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Lived Instructional Experiences of Technical Drawing Teachers in Teaching Grades 7 and 8 Learners: Pedagogical Practices, Classroom Challenges, and Skills Development in Public Secondary Schools – Gamu Agri-Fishery School

Mary Ann F. Medrano

Gamu Agri-Fishery
maryann.flores101@deped.gov.ph

Abstract

This qualitative study explored the lived instructional experiences of Technical Drawing teachers in teaching Grades 7 and 8 learners at Gamu Agri-Fishery School. Specifically, the study examined teachers' pedagogical practices, classroom challenges, and strategies in developing learners' technical drawing skills. Using a qualitative phenomenological research design, the study involved purposively selected Technical Drawing teachers handling Grades 7 and 8 learners. Data were gathered through semi-structured interviews and analyzed using thematic analysis. Findings revealed that teachers utilized demonstration-based instruction, guided practice, performance tasks, hands-on activities, and contextualized teaching strategies to improve learners' technical drawing competencies. Participants emphasized that practical activities enhanced learners' precision, creativity, and problem-solving skills. However, teachers encountered challenges related to limited drawing materials, inadequate laboratory facilities, insufficient instructional time, varying learner abilities, and difficulties in maintaining learner engagement during technical activities. Despite these challenges, participants demonstrated adaptability and commitment by improvising instructional materials and modifying teaching approaches according to learner needs. The study highlights the importance of strengthening institutional support, improving instructional facilities, and providing sustained professional development opportunities for Technical Drawing teachers in public secondary schools.

Keywords: *Technical Drawing, pedagogical practices, skills development, classroom challenges, qualitative inquiry, public secondary schools*

Introduction

Technical Drawing is an important component of Technology and Livelihood Education (TLE) that develops learners' spatial visualization, precision, creativity, problem-solving abilities, and technical competencies. It equips learners with foundational knowledge and practical skills necessary for engineering, architecture, industrial arts, drafting, and other technical-vocational disciplines. Through Technical Drawing instruction, learners develop the ability to interpret, construct, and communicate ideas using standardized drawing conventions and technical representations.

In the Philippine K to 12 educational curriculum, Technical Drawing serves as a preparatory subject that develops learners' practical and employable skills aligned with industry standards and technological advancement. Teachers handling Technical Drawing classes are expected to facilitate competency-based, learner-centered, and hands-on instructional approaches that support skills acquisition and technical proficiency among learners.

Teaching Grades 7 and 8 learners presents significant instructional demands because learners are still developing fine motor skills, technical accuracy, concentration, and spatial understanding. Technical Drawing teachers must employ effective pedagogical practices that encourage active participation, practical application, and learner engagement while addressing varying learner abilities and classroom conditions.

The integration of demonstration-based instruction, guided practice, collaborative activities, and performance-based assessment has become essential in Technical Drawing education. Teachers often utilize actual demonstrations, step-by-step procedures, drawing exercises, and practical activities to facilitate skills development and learner mastery. According to David Kolb, experiential learning occurs through concrete experiences, reflective observation, and active experimentation, emphasizing the importance of hands-on activities in technical-vocational instruction.

Despite the importance of Technical Drawing education, several instructional challenges continue to affect classroom implementation in public secondary schools. Existing studies have identified concerns related to inadequate instructional materials, insufficient drafting equipment, overcrowded classrooms, limited laboratory facilities, and varying learner competencies. These challenges affect teachers' ability to effectively deliver practical instruction and sustain learner engagement during technical activities.

Furthermore, Technical Drawing instruction requires patience, precision, and individualized guidance due to the practical nature of the subject. Teachers often encounter difficulties in managing classroom activities while simultaneously assisting learners with different skill levels and learning paces.

Although several studies have examined technical-vocational education, limited qualitative inquiries have explored the lived instructional experiences of Technical Drawing teachers in public secondary schools, particularly in rural educational contexts. Understanding teachers' lived experiences provides valuable insights into instructional realities, pedagogical adaptability, learner engagement strategies, and classroom challenges encountered in Technical Drawing instruction.

Hence, this study explored the lived instructional experiences of Technical Drawing teachers in teaching Grades 7 and 8 learners at Gamu Agri-Fishery School. Specifically, it examined teachers' pedagogical practices, classroom challenges, and strategies in developing learners' technical drawing skills.

