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Corresponding author:
[1]Reynaldo V. Moral, PhD
Master Teacher I, Department
of Education, Division of Cebu
City, Cebu, Philippines
E-mail:
reynaldo.moral@deped.gov.ph

Reviewing editor:
Professor Dr Triyo Supriyatno
UIN Maulana Malik Ibrahim
Malang, Indonesia

[2]Eugene Embalsado
Teacher III, Department of
Education, Division of Cebu
City, Cebu, Philippines

[2]Victor Rey B. Lomocso
Teacher I, Department of
Education, Division of Cebu
City, Cebu, Philippines

PERSPECTIVE DRAWINGS OF SENIOR HIGH SCHOOL STUDENTS IN HOUSEKEEPING AND TECHNICAL DRAFTING: A THEORY DEVELOPMENT APPROACH

Reynaldo V. Moral, PhD[1], Eugene Embalsado[2], Victor Rey B. Lomocso[3]

Abstract: The study focused on senior high school students' perspective drawings who are majoring in housekeeping and technical drafting of the Technical-Vocational Livelihood (TVL) Track. It is an attempt to develop a theory as well as formulated an academic strategic plan that will give students the advantage, they will need in making the transition from high school to college. The specific objectives are to explore the students' images based on the drawings they have created and discover the aspects of perspective drawing as essential to a teacher's presence. There were ten (10) informants in this study that has been systematically collected and analyzed. With the adapted lesson plan of Thrive Collective approach, the study utilized the grounded theory during data analysis with the following stages: open coding, axial coding, and selective coding. Subjects should understand what is being asked of them and involved persons must be competent to consent. From the conducted thematic analysis, three (3) propositions were drawn up: (a) when the students are interested in what they are doing, they will be able to perform the task effectively and efficiently; (b) students learn by imitating others on how they do things aided by technology, and (c) solving problems could be done gradually by using mental visual perceptions. From the propositions, these hypotheses were derived: (a) student's ability could be recognized based on their drawings; (b) the power of students' imagination could be put into practice, and (c) life skills are influenced by the students' intellectual capacity with the guidance of the teachers. Considering these suppositions, students' perspective drawings are brought by imagery in relation to real-world problems.

Keywords: drawing, housekeeping, technical drafting

1.1 Introduction

Drawing plays a vital role in the development of humans' cognitive domain. It can help them learn how to write and think creatively, develop hand-eye coordination, sharpen analytic skills, and conceptualize ideas. Generally, most high school students rarely used a tool for learning in school since high school teachers are not trained in visual education. For these types of learners and educators, drawing is not something that should be confirmed in art lessons. As a matter of fact, it is a skill that can play a role in many different subject areas in school education, and later in the workplace (Adetunji, 2016). As cited by Picard and Gauthier (2012) "a drawing is much more than what it represents". In addition to depicting the figurative aspects of everyday objects (e.g., a car), drawings can express psychological moods and basic emotions.

In the pandemic process due to COVID 19, the change and transformation in education, which started with the process of integrating communication technologies into education, paved the way for the emergence of alternative systems to traditional education practices and further strengthened existing systems such as distance education (Elitaş in Dilmac, 2020). According to the results of the study conducted by Duran (2020), there is consistency between the drawings and interviews of the children during the COVID-19 pandemic. In addition, students react differently to online education, and their reaction is based on their proficiency in using online tools, their ability to technically access online courses, and the instructors' manner of conducting learning activities (Butnaru et al., 2021).

Moreover, many of the measures that the region's countries have adopted in response to the crisis are related to the suspension of face-to-face classes at all levels, which has given rise to three main areas of action: the deployment of distance learning modalities through a variety of formats and platforms (with or without the use of technology); the support and mobilization of education personnel and communities; and concern for the health and overall well-being of students (ECLAC-UNESCO, 2020).

