly important for innovation in contemporary visual arts practice. However, creativity can only be encouraged when instructional guidance allows sufficient freedom for individual interpretation.

Digital Competence and Adaptability: Exposure to digital drawing can prepare learners for the changing demands of contemporary visual communication and creative production. Competence in digital illustration, image editing and related applications can broaden opportunities in animation, concept art and graphic design. Such knowledge also strengthens learners' ability to adapt traditional drawing principles to different media and technologies. However, access to devices, software, electricity and relevant training remains important in Nigerian educational institutions (Ajayi & Luckay, 2023). Digital competence should therefore complement foundational drawing knowledge rather than replace traditional studio practice.

Portfolio Development and Professional Preparation: This provides a means of demonstrating learners' technical abilities, creative development and artistic achievements. A well-organised portfolio can present evidence of practical competence and the ability to undertake different drawing tasks. It may support applications for further education, exhibitions, competitions, commissions and employment. Portfolio preparation also encourages learners to evaluate the quality and relevance of their artistic work. Its professional value, however, depends on presentation, communication skills and access to relevant opportunities.

Entrepreneurship and Sustainable Creative Careers: Drawing competence can create opportunities in portraiture, illustration, fashion, graphic design, concept art and product development. Linking artistic skills with professional awareness can introduce learners to pricing, client communication,

marketing and the presentation of creative work. These competencies may support self-employment, freelance practice and participation in the wider creative economy. Nevertheless, artistic ability alone does not guarantee sustainable income, as market demand, business knowledge, equipment and professional networks also influence career outcomes. The Drawing Skills Scaffolding Model therefore incorporates creative enterprise as a means of connecting educational development with professional application.

Relevance to Nigerian Teacher Education: Colleges of education and other teacher-preparation institutions can use instructional scaffolding to strengthen the teaching of drawing methods and studio practice. Student teachers can develop competence in diagnosing learners' difficulties, demonstrating techniques, providing feedback and adjusting instructional support. These experiences can improve their preparedness to teach learners with different abilities and levels of practical experience. Incorporating scaffolding into microteaching, peer teaching and reflective assessment can further strengthen professional competence. Effective implementation requires appropriate training, practical resources and continuing professional development.

Challenges of Instructional Scaffolding

Instructional scaffolding in drawing can pose several challenges.

Poor Resources and lack of Studio Facilities: Drawing lessons should be delivered with the right resources, including drawing boards, drawing tools, lighting, models and others. Many institutions lack resources to provide effective instruction, including demonstration, guided practice and individual feedback. This can cause learners to miss out on developing key drawing skills such as accurate observation, tone, perspective, etc.

Large Group Sizes: Scaffolding can be difficult to deliver to large group sizes. As drawings require close observation, corrections and lots of practice to improve, having many learners can cause scaffolding to become generalised. Learners will not develop skills as quickly and receive less positive feedback.

Teacher Knowledge and Learner Differences: Scaffolding will be most successful if the teacher can demonstrate techniques, identify any issues the learners may have, adapt the amount of support given and hand over responsibility. If the teacher does not have enough professional knowledge, they may struggle with these skills. Learners will vary in their previous experience, confidence, speed of learning and visual abilities. This means a variety of teaching strategies should be prepared.

Cost of Resources and Technology: Costs can cause barriers to learners being able to complete drawing activities both physically and digitally. Students from lower income households may struggle to practice outside of the classroom. This can impact on developing digital skills.

Exam-Focused and Lack of Industry Links: A focus on exams can cause learners to copy and produce set outcomes. A lack of links between educational institutions and the creative industry can mean learners do not get much exposure to industry expectations, building a portfolio, entrepreneurial skills and employment opportunities.

Too much scaffolding: Too much scaffolding can cause learners to depend too much on the teacher. Learners should be encouraged to think for themselves and be creative. To effectively scaffold, learners should be provided with support which gradually decreases as they become more confident, competent and independent.

Discussion

The proposed Drawing Skills Scaffolding Model provides a structured approach to connecting drawing instruction with technical competence, creativity and independent artistic production. Its theoretical foundation in Vygotsky's (1978) Zone of Proximal Development and the instructional principles of Wood et al. (1976) emphasises the importance of appropriate guidance and the gradual transfer of responsibility to learners. The six stages provide a progression from identifying existing abilities to applying acquired skills in creative and professional contexts. Unlike instructional approaches that focus mainly on reproducing demonstrated examples, the model places emphasis on experimentation, decision-making, original production and professional awareness. Its central contribution is therefore the integration of drawing skills development with learner autonomy, creative problem-solving and preparation for potential career opportunities.