Research Objectives

This study aimed to explore the lived instructional experiences of Technical Drawing teachers in teaching Grades 7 and 8 learners.

Specifically, it sought to:

1. examine the pedagogical practices utilized by Technical Drawing teachers in teaching Grades 7 and 8 learners;
2. explore the classroom challenges encountered by Technical Drawing teachers during instruction;
3. determine teachers' experiences in developing learners' technical drawing skills; and
4. identify the coping mechanisms and instructional adaptations employed by teachers in addressing instructional and classroom challenges.

Methodology

Research Design

The study employed a qualitative phenomenological research design to explore and understand the lived instructional experiences of Technical Drawing teachers in public secondary schools.

Participants and Locale of the Study

The participants consisted of eight purposively selected Technical Drawing teachers from Gamu Agri-Fishery School who were handling Grades 7 and 8 learners.

Data Collection Procedure

Semi-structured interviews were utilized to gather in-depth information regarding teachers' instructional experiences, pedagogical practices, classroom challenges, and learner skills development strategies. Interviews were conducted face-to-face and audio-recorded with participants' consent.

Data Analysis

Data were analyzed using thematic analysis following the framework of Virginia Braun and Victoria Clarke. Data coding, categorization, and thematic interpretation were conducted to identify recurring themes and patterns.

Ethical Considerations

The study observed ethical principles including confidentiality, informed consent, voluntary participation, anonymity, and respect for participants' rights throughout the research process.

Results and Findings

Theme 1: Demonstration-Based and Hands-On Pedagogical Practices

Participants consistently described the implementation of demonstration-based and hands-on instructional approaches in teaching Technical Drawing among Grades 7 and 8 learners. Teachers emphasized that actual demonstrations, guided practice, performance-based activities, peer collaboration, and repetitive drawing exercises were among the most effective pedagogical strategies in helping learners understand technical concepts and develop drafting skills.

One participant shared:

“Mas natututo ang learners kapag actual na ipinapakita ang drawing procedures.”

Another teacher explained:

“Hands-on activities help learners understand measurements and technical accuracy.”

Participants highlighted that step-by-step demonstrations enabled learners to clearly observe proper drawing procedures, measurement techniques, line construction, lettering, and instrument handling. Teachers explained that learners demonstrated better understanding when they personally modeled technical processes before allowing learners to perform activities independently.

Several participants emphasized that guided practice was essential in developing learners' technical accuracy and confidence. Teachers explained that learners required continuous supervision and feedback while performing drawing tasks to avoid errors in measurements, proportions, and line quality. Participants noted that repeated exercises and actual application strengthened learners' mastery of technical drawing procedures.

One participant remarked:

“Kailangan talagang i-guide sila habang nagdo-drawing para maitama agad ang mistakes.”

Another teacher shared:

“Practice is very important because learners improve gradually through repetition.”

Participants further emphasized the importance of experiential and performance-based learning activities in sustaining learner participation and motivation. Teachers observed that learners became more engaged during practical drawing tasks, collaborative projects, and actual drafting exercises compared to lecture-based instruction. Group activities and peer collaboration also encouraged learners to share ideas, compare outputs, and assist classmates experiencing difficulties.

Several teachers explained that practical drawing exercises enhanced learners' concentration, precision, creativity, and spatial visualization skills. Participants observed that learners gradually developed patience, discipline, and attention to detail while completing technical drawing outputs.

One participant stated:

“Technical drawing activities train learners to become more patient and careful.”

Teachers likewise observed that experiential instructional practices supported differentiated learning by allowing learners to progress according to their own pace and abilities. Participants explained that some learners required additional demonstrations and individualized assistance, especially during complex drawing activities.

The findings indicate that experiential and demonstration-based pedagogical practices effectively support technical skills development, learner participation, and practical understanding in Technical Drawing education. These findings align with the experiential learning theory of David Kolb which emphasizes that learning occurs through active participation, concrete experiences, and reflective practice. The findings likewise support constructivist perspectives emphasizing active learner engagement and guided learning experiences in technical-vocational instruction.

Theme 2: Instructional and Classroom Challenges in Technical Drawing

Participants identified several instructional and classroom challenges that affected the implementation of effective Technical Drawing instruction among Grades 7 and 8 learners. Teachers consistently emphasized concerns regarding insufficient drafting materials, inadequate laboratory facilities, overcrowded classrooms, limited instructional time, and varying learner competencies.

