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INTERVENTION PROCEDURE IN DRAWING CLASSES FOR NON-ART UNIVERSITY STUDENTS: THE IMPACT OF ASSIGNMENT REDESIGN ON STUDENTS' PERFORMANCE

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Abstract

Drawing allows students to actively engage with the topic they are learning, as opposed to only taking knowledge passively (Abdullah et.al., 2023). The endeavor to teach fundamental freehand drawing techniques to non-art university students poses distinct challenges necessitating the adaptation of specific instructional methodologies. This study investigates the impact of assignment design as a part of instructional methods in a freehand drawing course tailored for non-art students and its consequent effects on student performance. Employing a multifaceted data collection methodology involving intervention, post-intervention analysis, and self-reflection questionnaires about students' perceptions of the learning process, the study seeks to elucidate which interventions in instructional procedure are efficient in improving students' overall performance. The study cohort comprises 63 second-year students drawn from diverse faculties at Prince of Songkla University in Hat Yai, Thailand, encompassing eleven students from the first semester and fifty-two from the second semester of the academic year 2023. Through visual

analysis post-intervention, informed by standardized rubric score criteria, the findings evince a significant correlation between assignment themes and student performance. Furthermore, discernible enhancements across various assignment categories suggest a marked improvement in learning outcomes attributable to the redesigned assignments implemented in the second semester compared to their counterparts in the first semester of the academic year 2023.

Keywords:

Freehand Drawing, Assignment Design, Instructional Procedure

1. INTRODUCTION

Drawing, as a form of visual art, involves the representation of objects, forms, or concepts through mark-making on surfaces like paper, canvas, or digital media (Ching, F.D.K., 2019). It encompasses a spectrum from simple sketches to highly refined artwork and utilizes various instruments such as pencils, charcoal, ink, and digital styluses (Abdullah et al., 2023). Freehand drawing, in particular, has been demonstrated to foster creative thinking while maintaining logical coherence (Budiman et al., 2021). Developing drawing skills is deemed essential for individuals to unlock their artistic potential, whether through formal instruction under a mentor or through self-directed learning (Melges, M., 2015). The study of drawing extends beyond the mere act of rendering images; it involves the perception of internal mental experiences, thoughts, and dimensional changes in nature, which are then translated into visual representations (Raxmonov, I. A., 2022). Students' works can be very different regarding the level where the outstanding ones present substantive content expressed through a well presented freehand drawing skill, taking account of clarity, the proportions, well-chosen lines, spatial imagination, projection drawing skills (Melges, M., 2015). Teaching drawing to university students with varying levels of freehand drawing proficiency presents challenges. Particularly in cases where drawing courses are part of general elective curricula unrelated to students' professional fields, instructional approaches must be tailored not only to students' skill levels but also to inspire their creativity and unlock their full artistic potential.

At Prince of Songkla University in Thailand, students from diverse faculties are introduced to the fundamentals of freehand drawing as part of a general elective course in their second year. The course, titled "Everyone Can Draw," aims to instill a basic understanding of art elements and drawing techniques applicable to various forms of self-expression. Within the

outcomes-based framework of the Creative Media and Digital Technologies curriculum, the course is designed to develop discipline-specific competencies and proficiencies. It emphasizes the practical application of fundamental artistic principles using traditional drawing tools, equipping students with skills and knowledge for engaging in visual language and communication activities in their future endeavors. Aligned with program learning objectives, the course focuses on basic drawing skills, cognitive understanding of art fundamentals in figurative art, and motor skills necessary for graphic representation. Structured as block classes over five weeks, the instructional approach adopts a tutorial-based format centered on core art elements such as line quality, volume, value, texture, color, character drawing basics, as well as various perspective and composition rules relevant to illustration. However, an observed gap exists wherein students struggle to fully integrate acquired skills into their final projects, indicating a need for a reassessment of teaching methodologies.

1.1. Description of Shortcomings

A comprehensive evaluation of submitted works and classroom observations from previous drawing courses reveals significant challenges faced by certain students in meeting assignment objectives. Key aspects of artistic expression, including line quality, proportionality, lighting, and shading, were often underutilized in conveying three-dimensional forms convincingly. Rather than employing these elements to create depth and dimension, they were frequently treated as superficial embellishments, resulting in two-dimensional representations lacking visual depth. Moreover, while traditional drawing techniques taught in class facilitate efficient graphical representation, the majority of students opted for alternative approaches, leading to shape distortions and the production of incomplete or error-ridden works. These deficiencies were most evident in the final assignment of the semester, where students were tasked with creating portrait illustrations of their classmates infused with individual creative concepts. Despite being provided with reference images, students struggled with basic human proportions, line quality, form, volume, and the integration of background elements, resulting in incomplete graphical representations and lower motivation levels. Consequently, students with prior drawing experience demonstrated noticeable progress, while novice learners experienced stagnation, consistent with Rosenshine's (1997) assertion that differences in persistence stem from past successes or failures.