The practical application of the model requires clearly defined learning outcomes and appropriate assessment procedures at each stage. At the diagnosis stage, teachers should assess learners' existing abilities in observation, proportion, line quality, tonal representation and spatial relationships to establish their starting points and identify areas requiring instructional support. During demonstration and modelling, assessment should determine learners' understanding of drawing principles, their ability to identify demonstrated techniques and their capacity to reproduce essential procedures. Guided practice should be evaluated through improvements in drawing accuracy, control of materials, application of techniques and the ability to use feedback to correct identified weaknesses. At the creative experimentation stage, assessment should focus on originality, exploration of different media and techniques, alternative compositions and the ability

to solve visual problems. These indicators enable teachers to monitor learners' progress and adjust the level of instructional assistance according to their developing abilities.

The final stages of the model place greater emphasis on learner independence and the practical application of acquired drawing skills. Independent drawing production should be evaluated through completed projects, technical accuracy, compositional organisation, personal expression and the ability to work with minimal instructional assistance. At the creative enterprise and professional development stage, learners should demonstrate their ability to organise and present portfolios, explain their creative decisions, respond to basic design briefs and identify opportunities for applying their skills in professional and entrepreneurial contexts. These learning outcomes can be assessed through practical exercises, observation checklists, drawing assignments, portfolio reviews, peer assessment and reflective evaluation. Such assessment methods provide evidence of learners' development across the six stages and help teachers determine when instructional support should be maintained, modified or gradually withdrawn. Consequently, assessment becomes an integral part of the scaffolding process rather than an activity restricted to the completion of drawing assignments.

The model also recognises that technical competence, creativity and innovation are interconnected aspects of drawing education. Learners require foundational knowledge and practical skills to make informed artistic decisions, explore alternative solutions and communicate ideas effectively. However, instructional guidance must not become excessive or restrict individual expression, as prolonged dependence on teacher direction may limit learners' capacity for independent artistic judgement. Teachers should therefore adjust their support according to learners' progress while providing opportunities for experimentation, reflection and self-directed production. This approach positions drawing education as both a technical and creative learning process in which structured guidance provides a foundation for individual expression and innovation.

Within Nigerian Visual Arts Education, the application of the model may be affected by inadequate instructional resources, large class sizes, limited practical teaching time, insufficient teacher preparation and unequal access to digital technology. Addressing these challenges requires institutional support, context-sensitive teaching strategies, improved studio facilities and sustained professional development for art teachers. The model also highlights the importance of connecting drawing instruction with professional practice through portfolio development, creative projects and engagement with relevant industries. Nevertheless, drawing competence does not automatically guarantee employment or sustainable income, since career outcomes also depend on market conditions, business knowledge, professional networks and available economic

opportunities. As a conceptual framework, the Drawing Skills Scaffolding Model requires empirical investigation to determine its effectiveness in improving drawing proficiency, creativity, independent problem-solving and career preparedness within different educational contexts.

Conclusion

Instructional scaffolding has great potential to improve drawing education. By using demonstration, guided practice, feedback, experimentation and increasing independence, learners can improve their observation, technical skills, creativity, visual communication and problem-solving. The Drawing Skills Scaffolding Model (DSSM) provides a structured way to link these outcomes to independent drawing and creative entrepreneurship. This model can be applied to Nigerian Visual Arts Education as it can be adapted to different teaching situations.

However, there needs to be the right resources to teach, confident teachers, effective assessments and opportunities for creativity. Scaffolding should be reduced carefully so learners aren't dependent. If this model is used flexibly, it can help improve drawing instruction to be more meaningful and prepare learners for further study and creative careers.

Recommendations

Structured drawing instruction- Visual Arts teachers should use progressive drawing activities. This should include diagnosing skills, demonstration, guided practice, experimentation and independent drawing.

1. Teacher Training - Teacher education institutions should provide practical training on scaffolding, demonstrating drawing, differentiation, feedback and reducing support.
2. Resources - Educational authorities/institutions should provide the necessary resources for drawing. This should include suitable studio space and digital resources. Use local resources where possible and keep costs low.
3. Creativity - Drawing tasks should encourage learners to be creative, personalise their work to reflect their culture, solve visual problems and experiment with different materials and techniques.
4. Continuous assessment - Teachers should assess learners through practical tasks, observation, feedback, reflection and portfolios. Focus on technical development and creativity.
5. Digital Learning - Appropriate digital drawing resources should be introduced. Provide equal access to devices, software and resources. Consider the local infrastructure.

6. Industry links - Schools/colleges should encourage exhibitions, mentoring, community projects, internships and links with practising artists and creative businesses to improve professional awareness.
7. Further Research - Researchers should look into how this model can be implemented in different educational settings in Nigeria. Look into how it impacts learners' drawing skills, creativity, independence and preparation for creative careers.

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