One participant stated:

“Mahirap magturo kapag kulang ang rulers, triangles, at drawing materials.”

Another teacher shared:

“Some learners struggle in maintaining accuracy and proper measurements.”

Participants explained that limited instructional resources hindered learners' ability to fully participate in practical drawing activities. Teachers emphasized that insufficient rulers, triangles, drawing sheets, compasses, and drafting tools affected the quality and continuity of classroom exercises. Some participants explained that learners occasionally shared materials during activities, which slowed classroom progress and limited individual practice opportunities.

Several teachers also highlighted the inadequacy of classroom spaces and laboratory facilities for conducting technical drawing activities. Participants noted that overcrowded classrooms made it difficult for learners to work comfortably and affected teachers' ability to monitor learners' outputs and behaviors effectively.

One participant remarked:

“Kapag masyadong siksikan sa classroom, nahihirapan silang gumawa ng accurate drawings.”

Teachers further emphasized difficulties in managing learners during practical activities because Technical Drawing requires concentration, focus, and close supervision. Participants explained that some learners became distracted, impatient, or easily discouraged when tasks became difficult or time-consuming.

Another participant explained:

“May learners na madaling mawalan ng focus kapag mahirap ang activity.”

Participants likewise observed that learners possessed varying levels of fine motor coordination, drawing abilities, and spatial understanding. Teachers noted that some learners required additional instruction and repeated demonstrations before mastering technical procedures. Slow learners often experienced frustration during activities involving precise measurements and detailed line work.

One teacher stated:

“Hindi pare-pareho ang ability ng learners kaya kailangan talagang maging patient.”

Participants also identified limited instructional time as a major challenge in Technical Drawing instruction. Teachers explained that technical activities often required longer periods for demonstrations, guided practice, checking outputs, and providing corrective feedback. However, limited class schedules restricted the amount of time available for practical activities.

The findings suggest that institutional limitations, inadequate instructional resources, and learner-related difficulties significantly affect instructional delivery and classroom management in Technical Drawing education. These challenges hinder teachers' ability to maximize experiential learning opportunities and

provide individualized learner support during practical activities.

Theme 3: Developing Learners' Technical and Practical Skills

Participants consistently perceived that Technical Drawing instruction contributed significantly to the development of learners' practical, technical, and cognitive skills. Teachers observed improvements in learners' precision, discipline, creativity, analytical thinking, problem-solving abilities, and attention to detail through continuous participation in drawing activities.

One teacher remarked:

"Learners develop patience and discipline through drawing activities."

Another participant explained:

"Technical drawing improves learners' analytical and visualization skills."

Participants emphasized that technical drawing activities trained learners to become more organized, systematic, and careful in completing tasks. Teachers observed that learners gradually learned the importance of accuracy, cleanliness, proper measurements, and time management while performing drafting activities.

Several participants highlighted that drawing exercises enhanced learners' spatial visualization and problem-solving skills. Teachers explained that learners learned how to interpret dimensions, analyze technical figures, and visualize objects from different perspectives. These competencies improved learners' understanding of technical concepts and strengthened their critical thinking abilities.

One participant shared:

"Natututo silang mag-analyze ng figures at measurements habang nagdo-drawing."

Participants further observed that Technical Drawing instruction encouraged creativity and self-confidence among learners. Teachers explained that learners became more confident in presenting outputs and solving technical problems independently after repeated practice and successful task completion.

Another teacher stated:

"Kapag natatapos nila ang outputs nang maayos, tumataas ang confidence nila."

Teachers also emphasized that Technical Drawing prepared learners for advanced technical-vocational subjects and future career opportunities related to engineering, architecture, drafting, and industrial technology. Participants believed that the subject provided foundational skills essential for technical and vocational development.

Several participants explained that performance-based tasks strengthened learners' practical competencies by allowing them to apply theoretical concepts in actual drawing situations. Teachers observed that learners became more motivated when they recognized the real-world applications of technical drawing skills.

The findings reveal that Technical Drawing education promotes technical competence, analytical thinking, discipline, creativity, and practical skills development among Grades 7 and 8 learners. These findings support technical-vocational education principles emphasizing experiential learning, practical application, and skills mastery in preparing learners for future academic and occupational opportunities.

