

# Knowing the Content, Missing the Practice: Pedagogical Content Knowledge of Primary Teachers in Two-Dimensional Creative Arts in Asante Akim-North, Ghana

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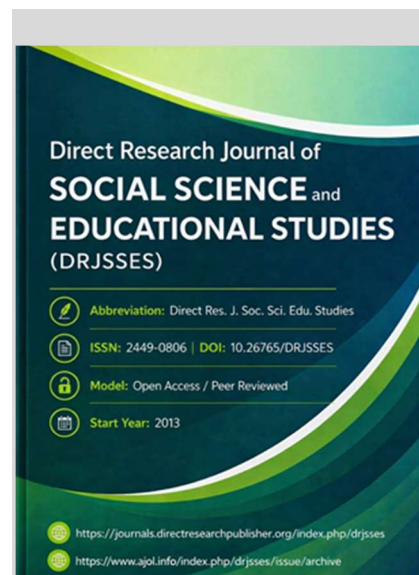
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### ABSTRACT

*Creative Arts is perceived to be a powerful vehicle to develop learners' creativity, cultural identity, visual literacy, and critical thinking. However, in Ghana, little research has been conducted into the Pedagogical Content Knowledge (PCK) of primary school teachers who teach the two-dimensional Creative Arts and how they enact their subject matter knowledge. To reduce this, the study examined primary school teachers' PCK in teaching 2D Creative Arts in the Asante Akim-North Municipality of Ghana. Specifically, teachers' knowledge, practices, self-efficacy, and context in teaching Creative Arts were examined using the convergent parallel mixed-methods design approach, which involves the collection of quantitative and qualitative data concurrently. The study used a sample of 275, made up of 7 headteachers, 13 Creative Arts teachers and 255 Basic Six pupils. The instruments for data collection were questionnaire, semi-structured interview, classroom observation and Creative Arts Performance Test. Quantitative study variables were analyzed using frequencies, percentages, means and standard deviations. Qualitative data were analyzed thematically. The results indicate that teachers' PCK was moderately developed, the highest being content knowledge ( $M = 3.62$ ,  $SD = 1.42$ ) and the lowest being pedagogical strategies ( $M = 1.85$ ,  $SD = 0.69$ ) and cultural relevance ( $M = 1.33$ ,  $SD = 0.49$ ). Teachers reported confidence teaching two-dimensional Creative Arts. However, classroom observations indicated limitations at teaching from a learner-centered, practical and culturally responsive approach. Headteachers cited inadequate teachers' PCK, lack of instructional materials and lack of professional development opportunities as challenges obstructing quality of Creative Arts instruction. To promote quality Creative Arts instruction, there is a need to improve teachers' PCK through in-service training, provision of teaching resources, instructional supervision and adoption of local cultural materials.*

**Keywords:** Pedagogical Content Knowledge; Two-dimensional Art; Creative Arts Teaching; Primary School Teachers; Asante Akim North Municipality, mixed methods, basic education, Ghana



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### INTRODUCTION

Creative arts is a critical dimension of holistic basic education, developing key competencies such as creativity, cultural understanding, innovation, communication, and problem-solving (UNESCO, 2024; OECD, 2024). Additional pedagogies in line with the

theme of creativity is exploratory, dynamic, learner-centered and focused on creating, reflecting, and evaluating rather than lecturing. It is thus the task of primary school teachers to teach visual literacy and artistic techniques and processes (Malykhin et al., 2024).