Consequently, according to the Organization for Economic Co-operation and Development (OECD, 2018), students will need to develop curiosity, imagination, resilience, and self-regulation; they will need to respect and appreciate the concepts, perspectives, and values of others; and they will need to cope with failure and denial, and to move forward in the face of adversity. Their inspiration will be more than getting a good job and a high income; they will also need to care about the well-being of their friends and families, their communities, and the planet.

In this principle, the investigation by Chedi (2015) reviews the challenges facing technical graphic/ drawing skills acquisition, the use of ICT in the teaching methodology, and the essential issues related to the enhancement of teaching and learning. The reviews revealed that learners find it difficult to Visualize a Multi-view Drawing and use CAD. Various research discovers that the use of ICT such as Computer Animated Modules for Engineering Drawing (CAMED) and multimedia computer-based instruction enhances Technical Graphic/ Drawing skills acquisition for teaching and learning.

A new study shows that drawing is superior to activities such as reading or writing because it forces the person to process information in multiple ways: visually, kinesthetically, and semantically. Across a series of experiments, researchers found drawing information to be a powerful way to boost memory, increasing recall by nearly double. Importantly, the benefits of drawing were not dependent on the students' level of artistic talent, suggesting that this strategy may work for all students, not just ones who are able to draw well (Terada, 2019).

Likewise, it has been speculated from the article of Riley (2017) on the domain of drawing as a systemic-functional semiotic model informed by Michael Halliday's model for language, as adapted by Michael O'Toole in his 2011 The Language of Displayed Art. The model is demonstrated as an aid to the production of drawings, rather than its more-recognized efficacy as a means of negotiating meaning from existing works. Furthermore, Makowska (2012) assumed that the work of a future architect requires the unification of thinking and drawing – conscious drawing of every single line. University education is a time of idealism and rejection of any compromises; however, the subsequent professional work verifies unfeasible ideas and teaches architects how to adapt their projects to investors' and contractors' requirements. In this extremely important period of unrestricted, creative drawing students can discover their potential and find pleasure in creative work.

Uz (2018) states that drawing is the basis of plastic arts and at the same time is a means of expression for artists. While requiring handicraft, drawing also brings along an intellectual, emotional, and mental process. It is also a field, where alongside the objective reality of personal emotions, thoughts and dreams can manifest themselves. In contrast, the study by Rose (2014) suggests that school and home drawing environments may be less influential than previously thought. Alternatively, there might be fewer differences between the school types than the curricula suggest. Consequently, future research should consider the artistry of teachers and parents and observational data of classroom art lessons and home drawing experiences.

To carry out the role of Technical Vocational & Livelihood (TVL) teachers as catalyzers of development, the importance of accuracy in any technical drawing, the use of CAD, or computer-aided design programs, is becoming increasingly common. These programs increase the speed and accuracy of the drafting process, as well as make the reproduction of drafts as simple as printing text documents (Career Trend, 2017). As a matter of fact, the study of Arslan and Dazkir (2017) indicates that the student's lack of skills in technical drawing and in creating 2D and 3D mental visualizations negatively influenced their design process. This is substantiated by the report of Yapici and Koldemir (2015) that the movement of the pieces with the help of technical drawing programs, forces suffered during the movement of materials, types of material, and help to all kinds of engineering calculations. Based on actual body measurements with laser technology it has become well-done modeling.

With advancements in technology and modernization, the face of housekeeping has changed, and is no more considered to be a back-of-the-house department of the hotel. The housekeeping department ensures the cleanliness, safeguarding, and aesthetic entreat of the hotel. However, with the passing of time, housekeeping services are increasingly becoming scientific and mechanized and technology has brought a substantial change in efficiency and product quality in the housekeeping department as it leads to a reduction of manpower and time (Uttarakhand Open University, n.d.). In addition, the competency achievement of students as an intern in the housekeeping department needs to be evaluated through the performance assessment. Their performance is judged by internal and external examiners. Therefore, the competency of the students is in accordance with the hotel standard (Jubaedah et al., 2019).