Factors contributing to these challenges may include the appropriateness of assignment complexity, particularly in tasks involving human facial anatomy practice. The design of assignments, focused on program learning objectives and assuming a foundational level of drawing proficiency, may exacerbate students' difficulties. In light of these observations, two questions emerge regarding assignment design:

1. Can interventions in assignment design enhance the technical quality of students' drawings?
2. Can flexibility in selecting visual motifs for reference images in final assignments motivate students to produce higher-quality graphical representations and achieve higher scores?

2. METHODOLOGY

This classroom action research study employed data collection methods consisting of post-intervention assessments and a self-reflection questionnaire administered to students. The post-intervention assessment, conducted upon the completion of the course, aimed to compare overall outcomes with those of previous drawing courses. This assessment involved descriptive and mean analyses, utilizing rubric score criteria to evaluate students' final works. Rubric score criteria, following the standards model of assessment, were utilized based on the assertion by Biggs (2011) that this model is designed to assess changes in performance resulting from learning, thereby determining what and how well something has been learned. The utilization of rubrics aimed to guide the teacher towards more unbiased and objective assessments, aligning with the perspective of Biggs and Tang (2011) who emphasized the importance of clearly defining expectations and grading criteria for different levels of performance.

Evaluation of the final assignment was divided into sections addressing specific objectives, with allocated points reflecting the extent to which these objectives were achieved. Additionally, a self-reflection questionnaire was administered to gauge students' perceptions of assignments and instructional methods employed throughout the course, offering nuanced feedback beyond traditional lecturer evaluations. The study involved 63 second-year students from various faculties at Prince of Songkla University in Hat Yai, Thailand, spanning both the first and second semesters of the academic year 2023. Conducted within traditional classroom settings, the

research aimed to assess the redesigned drawing assignments through students' learning experiences.

Descriptive analysis was employed to identify student challenges in attaining assignment objectives, providing insights into areas requiring instructional emphasis. Frequency count and percentage analyses were used to scrutinize participants' responses to the self-reflection questionnaire, offering quantitative insights into student perceptions. Mean analysis facilitated a comparative evaluation of data from the current study with that of prior courses, providing a robust basis for assessing learning outcomes over time.

Due to the substantial volume of data acquired from multiple assignments, this paper will focus on presenting the design of the final drawing assignment, encompassing all art elements covered in classes along with the instructional procedures employed. This singular assignment will sufficiently illustrate the adaptability and applicability of potential intervention procedures within the instructional framework design for drawing classes in higher education.

3. RESULTS

3.1.Intervention Procedure: Assignment Redesign

The core instructional approach in the Everyone Can Draw classes revolves around introducing a new challenge with each exercise, aiming to facilitate the practice of diverse traditional drawing methodologies in graphic creation. This method emphasizes focusing on one art element at a time and gradually progressing towards more intricate tasks. Aligning with Mittler's assertion that the elements of art serve as fundamental components or building blocks—comprising color, value, line, texture, shape, form, and space (Mittler, 2006)—each challenge presented in the drawing class represents an art element and its practical application in visual design. Furthermore, as advocated by Aguilar and Azpeitia (2013), the assignments are structured in a cyclical manner, ensuring a coherent progression that allows for the proportional development of skills.

Within this instructional framework, the final assignment in the second semester of the academic year 2023 provides students with the opportunity to showcase proficiency in all skills acquired throughout preceding assignments. In this task, students are tasked with reinterpreting their favorite piece of artwork infused with their individual creative concepts. This comprehensive

endeavor encompasses observational drawing, fostering familiarity with basic workflows commonly employed in traditional visual art practices, and encourages creative freedom in the interpretation of specific visual styles. Through the process of copying and imitating other artists' drawings, students can achieve creative outputs and develop fundamental drawing skills. This aligns with the findings of Ishibashi and Okada (2004), whose study revealed that drawings by subjects who had previously copied others' drawings were rated as more creative than those of subjects who had not engaged in such activities. The detailed description of the final assignment design is presented in Table 1 below.