There is also consensus that teachers' pedagogical content knowledge (PCK), which is their knowledge of how to teach their knowledge to learners, affects their teaching (Santibáñez et al. , 2025). Pedagogical content knowledge (PCK) is the ability to represent, explain and deliver specific content in a way that learners are able to receive it and understand it (Chaitidou & Peikos, 2026). PCK is the ability to select and use appropriate instructional strategies, knowledge of learners' likely misconceptions, and making appropriate decisions and evaluations during lesson design and assessment (Khoza & Ndlovu, 2026; Mjobo, Cisse, & Omojemite, 2025). Moreover, Mulumba (2026) pointed to the interrelationship between learners' engagement, their understanding, and PCK in a language- and competence-based education. Additionally, Santibáñez et al. (2025) note that PCK links content knowledge and pedagogical practice since it transforms teachers' content knowledge into principles and strategies for their pedagogical practice. PCK content knowledge of two-dimensional creative arts is related to the process-centeredness, situatedness, and doing nature of the content. Hence. PCK equips teachers to explain processes of creating art, guide student learning, provide feedback, and assess the process and product presented by students (Khoza & Ndlovu, 2026; Chaitidou & Peikos, 2026; Marcos, 2025). In the absence of PCK, teachers are unable to develop content for achieving specific learning goals, guide creativity and psychomotor skills development (Mjobo et al. , 2025; Saharuddin et al. , 2025), or develop PCK where the content is made learnable and applicable even if teachers exhibit confidence in developing creative arts content (Wawire et al. , 2025; Yu & Alibakhshi, 2025). The limitations facing pre-service teacher preparation, and PCK for teaching CA curricula, in many African countries, including Ghana, have been documented. The study is grounded on PCK and constructivist learning theories similar to the visual arts, where knowledge is constructed through doing, reflecting, and problem-solving (Chaitidou & Peikos, 2026). PCK refers to the knowledge and understanding of teachers about how to order content, demonstrations and assessments to create an optimal learning environment (Khoza & Ndlovu, 2026). Such knowledge can be placed in a two-dimensional representation of creative arts between the teacher's content knowledge regarding line, colour, composition and pattern and their ability to model, scaffold and assess students' practical activities. Thus, the present study intends to address the empirical gap in terms of the PCK (knowledge of content, pedagogy, lesson organisation , demonstrations, teaching and learning materials, and assessment) that Ghanaian primary school teachers employ in teaching 2-D art in the Asante Akim-North Municipality (Mjobo et al , 2025; Saharuddin et al , 2025). The findings will inform teachers' professional development, curriculum implementation, and learners'

creativity and confidence in teaching and learning of creative arts in Ghanaian basic schools.

## METHODOLOGY

### Research Design

The study employed a convergent parallel mixed-methods research design. It explored the PCK of primary school teachers in the classroom teaching of two-dimensional Creative Arts in the Asante Akim-North Municipality of Ghana. Therefore, the mixed methods research design was appropriate, as it allowed the collection, analysis and interpretation of quantitative and qualitative data in one phase of the study, creating a more complete picture of teachers' subject PCK. Mixed methods can be used when the research problem involves the need for a realistic use of both quantitative and qualitative data to understand a phenomenon better than using either would alone (Creswell & Creswell, 2023). Quantitative methodology enabled us to measure the teachers' perceived PCK, instruction and learners' performance, whereas qualitative methodology provided contextual explanations of teacher preparation and instructional supervision, resources, and classroom instruction. Using these methods contributed to the credibility of the findings. They provided evidence of teachers' knowledge from different sources rather than relying only on teachers' self-reports. More recent methodological suggestions for high-quality mixed methods research studies have further specified that reporting should articulate the rationale for the mixed methods design, analyse the quantitative and qualitative components separately, and provide meaningful integration (Hirose & Creswell, 2023).

### Population of the Study

The study was conducted in public basic schools in the Asante Akim-North Municipality of the Ashanti Region of Ghana. The study focused on headteachers, Creative Art teachers, and Basic Six pupils. The rationale for selecting these participants was that the three headteachers' perspectives complemented the teachers' views on teaching and learning Creative Arts. While headteachers commented on the implementation of Creative Arts into the curriculum, supervision of teachers, and availability of teaching/learning resources, teachers discussed their knowledge of the curriculum and their practices. Basic Six learners were included for their practical experiences, which indicated the extent to which classroom experience may have translated into artistic understanding and skill (Table 1).

### Sampling Procedure and Sample Size

The list of public basic schools in the Asante Akim-North

**Table 1:** Target Population for the Study

| <b>Circuits</b> | <b>Number of Schools</b> | <b>Number of Teachers in Circuit</b> | <b>Number of Head Teachers</b> | <b>Number of learners in Circuit</b> | <b>Total</b>  |
|-----------------|--------------------------|--------------------------------------|--------------------------------|--------------------------------------|---------------|
| Owerriman South | 4                        | 37                                   | 4                              | 1,142                                | 1,183         |
| Owerriman North | 7                        | 86                                   | 7                              | 1,428                                | 1,521         |
| Amantenaman     | 9                        | 82                                   | 9                              | 2,278                                | 2,378         |
| Agogo North     | 6                        | 76                                   | 6                              | 2,734                                | 2,816         |
| Agogo West      | 8                        | 57                                   | 8                              | 1,758                                | 1,823         |
| Agogo East      | 7                        | 54                                   | 7                              | 1,404                                | 1,465         |
| Agogo Central   | 6                        | 63                                   | 6                              | 2,398                                | 2,467         |
| Ananekrom       | 8                        | 52                                   | 8                              | 1,683                                | 1,741         |
| <b>Total</b>    | <b>55</b>                | <b>507</b>                           | <b>55</b>                      | <b>14,825</b>                        | <b>15,387</b> |