In the local situation, at Don Sergio Osmeña Sr. Memorial National High School, it is observed that some Grade 12 students show an inclination in the field of drawing and are currently taking technical drafting and housekeeping. Their transition from junior high school TVL subjects needs to be enhanced to prevent insecurities in one's drawing ability. This means students can be reluctant to use drawing as a way of organizing their thoughts. Unfortunately, the current school year 2021-2022 shows that their Mean Percentage Score (MPS) in Technical Drafting is 60.0% and 44.33% for the first semester. More so, their MPS in Housekeeping reveals 59.0% and 54.21%

which indicates very alarming that needs to be compared for the next semester. These figures were taken from the current report of the School Monitoring, Evaluation, and Adjustment (SMEA) coordinator and validated by the Learning and Development (L&D) coordinator of the school.

The given scenarios and trends are uncommon and unforeseen for senior high school TVL students. This prompted the researchers to find out why these students practice and nurture their inner artists to improve their achievement in these major subjects through perspective drawing. In this intervention, perspective drawing is a technique to create the linear illusion of depth. As objects get further away from the viewer they appear to decrease in size at a constant rate. It is one of the most common issues beginners have with drawing and painting. Since the starting point of the K to 12 curriculum, the school has never undergone intensive action research concerning students' experience in technical drafting and housekeeping relevant to other disciplines in Technical Vocational Livelihood (TVL) as one of the tracks offered under Senior High School programs in the Philippines which is designed to provide students with job-ready skills that they will need in the future. Hence the purpose of this study is to formulate an academic strategic plan that will give senior high school students the advantage they will need in making the transition from high school to college. By giving a strong overview of academic expectations, students will be better prepared to meet the challenges of collegiate academics.

1.2 Basic Research Questions

The research questions of this study are formulated as follows:

What are the students' images in technical drafting and housekeeping based on the drawings they have created?

How do senior high school students describe their perceptions of teacher presence in the technical drafting and housekeeping class?

What aspects of perspective drawing do senior high school students perceive as essential to a teacher's presence in technical drafting and housekeeping class?

What immediate strategic plan may be formulated based on the findings of the study?

2.1 Innovation, Intervention, and Strategy

The generated theory in this study may contribute to School Improvement Planning (SIP) by combining the concepts constituting the foundation for positive improvement results of the senior high school TVL curricula through the meaningful teamwork of the researchers; measuring the learning goals taken from the Most Essential Learning Competencies (MELCs); and the regular collection and analysis of performance data using the informants' drawings and utterances. The shift to distance learning and hybrid learning has required innovation, adaptation, and more coordination than ever to support students during the module distribution and retrieval period. This activity gives students space to share how they are doing, what they are thinking about, and how they are experiencing school despite the pandemic by helping students recognize that teachers care about what they have to say and how they are feeling. Furthermore, provide the researcher's insight into students' lives so that researchers can act on the information that students share in an intentional manner.

2.2 How to Implement This Intervention Virtually:

> Choose a day of the week to conduct a Temperature Check with students. This could be something they do at the beginning of a meeting/class, towards the end of a class, or asynchronously.

> Send out a Google Form as a quick way for students to tell you how they are feeling and what support they need. (Download and customize our free Google Forms template for facilitating virtual temperature checks.) Consider asking students to rate how they are feeling on a scale of 1-5, check off specific feelings that they're experiencing (e.g., happy, hungry, anxious, overwhelmed, bored, etc.), and share additional details about why they think they are feeling this way.

> Have students complete these Temperature Checks on a regular basis (once per week or once per month, if not more frequently) in an agreed-on period so they have a regular pulse of what is happening within our school and in our students' lives.

> If we identify a student who needs extra support, is sure to find time to check in with them individually and help connect them with any additional resources they may need.

Finally, the findings of the study lead to creating sound dissemination to increase awareness of the making of basic research to the TVL teachers and, therefore, maximize the impact that the research can have in improving the educational outcomes of the senior high school graduating students that will benefit from it. This will be presented in two cycles during the In-service Training (INSET) or Learning Action Cell (LAC) to enrich the teachers' practices with the most effective strategies and with the newest findings from research evidence in order to increase the quality of their educational interventions and develop professional knowledge and skills throughout the education process within the school year.