Theme 4: Instructional Adaptability and Teacher Resourcefulness

Despite instructional limitations and classroom challenges, participants demonstrated adaptability, creativity, and resourcefulness in sustaining effective Technical Drawing instruction. Teachers explained that they continuously improvised instructional materials, modified classroom activities, utilized locally available resources, and adjusted instructional strategies based on learner needs and classroom conditions.

One participant shared:

"We improvise materials and maximize available resources during activities."

Another teacher stated:

"Teachers need patience and creativity in teaching technical skills."

Participants emphasized that resourcefulness was necessary in addressing the lack of drafting tools and instructional materials. Teachers described using improvised rulers, recycled papers, locally available materials, and alternative teaching aids to ensure continuity of classroom activities despite resource

shortages.

Several participants also explained that they modified drawing activities according to learners' skill levels and learning capacities. Teachers provided additional guidance, simplified procedures, and individualized assistance to learners who experienced difficulties in technical tasks.

One participant explained:

“Ina-adjust namin ang activities depende sa capability ng learners.”

Participants further highlighted the importance of patience, encouragement, and positive reinforcement in maintaining learner motivation and participation. Teachers explained that Technical Drawing requires persistence and continuous practice; therefore, learners needed emotional support and constructive feedback to improve their confidence and skills.

Another teacher remarked:

“Importante ang encouragement kasi may learners na madaling ma-discourage.”

Participants also demonstrated flexibility in classroom management by adjusting teaching approaches according to class size, available facilities, and instructional time limitations. Teachers emphasized that effective instruction required adaptability and innovation to ensure meaningful learning experiences despite institutional constraints.

The findings suggest that teacher adaptability, instructional resilience, and resourcefulness significantly contribute to sustaining effective Technical Drawing instruction in public secondary schools. Teachers' ability to innovate, improvise, and modify instructional practices enables them to maintain learner engagement and support skills development despite resource limitations and classroom challenges.

Discussion

The findings revealed that Technical Drawing teachers utilize demonstration-based, experiential, and learner-centered pedagogical practices that enhance learners' technical competencies and practical skills. Hands-on activities, guided practice, and performance-based tasks facilitate meaningful learning experiences and strengthen learners' understanding of technical drawing concepts.

The study further revealed that Technical Drawing instruction contributes positively to learners' precision, analytical thinking, creativity, discipline, and problem-solving abilities. Teachers perceived that repeated practice and practical application improved learner confidence and technical proficiency.

However, the study also identified several instructional challenges including inadequate drafting materials, overcrowded classrooms, limited facilities, and varying learner abilities. These challenges hinder effective instructional delivery and classroom management during technical activities.

Despite these difficulties, teachers demonstrated strong instructional adaptability and resourcefulness by improvising materials and adjusting instructional strategies according to classroom conditions and learner needs. The findings underscore the important role of teacher resilience and creativity in sustaining effective technical-vocational instruction.

Conclusion

The study explored the lived instructional experiences of Technical Drawing teachers in teaching Grades 7 and 8 learners at Gamu Agri-Fishery School. Findings revealed that teachers employ demonstration-based, hands-on, and learner-centered pedagogical practices that enhance learners' technical drawing competencies and practical skills.

Teachers perceived that Technical Drawing instruction improves learners' precision, creativity, analytical thinking, discipline, and technical proficiency. However, instructional challenges related to inadequate materials, insufficient facilities, limited instructional time, and varying learner abilities affect the implementation of effective instruction.

Despite these challenges, teachers demonstrated instructional adaptability, creativity, and resilience in sustaining meaningful learning experiences for learners. The study concludes that effective Technical Drawing instruction requires adequate institutional support, instructional resources, and sustained teacher development programs.

Implications of the Study

The findings provide important implications for educational leaders, curriculum planners, and school administrators. Schools may strengthen support for Technical Drawing education by improving laboratory facilities, providing adequate drafting materials, and ensuring sufficient instructional resources for practical learning activities.

Professional development programs focusing on technical-vocational pedagogy, classroom management, and skills-based instruction may further enhance teachers' competencies and instructional effectiveness. Schools may likewise encourage collaborative resource-sharing and innovation among Technical Drawing teachers to improve instructional delivery.

Future researchers may conduct similar studies in other educational settings to further explore instructional practices, learner experiences, and skills development in Technical Drawing education.

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