**Source:** Statistics Unit, Asante Akim North Municipality GES (2024)

**Table 2:** Sample Matrix

| <b>Respondents</b> | <b>Population</b> | <b>Sample Size</b> | <b>Percentage (%)</b> |
|--------------------|-------------------|--------------------|-----------------------|
| Head teachers      | 55                | 7                  | 12.73                 |
| Teachers           | 507               | 13                 | 2.56                  |
| Basic 6 Learners   | 14,825            | 389                | 2.62                  |
| <b>Total</b>       | <b>15,387</b>     | <b>409</b>         | <b>2.66</b>           |

Due to the small number of Creative Arts teachers (n = 13), the quantitative findings were limited to descriptive analyses and do not support inferences about statistical associations or other teacher-level analyses.

Municipality was provided by the municipal director of education. Schools were sampled from the various educational circuits to adequately represent the entire Municipality. Headteachers were purposively sampled because they were school leaders and directly involved in supervising the activities of teaching and learning. Creative Arts teachers and learners in Basic Six classes were sampled using simple random sampling to give equal chances of participation to all of them. Seven headteachers, 13 Creative Arts teachers and 255 Basic Six learners took part in the final sample of 275 respondents. The original required sample of 409 was reduced to 275 as only this number provided complete and usable responses for data analysis. Consequently, the sample size from this study was calculated and the findings are interpreted accordingly (Table 2).

### Data Collection Instruments

The instruments used for data collection were: teacher questionnaires, semi-structured interview guides, classroom observation schedules and Creative Arts

Performance Test. The choice of instruments was consistent with a mixed methods design that allowed for triangulation of the findings of the study. A teacher questionnaire was developed to gather evidence of teachers' PCK in Creative Arts through the two-dimensional Creative Arts PCK: content knowledge, lesson structure, instructional, learning support, and assessment practices. It was designed to assess teachers' perceived PCK of their Creative Arts specialty areas but was based on current conceptualizations of professional teacher knowledge as the interdependence of content knowledge, pedagogical reasoning and contextualized knowledge (Santibáñez et al. , 2025; Khoza & Ndlovu, 2026). Content validity was judged by experts in Creative Arts education and educational measurement. A pilot testing was conducted outside the study area to amend unclear items and test the reliability of the instrument. The semi-structured interview guide was administered to the headteachers to collect information on teacher preparedness, teachers' professional development and supervision, and provision of resource. This semi-structured interview guide was

necessary since curriculum implementation is not only about competencies but also about institutional arrangements and professional development opportunities (Wawire et al., 2026; Mulumba, 2026). To evaluate pedagogy, a classroom observation schedule was developed, assessing teacher modelling, learners, teaching aids, feedback practices, and assessment practices.

The method used for observation of classroom practices is also considered, as teachers' self-reported high confidence does not always correlate with teachers' knowledge of pedagogy, and in fact, research shows PCK is demonstrated through how teachers convert their content knowledge into classroom practice (Chaitidou & Peikos, 2026; Mjobo et al., 2025). The CAPT assessed Basic Six learners on 2D art concepts, such as line, color, pattern, composition, and design (see figure 1). The test items were based on the Ghana Creative Arts Curriculum for primary school. In addition, the content validity of the CAPT was established by assessing the contents of the test items by experts in Creative Arts.

### **Validity and Reliability of Instruments**

To establish instrument validity, a panel of experts evaluated the questionnaire items, interview questions, observation indicators, and Creative Arts Performance Test tasks. They determined that these instruments accurately assessed the study objectives. The questionnaire and the Creative Arts Performance Test were also evaluated to confirm that their items aligned with the dimensions of PCK and curriculum standards. Overall reliability was assessed using Cronbach's alpha for internal consistency. The observer procedures were standardised, and observer training was used to improve reliability in classroom observation.

### **Ethical Considerations**

Ethical approval was obtained before data collection. Permission was gained from educational authorities and the schools approached. At the schools, the purpose of the study was explained, and permission from teachers and headteachers was gained. As all participants in Basic Six were minors, consent was obtained from their parents or guardians, and assent was obtained from the learners. Results of the study were kept anonymous and private. Learners were made aware that participation in the study was voluntary and that they could withdraw at any time.