3.1 Methodology

3.2 Research and Sampling Design

This study used a grounded theory approach. It is a research method concerned with the generation of a theory that is 'grounded' in data that has been systematically collected and analyzed. It is used to uncover such things as social relationships and behaviors of groups, known as social processes. It is a general methodology for developing a theory that is grounded in data that is systematically gathered and analyzed (Noble & Mitchell, 2016). Analytical procedures and sampling strategies are then used, and the study is finished when theoretical sampling reached discussed below. Data collected may be qualitative or quantitative or a combination of both. Data collection methods often include in-depth interviews using open-ended questions. Questions can be adjusted as theory emerges. Observational methods and focus groups were also used. Participants must meet a form of a requirement that fits the purpose, problem, and objective of the study. Based on Form 14 of the class advisers, there will be 5 informants out of 40 students in the Grade 12 section Heimat who are currently taking up Housekeeping and informants out of 47 students in the Grade 12 D section Dexterity major in Technical Drafting. Therefore, the total sample size is 10.

3.3 Data Gathering Methods

A perspective drawing lesson plan was provided in this study adapted from Thrive Collective (Minton, 2020). Thrive Collective provides project-based learning that teaches both art and life skills. To the extent possible, every lesson plan provides three clear goals. First, what art skill, subject area, or big idea is being taught (the art "learning")? Second, what will the students produce by the end of the class (the "project")? Third, how does that art skill translate into an everyday life skill (life "learning")?

The first part of enhancing the students' perspective drawing was the utilization of the class outline wherein the primary project is called perspective. This was carried out based on the following objectives: (1) Be introduced to perspective, horizon lines, vanishing points, as well as one-point perspective. (2) Draw an example using the edge of a table as a horizon line and a regular household object in 3-dimensional form from one- and two-point perspectives. (3) Be asked to think of instances where perspective is important in deciding (sports, problem-solving, etc.). This will be demonstrated by the TVL senior high school teacher-researchers comprising 4 steps with a limited time of 5 to 10 minutes per step and be followed by classwork and group check-in /presentations.

Furthermore, to start the grounded theory process, the researchers should:

Identify the area of interest.

Avoid preconceived theories and focus on the data only.

Use theoretical sensitivity— an awareness of subtle messages and meanings in data.

Research stops when we have reached theoretical saturation: the point where we have sampled and analyzed our data until we have exhausted all theories and uncovered all data. Grounded theory commonly uses the following data collection methods:

Interviewng participants with open-ended questions.

Participant Observation (fieldwork) and/or focus groups.

Study of Artifacts and Texts

3.4 Data Analysis

3.5 There are three stages of data analysis in Grounded Theory:

Open coding: this involves line-by-line coding where concepts and key phrases are identified and highlighted and moved into subcategories, then categories. This breaks the data down into conceptual components and the researcher can start to theorize or reflect on what they are reading and understanding—making sense of the data. The data from each participant will be 'constantly compared' for similarities.

Axial coding: at this stage relationships are identified between the categories, and connections are identified.

Selective coding: this involves identifying the core category and methodically relating it to

other categories. The relationships must be authenticated, and categories refined. Categories are then integrated together, and a GT is identified.

Analytical notes are encouraged. These are notes to oneself to explain thought patterns in relation to the data analysis. The final theory is usually generated from the integration of several analytical memos.

3.6 Ethical Considerations

In this investigation, the process of obtaining consent consists of the following: consent was given freely (voluntary), subjects should understand what is being asked of them, and involved persons must be competent to consent. This means, that to participate in a research study, participants need to be adequately informed about the research, comprehend the information, and have the power of freedom of choice to allow them to decide whether to participate or decline. Participants' agreement to participate in this study was obtained only after a thorough explanation of the research process (Arifin, 2018). Furthermore, Cline and Nelson (2013) states that parental permission is held to the same standards as informed consent and is required (absent a waiver) for research involving students. It means the agreement of a child's parent(s) or guardian to the participation of their child or ward in this action research.