### **Data Analysis**

The quantitative data obtained from the questionnaire and the Creative Arts Performance Test were analysed using frequencies, percentages, means, and standard deviations. This was appropriate because the study sought

to describe the level of teachers' PCK and learners' practical performance, not the relationship between variables. Qualitative data were analysed thematically through familiarisation, coding, theme development, pattern recognition, and interpretation. The quantitative and qualitative findings were integrated throughout the discussion to form an explanatory account of teachers' PCK in teaching 2D CA. No inferential statistical tests were run. Therefore, it was stated that teachers' perceived confidence differed from their observed classroom practice, rather than being correlated with it.

## **RESULTS AND DISCUSSION**

### **Demographic Characteristics of Respondents**

As shown in Table 3, the final sample for the study consisted of 275 participants comprising 7 headteachers, 13 Creative Arts teachers, and 255 Basic Six learners. The demographic details of teachers were important because their teaching experience, qualifications, and school contexts provided meaningful insights into interpreting their PCK in two-dimensional Creative Arts (Khoza & Ndlovu, 2026; Santibáñez et al., 2025). Of the headteachers, 57.1% (four) were male and 42.9% (three) were female. Of the Creative Arts teachers, 61.5% (eight) were male and 38.5% (five) were female. A total of 138 (54.1%) male and 117 (45.9%) female students were enrolled. Seven (53.8%) of the Creative Arts teachers were aged between 31 and 40 years. A greater proportion of headteachers were aged between 41 and 50 years ( $n = 3$ , 42.8%). The majority of learners' ages ranged from 12-14 years ( $n = 253$ , 99.2%). This is the expected age of Basic Six pupils. In terms of years of experience, 10 (76.9%) teachers had between 1 and 10 years, while headteachers had longer years of professional experience. In terms of academic qualifications, 9 (69.2%) teachers and 6 (85.7%) headteachers had post-diploma/degree qualifications.

The formal qualifications obtained by teachers, required in relation to classroom teaching, are not sufficient to determine teachers' effective classroom practices and depend on how well teachers can apply subject matter knowledge, pedagogical reasoning, and contextual knowledge, and how effectively they can learn from experience through continuing professional development (Mulumba, 2026; Wawire et al., 2026). Overall, it was decided that the participants could provide useful information concerning PCK and two-dimensional Creative Arts. The small teacher sample meant only descriptive interpretations could be made.

### **Teachers' perception of acquiring pedagogical content knowledge**

Self-reported teacher confidence in PCK for Creative Arts

**Table 3:** Combined Demographic Characteristics of Respondents

| Demographic Variable   | Category             | Headteachers F (%) | Teachers F (%) | Learners F (%)     |
|------------------------|----------------------|--------------------|----------------|--------------------|
| Gender                 | Male                 | 4 (57.1)           | 8 (61.5)       | Approx. 138 (54.0) |
|                        | Female               | 3 (42.9)           | 5 (38.5)       | Approx. 117 (46.0) |
|                        | Total                | 7 (100.0)          | 13 (100.0)     | 255 (100.0)        |
| Age                    | Below 12 years       | —                  | —              | 0 (0.0)            |
|                        | 12–14 years          | —                  | —              | 253 (99.2)         |
|                        | Above 14 years       | —                  | —              | 2 (0.8)            |
|                        | 20–30 years          | 0 (0.0)            | 4 (30.8)       | —                  |
|                        | 31–40 years          | 2 (28.6)           | 7 (53.8)       | —                  |
|                        | 41–50 years          | 3 (42.8)           | 2 (15.4)       | —                  |
|                        | 51–60 years          | 2 (28.6)           | 0 (0.0)        | —                  |
|                        | Total                | 7 (100.0)          | 13 (100.0)     | 255 (100.0)        |
| Teaching Experience    | 1–10 years           | 2 (28.6)           | 10 (76.9)      | —                  |
|                        | 11–20 years          | 3 (42.8)           | 3 (23.1)       | —                  |
|                        | 21–30 years          | 1 (14.3)           | 0 (0.0)        | —                  |
|                        | 31 years and above   | 1 (14.3)           | 0 (0.0)        | —                  |
|                        | Total                | 7 (100.0)          | 13 (100.0)     | —                  |
| Academic Qualification | Diploma/HND          | 1 (14.3)           | 4 (30.8)       | —                  |
|                        | Post-Diploma/Degree  | 6 (85.7)           | 9 (69.2)       | —                  |
|                        | Total                | 7 (100.0)          | 13 (100.0)     | —                  |
| Training Institution   | Teacher Training     | —                  | —              | —                  |
|                        | College              | 1 (14.3)           | 4 (30.8)       | —                  |
|                        | College of Education | 4 (57.1)           | 8 (61.5)       | —                  |
|                        | University           | 2 (28.6)           | 1 (7.7)        | —                  |
|                        | Total                | 7 (100.0)          | 13 (100.0)     | —                  |