4.1 Results

Four themes emerged from the analysis of respondents' significant statements from which responses to the study were drawn during the manual coding.

4.2 Varying Aspects of Learning

In an inclusive classroom where the different types of learners with different learning needs are overwhelmingly being taught together, it is fascinating how the teacher ensures the quality of education. It has been a mantra of almost if not all, educational institutions that there should be no students that should be left behind. All must move forward regardless of one's capability. Capturing and maintaining the learners' interests as well as ensuring how to deliver instructions in a way that all students including those with learning difficulties can comprehend and perform the necessary tasks is quite challenging. This requires knowledge and skill to address all these challenges.

Differentiated instructions can play an important role in ensuring that the needs of all learners are addressed properly. Incorporating arts into the different subject areas can be a great strategy to enhance the spatial intelligence of the learners. This allows them to be more creative thus improving their cognitive skills. Moreover, technology-aided instruction can also play a very important role in maintaining and ensuring students' interest and learning. When the learners are interested and engaged, it becomes easy for the teacher to transfer knowledge.

4.3 Technologically- Driven Instruction

Providing feedback in terms of technology utilization could be more apparent when teachers used the traditional ones. Since the trend of the 21st century sees the learners as more adept and more of them are exposed to a variety of digital tools to gauge where they could be more creative in thinking and engaging in a particular lesson with the use of their perspective drawings.

From asynchronous online scenarios to synchronous settings, it is still set from the minds of the senior high school TVL students on exploring related topics while allowing the slower

students more time to understand the material with the help of the teachers in creating lessons more enjoyable. Nevertheless, technology enables students to explore new dimensions and deepen their understanding of difficult concepts, particularly in technical skills enhancement.

4.4 Work Commitment

In a classroom setting where learners have different types of capacities to learn, commitment to work may vary their outputs. Every learner has their own way of learning. It is quite a challenge to a teacher how to inject commitment, especially in a workplace in which commitment to work should be visible to ensure the quality of outputs. Commitment to work and dedication can lead them to be more creative and can bring impact to the workplace as well as to their lives.

Being committed to work helps our learner to show professionalism and demonstrates time management skills, easy to approach and willing to help voluntarily, shows confidence for the job, becomes a team player, open for evaluation and suggestions and lastly shows leadership skills. Therefore, taking the job is a strong commitment that the teacher's client's response to the quality of instruction which may pay off during the series of activities embedded in the instructional plan.

4.5 Creativity

Creativity is the ability to come up with unique and original solutions. A creative thinker learner shows the ability known as creative problem-solving. Students' skills in drawing shows highly capable of valuable and marketable soft skill in a wide variety of possible careers. This indicates that manual technological drafting and integrating it with housekeeping skills has changed the respondents' learning environment as they do the hand-on the practical applications of the used media.

Furthermore, senior high school students' outcome varies their drawing outputs if their commitment is not visible. The real love to draw but due to lack of knowledge and resources they are deprive and not able to practice their skill, and their drawing skills are not acknowledged and not supported nor appreciated. It is therefore essential that the support system and appreciation must be practiced wherein the emotions as well as the feeling of students' on how the sense of creativity is employed as part of the system in the making of project.

From the conducted thematic analysis, three (3) propositions were drawn up:

Proposition 1: When the students are interested in what they are doing, they will be able to perform the task effectively and efficiently.

Adapting to the inevitable evolution of technology in this modern world where different types of learners exist, slow and fast, is vital. It is also crucial to ensure that the learner's interest is ignited during the learning process as it guarantees an easy and quick grasp of new knowledge. Hence, technology-driven instructions allow the learners to explore the spectrum of acquiring knowledge where learners are exposed to a more realistic setting or instruction.

> "I was self-taught, though the first time I did perspective, it was more unintentional. But still, I enjoy of what I am doing while keeps on drawing and drawing (P1, Lines 6-14)".

Proposition 2: Students learn by imitating others on how they do things aided by technology.