**Note:** A dash (—) indicates that the item did not apply to that respondent category.

**Table 4:** Teachers' Opinions on their Level of Pedagogical Content Knowledge

| Response Category  | Frequency (F) | Percent (%) |
|--------------------|---------------|-------------|
| Very Confident     | 2             | 15.4        |
| Confident          | 7             | 53.8        |
| Somewhat Confident | 4             | 30.8        |
| Not Confident      | 0             | 0.0         |
| <b>Total</b>       | <b>13</b>     | <b>100</b>  |

**Source:** Field study, 2026

teaching in 2D contexts. The results in Table 4 show that out of the 13 teachers surveyed, two respondents (15.4%) reported their confidence level as a very confident teacher, seven respondents (53.8%) reported their confidence level as a confident teacher and four respondents (30.8%) reported their confidence level as a somewhat confident teacher. No teachers were reported in the study as not being confident in teaching two-dimensional Creative Arts. The results above show that the outcome from the survey results was that all of the teachers surveyed perceived themselves to have some level of confidence to teach two-dimensional Creative Arts. However, confidence is not a direct marker of PCK, as some understandings of teacher professional knowledge have defined PCK as knowledge not only of subject content but also as knowledge of how to transform content into powerful learning experiences through modelling, teaching activities, demonstrations and assessments (Wang & Shapii, 2026; Žydžiūnaitė & Matulaitienė, 2026). This means that strong PCK consists

of skills to guide students through art making, address barriers to understanding art skills and processes, show these processes, and support students' progress in developing their craft, despite teachers' confidence discussing art vocabulary (line, shape, color, pattern, drawing, composition, etc.) (Barabanov et al., 2026; Priyanda et al., 2025). The 30.8% of teachers who responded as being only somewhat confident could indicate that teachers' preparedness regarding the practical aspects of two-dimensional Creative Arts (such as demonstration, trial and error, experimentation with materials, feedback on the quality of the artwork and monitoring learner's creative products) is inadequate. Studies on teacher professional knowledge have shown that the conceptualization of effective teaching is a combination of content knowledge, pedagogical reasoning, and contextualized decision-making (Joaquim et al., 2025). Lack of confidence may limit teachers' ability to use their artistic knowledge within learner-focused pedagogy.

**Table 5:** Knowledge and Skills of Creative Arts Teachers

| Main Theme                      | Categories/Description           |
|---------------------------------|----------------------------------|
| Knowledge and Skill of Teachers | Competent                        |
|                                 | Inadequately Skilled             |
|                                 | Poorly Trained / Undertrained    |
|                                 | Limited in Practical Application |
|                                 | Technically Proficient           |

**Source:** Field study, 2026

Additionally, the findings resonate with similar challenges of teacher professional training and curriculum implementation of Creative Arts education within Ghana as previously reported, such as insufficient teacher training, challenges in lesson planning, inadequate instructional resources, and lack of teacher professional support (Dordzro, 2025; Agbenyo et al., 2025). These results indicate that teachers' prior experience in classroom environments and their experience working in the field may be the foundation of their reported confidence levels, rather than confidence in their preparation to teach Creative Arts. Similarly, across the globe, it has been noted that teachers' professional knowledge supports their confidence in teaching, and depends on subject knowledge preparation and professional development (Mondal, 2025; Wang & Shapii, 2026). Overall the data suggest that teachers possess some degree of PCK in 2D Creative Arts, but this may not be at a sufficient level to ease the practical and creative aims of the curriculum. Moderate confidence potentially also prevents learners from engaging in essential artistic processes such as shading, color mixing, collage, printmaking, composition and creative experimentation. Therefore, the strengthening of teachers' PCK through active development and training in the teaching, and provision of resources and support for, learner-centered, teaching practices is critical for improving two-dimensional Creative Arts teaching in schools.