The learners of today are already having the right amount of capability to create and commit to producing the best drawing outputs, they just need some support internally and externally. In this premise, technology is very vital in terms of support for them in such a way that is a whiz kid alights in the age of digitalized activity. However, seeing a model shown by the teacher could be of great help for the students to pattern their plans in the making of the design. Indeed, an engagement of one's work with the idea of replicating a masterpiece would indicate that the pursuit of learning occurred since there exists a commendable type of motivation that aspires the TVL students to be creative.

> "In order for me to learn and improve perspective drawing skills I must practice finding the horizon line, seeing objects as shapes and emphasize my perspective through videos from YouTube sir (P7, Lines 80-83)

Proposition 3: Solving problems could be done gradually by using mental visual perceptions.

Determining the common factors that provide the student's insights may influence the ability to look for solutions to one's problem. The creative behavior as well as the gradual utilization of mental imagery in a wider context specifically broadens the scope to encompass the field of scientific discovery and application on housekeeping and technical drafting. Therefore, the student's ability to be responsible for cleaning and reporting any safety hazards to the homeowner as well as drawings providing visual guidelines and showing how to construct a product or structure will be enhanced.

> "I draw individually because I trust myself to draw better…Perspective drawing to make our furniture and can make everything and draw basics to develop our communities (P8, Lines 120-127)".

> "As a student, it helps relieve stress because sometimes when I draw, I tend to forget my problem and can help I improve my drawing skills…(P4, Lines 132-137)

> "I would discuss how perspective drawing contributes to the realistic aspect of the artwork/s. I would also discuss how perspective drawings can be used in illustrating various objects that can be related to one's chosen profession (P1, Lines 18-22).

From the propositions, these hypotheses were derived:

Hypothesis 1: Students' abilities could be recognized based on their drawings.

Once a project has been completed, the time for recognizing the students has a positive impact. Receiving recognition creates a special place in students' hearts since this is an opportunity for sharing their work with others. This conforms to the study of Jubaedah et al; (2019) wherein the competency that is achieved as an intern in the housekeeping department needs to be evaluated through the performance assessment in accordance with the hotel standard. Furthermore, giving students an opportunity to have their work affirmed and recognized by others makes learning authentic and worthwhile. As a matter of fact, some students may engage in the work from the start because they know their work will be affirmed by important people at the end.

Hypothesis 2: The power of students' imagination could be put into practice.

The teacher's quality instruction is essential for helping students to develop into truly educated persons who are capable of thinking through and effectively dealing with the complex problems of modern society. Since all persons can improve their creative imagination and thinking abilities. However, this requires an innovative educational program supported by teachers, parents, and others concerned. Makowska (2012) assumed that the work of a future architect requires the unification of thinking and drawing – conscious drawing of every single line. And so, creative drawing students can discover their potential and find pleasure in creative work.

Hypothesis 3: Life skills are influenced by the students' intellectual capacity with the guidance of the teachers.

Significant academic growth for all students is being asked with the guidance of the teachers. This happens since the type of students in the ongoing digital world is ever more diverse according to the needs of the time. Therefore, playing a greater role with compassion will have a positive effect on their students' learning, go beyond providing content knowledge and prepare the TVL teachers to differentiate their instruction to reach all students. This has a bearing on the review of Chedi (2015) on the challenges facing technical graphic/ drawing skills acquisition, the use of ICT in the teaching methodology, and the essential issues related to the enhancement of teaching and learning.

Theory Generated: Students' perspective drawings are brought by imagery in relation to real-world problems.

5.1 Recommendations

To thoroughly understand the students' perspective drawings based on their experiences among the TVL teachers in housekeeping and technical drafting, the following recommendations are proposed:

Teachers should balance the number of group activities if needed to encourage the students' self-regulated learning and pave the way to discover their individual competencies.

Students must value the importance of technical skills when working using their visual-spatial intelligence for the development of their metacognition.

A parallel study may be conducted across the K to 12 curriculum in which the competencies from the syllabi are being enhanced in the long run.

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