### Teachers' Knowledge and Skills as Creative Arts Educators

Headteachers were asked whether the Creative Arts teachers were perceived to have the subject knowledge and skills necessary to teach the two-dimensional Creative Arts. As shown in Table 5, headteachers believed that the teachers were technically expert in teaching the Creative Arts, and others believed that they had not been prepared specifically with the subject knowledge and skills. The contrast between findings indicates that the overall PCK of 2D Creative Arts differs between schools, and that while teachers are capable in the curriculum, they are not familiar with nor knowledgeable about the processes to ease creative and practical experiences. The qualitative

study revealed that lack of requisite knowledge and skills also impacted negatively on teachers' ability to teach Creative Arts. For instance, one headteacher reported that *"Since Creative Arts dwells much on skill acquisition, it poses serious challenges to teachers because the knowledge and skills are not there"* (Headteacher 005). Another said, *"Teachers lack the required knowledge and skills to handle the subject"* (Headteacher 003). Given the responses, it can be concluded that even if teachers have the general knowledge and skills for teaching, they may lack the artistic knowledge and practical experience needed to teach the Creative Arts. Recent studies have found that Creative Arts teachers require a combination of discipline-based knowledge, performing skills, creativity, and pedagogical knowledge to convert their knowledge of arts into meaningful learning experiences for students (Mpofu et al., 2025).

These findings are similar to those reported in Agbenyo et al. (2025), who argued that many teachers who taught Creative Arts in Ghanaian basic schools lacked subject specialization, and were deployed to teach the subject to fill a gap, not because they had a specialization in the subject area. Similarly, Dordzro (2025) asserted that poor teacher training, inadequate teaching materials, lesson planning and curriculum implementation were meaningful challenges to the teaching of Creative Arts in Ghanaian basic schools. These difficulties may instead cause teachers to provide mainly theoretical instruction with far fewer opportunities for creative activities such as drawing, painting, collage, printing, design, and composition.

The headteachers also suggested that the challenges teachers faced were in part due to the school environment. One headteacher explained that *"some teachers know the subject but have no good materials, no access to technology, no time, and no money"* (Headteacher 001, 2025). This suggests that the challenges in Creative Arts that are not solely related to teacher competencies, but also related to the institutional support systems, resources for teaching, and the provision of professional development opportunities for teachers. Such challenges have also been documented in studies of Creative Arts education as being related to the provision of resources and conducive teaching and learning environments, as well as active teacher professional development.

**Table 6:** Headteachers' Perception of the Importance of Learning 2-D Arts

| Main Theme                  | Categories/Description                |
|-----------------------------|---------------------------------------|
| Importance of Creative Arts | Practical and Hands-On Learning       |
|                             | Critical Thinking and Problem-Solving |
|                             | Skill Development                     |
|                             | Self-Expression                       |
|                             | Creativity and Imagination            |

**Source:** Field study, 2026

(Mngomezulu et al., 2025). Overall, results show that Creative Arts teachers possess subject matter knowledge but need support to teach practical skills, pedagogical content knowledge, and the integration of knowledge and skills. Continuous professional development opportunities, access to art resources, instructional supervision, and school support are required to help teachers to provide practical, meaningful, and creative instructional art experiences (Jingwen et al., 2026).

### Headteachers' Attitudes towards Learning of Two-Dimensional Artistry

Table 6 shows headteachers' perceptions of the teaching and learning of two-dimensional Creative Arts, showing that headteachers' perceptions of Creative Arts subjects were positive. They believed that Creative Arts subjects offered hands-on learning opportunities to develop critical thinking, problem-solving skills, self-expression and develop creative skills and imagination. Given the influence of school leadership attitudes on the intended curriculum, resourcing and support for teaching, and the overall environment in which students experience learning (Alkan et al., 2026; Ozturk et al., 2024), this raises the possibility that the attitudinal perspective of school leadership may reflect the educational merit of two-dimensional art-making experiences beyond entertainment. In terms of the general aims of Creative Arts, headteachers appeared to understand the broad potential; creativity, imagination and self-expression were all mentioned frequently. However, only limited reference was made to broader intrinsic curricular aims of artistic literacy, safeguarding of cultural heritage, visual literacy, appreciation of indigenous knowledge systems and transdisciplinary learning. The findings thus show that some school leaders perceive two-dimensional Creative Arts as a practical arts subject rather than a cognitive subject for developing learners' cognitive, cultural, and creative capacities. Contemporary views of arts education are that creative learning areas develop the whole learner through problem-solving, identity and culture, as well as innovation skills (Kilu & Sanda, 2025; Yudess, 2025). Although headteachers have a narrow view of Creative Arts, they have a role as instructional managers

responsible for delivering the curriculum and supporting teachers to achieve the intended outcomes. When a school's leadership has a tenuous understanding of the benefits of the Creative Arts, and how the subject fits within the teaching and learning of the school, this will impact on how Creative Arts are prioritized in instructional leadership, professional development and the resourcing of teaching and learning. Research shows principals' understandings and beliefs shape the strength of support for explicitly introduced and specialist learning areas in schools (Alkan et al., 2026). The analysis concluded that there was a need for strong leadership across the teaching and learning of Creative Arts, especially in relation to competency-based outcomes. The aims for the teaching and learning of 2D art went beyond simply making drawings or art. They also included developing students' creativity and reading and making visual images and conceptualizing and expressing ideas. Pedagogical literature has shown that creativity-related skills can be taught through the use of learning activities and school culture oriented toward creativity and exploration (Jingwen et al., 2026; Thiel et al., 2026). As a result, headteachers who see CA as cognition and culture, rather than expression, are more likely to implement good CA practices. Headteachers have some knowledge of the importance of two-dimensional Creative Arts, but it is not thorough. Continued professional development can help school leaders monitor and evaluate progress, deploy resources, lead and support teachers, and improve outcomes for two-dimensional Creative Arts pupils. Improving school administrators' understanding of Creative Arts may help them recognize it as a subject equipped with creativity, cultural awareness, critical thinking and other skills, thus ensuring the effective implementation of Ghana's Creative Arts primary school curriculum.

### Pedagogical Content Knowledge of Arts Teachers

Table 7 shows the extent to which teachers displayed Pedagogical Content Knowledge (PCK) while teaching two-dimensional creative arts. Teachers were moderately satisfactory on some indicators of teaching practice but less satisfactory in transferring content knowledge into



**Table 7:** Teachers' Pedagogical Content Knowledge

| Variable                                | N  | Mean | Std. Deviation |
|-----------------------------------------|----|------|----------------|
| Clear Learning Objectives               | 13 | 2.54 | 1.20           |
| Lesson Plan Structure                   | 13 | 2.31 | 1.18           |
| Material and Resources                  | 13 | 2.15 | 0.90           |
| Knowledge of Content                    | 13 | 3.62 | 1.42           |
| Incorporation of Pedagogical Strategies | 13 | 1.85 | 0.69           |
| Cultural Relevance                      | 13 | 1.33 | 0.49           |

**Source:** Field study, 2026

pedagogical practice. They were least confident in stating learning objectives ( $M = 2.54$ ,  $SD = 1.20$ ), using a lesson plan ( $M = 2.31$ ,  $SD = 1.18$ ), and using materials and resources ( $M = 2.15$ ,  $SD = 0.90$ ). They were most comfortable teaching creative arts content ( $M = 3.62$ ,  $SD = 1.42$ ) and knew arts content better than they could communicate or integrate it in their classrooms. This is the basis for pedagogical content knowledge (PCK): subject knowledge is different from the skill needed to show and explain it to make it easy for others to understand. Wang and Shapii (2026) claim it includes teachers' use of an adequate representation, demonstration, and explanation, as well as appropriate teaching and assessment methods, to make the core ideas accessible to all learners. The findings also revealed that teachers showed sufficient soundness in their subject content knowledge of the curriculum document's two-dimensional creative arts content lines: color, shape, pattern, drawing, and composition. However, their pedagogical content knowledge was weak ( $M = 1.85$ ,  $SD = 0.69$ ), suggesting difficulty in translating subject-matter knowledge into teaching content. Similar situations were found when teachers had reasonable content knowledge but low levels of PCK due to insufficient initial professional training or limited teaching experience (Yusoff et al., 2023). Cultural relevance ( $M = 1.33$ ,  $SD = 0.49$ ) had the lowest mean of the four themes. This is unfortunate, as in creative arts education children should connect to local materials, indigenous knowledge, visual communication, cultural symbols, artefacts, cultural patterns, family and community aesthetic activities, rather than abstractions and imports from commercial and social networks. Existing research in visual arts education has demonstrated the importance of visual culture and local context, as well as lived experience, for art education curricula (Zhang et al., 2026). The low prevalence of cultural references in the database may therefore limit students' cultural knowledge, aesthetic experience and visual literacy (Zhang et al., 2026). In terms of learner-focused teaching, the score for this area is particularly low, indicating that learners are not being exposed to learner-centred approaches such as demonstration, guided practice, practical experimentation, reflection, critique, and feedback. In particular this is disadvantageous in subjects like two-dimensional creative arts that lend themselves to a learner-centered approach where techniques and skills are acquired through practice,

and where sound teacher subject content knowledge and effective pedagogies, which support creativity, exploration and active learning (Wang & Shapii, 2026), are important prerequisites for effective teaching and learning. Agbenyo et al. (2025) also found that many Ghanaian creative arts teachers had never been professionally trained to teach visual art activities. Like the other subjects in this study, Dordzro (2025) found that inadequate teacher training and teaching and learning materials and the difficulty of interpreting the Creative Arts curriculum hamper the teaching of Creative Arts subjects in Ghanaian primary schools. Qualitative data were also collected to reinforce the quantitative findings. For example, '(NBMAS School's Teacher 007a)' said, "*Professional development training for teachers and the introduction of creative art materials will help improve our teaching.*" This shows that teachers know what they do not know and have determined that continuing professional development (training) is an area where improvement is needed. Further, this corroborates the findings of earlier studies that untrained social studies teachers who are teaching out-of-field are unable to develop subject-related pedagogical content knowledge (Abutin et al., 2026) that limited teaching and learning resources prohibit practical learning since creative arts require other tools of the trade for learners to explore and sharpen their artistic skills. These teachers require creative arts content knowledge and pedagogical content knowledge to make local culture relevant to integrated creative arts, establish learner-centered direct art-making practices, and assess learners' creative products. Preservice and in-service teacher education and professional development for integrated creative arts, therefore, need to address the knowledge dimension and model integrated creative arts pedagogies that are contextual to local culture and learner-centred in assessing learners' creative products.

## Conclusion

The study sought to explore the PCK of primary school teachers in the teaching of the two-dimensional aspect of Creative Arts in the Asante Akim-North Municipality of the Ashanti Region of Ghana. The objectives of the study were achieved. Research aims included determining levels of



PCK for primary school teachers, the exploration of classroom practices and investigating contextual influences on Creative Arts teaching. Participants had moderate levels of PCK, with a stronger understanding of two-dimensional Creative Arts content than teaching strategies, cultural knowledge, and learner-centered approaches to teaching and learning. Most teachers reported being confident or somewhat confident in teaching 2D Creative Arts, but this did not necessarily correlate with good PCK in the subject. Teachers show PCK by transacting their content knowledge into meaningful learning experiences through demonstrations and modelling, instructional strategies, experiential learning, feedback, and the assessment of students' creative work. Teachers had knowledge of art concepts such as line, shape, color, pattern, drawing and composition, but rarely applied these concepts into culturally relevant, culturally grounded and creativity-focused learning experiences. Qualitative data indicated that the level of knowledge and practical skills of teachers varied from school to school. Some teachers demonstrated a basic level of competence in Creative Arts teaching, while others indicated that they lacked preparation, practical skills and specialized training to teach learners about different fine arts. These included painting and collage, chalk shading, printmaking and creative composition. In addition, the study found that weakness in Creative Arts teaching was due not only to the competency of individual teachers, but also to contextual factors such as a lack of instructional resources, opportunities for professional development, and institutional support. Thus, while primary school teachers possess some basic PCK to teach the two-dimensional Creative Arts, further development of teachers' PCK is needed to achieve the practical, creative, and culturally relevant objectives of the Ghana Creative Arts Curriculum for Primary Schools. Improving teachers' pedagogical competence, and access to diverse resources and school-based support for teachers, is critical to improving how Creative Arts are taught. However, the relatively small (n=13) sample size of Creative Arts teachers in only one municipality, as well as the limitations of self-reported data on teacher confidence, means that generalizations made from these findings should be treated with caution when considering their relevance to the entire population of primary school teachers in Ghana. Larger studies, including longitudinal and cross-comparative research across other regions, may provide further evidence of how teachers understand and develop their PCK within Creative Arts.

### Recommendations for Practice

The results led to recommendations for teaching two-dimensional Creative Arts in Ghanaian primary schools. The GES, teacher education institutions, and school

management authorities should provide in-service training for Creative Arts teachers on practical activities. The training should focus on drawing, painting, collage, printmaking, colours, shading, pattern-making, composition, classroom presentation, and assessment of learners' creative work. Second, Creative Arts teaching and learning materials are vital for effective teaching. Learners need drawing materials, paint, brushes, paper, recycled materials, visual resources and locally available art tools. As practical subjects, these materials are important for learners to practice, create, and become skilled in art. Finally, for effective programs, teachers should use local cultural resources for two-dimensional Creative Arts, including indigenous symbols, artefacts, customary patterns, cultural community practices and materials found in the local area. Such programs offer children opportunities to develop understandings of local context and culture, creativity, and visual literacy.

### Recommendations for Further Research

Future studies should include larger samples from other parts of Ghana to generalise the findings of this study on teachers' PCK in Creative Arts and could investigate the effects of in-service creative arts professional development programs on teaching and learning. Further comparative studies, particularly between highly trained Creative Arts specialists and generalist primary teachers, could outline how teacher preparation might influence Creative Arts teaching practice.

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