142-137 Everyone Can Draw | The Final Assignment | Semester 2-2023				
Program Learning Outcomes: • To have cultural sensitivity for effectively communicating with people in diverse society (PLO 7.1) • To be able to communicate applying both social etiquette and/or online netiquette for socializing and dealing business properly (PLO 7.2) • To concern about global issues and respond to the changing environment properly (PLO 7.3)				
Competencies to be achieved			*Description of the task and / or Procedure*	*Drawing fundamentals, techniques and tools covered in class to be utilized in the final assignment*
PLO 7.1	**PLO 7.2**	**PLO 7.3**		
●	●	●	**Re-create a favorite piece of art** Students are tasked with generating a drawing inspired by existing favorite artwork from the field of fine arts, illustration, comic books or animation. This artwork should be executed using techniques and tools learned in class, employing traditional drawing techniques or digital drawing techniques for those familiar with digital drawing software. Participants have the freedom to modify the visual representation of existing works based on their personal impressions, with the aim of expressing personal creativity, irrespective of the chosen existing concepts. The development process necessitates the creation of inicial sketches to explore and refine the idea. Additionally, visual references and minimum 2 photos of the drawing process (rough and refined sketches) are required to accompany the final artwork submission. The complexity and interplay of visual elements, along with the level of detail, should contribute to the creation of a believable scene, demonstrating a substantial investment of time and effort, as well as an understanding of fundamental artistic principles covered in class, including line quality, form and volume, light and value, color harmonies and composition.	• Freehand Sketching (gesture drawing) • Rendering high and low key values for creating illustion of three-dimensional forms • Color harmonies in relation to reference artwork • Composition balance (symetrical/ assymetrical, rule of thirds) Tools: • pencil • crayons • watercolor • color pencils • charcoal • ink

Table 1: Redesigned assignment 5 with task description and tools utilized in relation with program learning outcome.

3.2. The Final Assignment Rubric Results

The final assignment in semester 1 and 2 of academic year 2023 was evaluated on a scale ranging from 00% to 30% as the maximum achievable score. Rubric score criteria is presented in Figure 1 below. Consequently, the results are categorized into four distinct groups based on the range of scores attained in order to get more clear comparison of the final outcome between the final assignment in semester 1 and the same assignment but redesigned, in semester 2 of academic year 2023:

- Group 1: Scores falling within the range of 0 to 10%
- Group 2: Scores falling within the range of 11 to 19%
- Group 3: Scores falling within the range of 20 to 25%
- Group 4: Scores falling within the range of 26 to 30%

Concept	**Assignment 5: Re-create a favorite piece of art** Draw your own interpretation of your favourite piece of art applying the following art ellements covered in classes: • Line quality and intensity • Form and volume • Value and lighting • Color harmony	
Criteria description	a)	Reference photo is relevant (according to requirements) and development stages (minumum 3) are attached with submission 5%
	b)	Variety of lines/patches related to source of light are evident 5%
	c)	Usage of line/patches enhances the general impression of the artwork creating illusion of three dimensional forms 5%
	d)	Full range of values from darkest to lightest is creating illusion of three dimensional forms 5%
	e)	Drawing shows full understanding of color harmonies in relation to reference image 5%
	f)	Drawing is fully accomplished. All parts of the drawing are visible without confusing sections that indicate error 5%
	Total score for the assignment 5 (The final assignment) = 30%	

Figure 1: Rubric Score Criteria for The Final Assignment 5

In The Final Assignment Involved Portrait Drawing In Semester 1 Of Academic Year 2023, In The Score Range From The Group 1, Two Students Did Not Submit Their Work Resulting With Score 0%.

In Group 2, Consisting Of Two Students, Prevalent Characteristics Encompassed Lower Quality Rendering Of Values Depicting Shadows And Highlights And Insufficient Effort In Rendering Surfaces Resulting In Works That Look Incomplete.

There Were No Students Attaining Score Range From 20 To 25% In Group 3, While In Group 4 Ranging From 26 To 30%, There Were 7 Students From Which, Three Of Them Attained Maximum Score Of 30%. It Should Be Noted That Across All Groups, Deductions Were Commonly Observed In The Rubric Section, Attributable To Factors Such As The Absence Or Insufficient Submission Of Sketching Process Or Source Of The Original Reference Image (Supplementary Material A).

After Redesigning The Final Assignment In Semester 2 Of Academic Year 2023, In The Score Range From The Group 1, Only One Student Did Not Submit Their Work Resulting With Score 0%.

In Group 2, Consisting Of Two Students, Prevalent Characteristics Encompassed Lower Quality Rendering Of Values Depicting Shadows And Highlights And Insufficient Effort In Rendering Surfaces Resulting In Works That Look Incomplete.

Within Group 3, Composed Of Fifteen Students, Partial Visual Components Within Compositions Were Observed, Suggesting Potential Improvements Through The Addition Of Various Types Of Shadows And Lights, Light Reflections, Or Different Rendering Treatments.

Conversely, Thirty-Three Students Comprising Group 4 Did Not Exhibit Major Issues, With Only Minor Opportunities For Enhancement Identified, Such As Refining Some Elements In The Background Or Increasing Highlights On The Main Motif For More Believable Representation. Twelve Students In This Group Achieved Maximum Points Of 30% Showing Outstanding Creativity Coupled With Skill Set (Supplementary Material B).

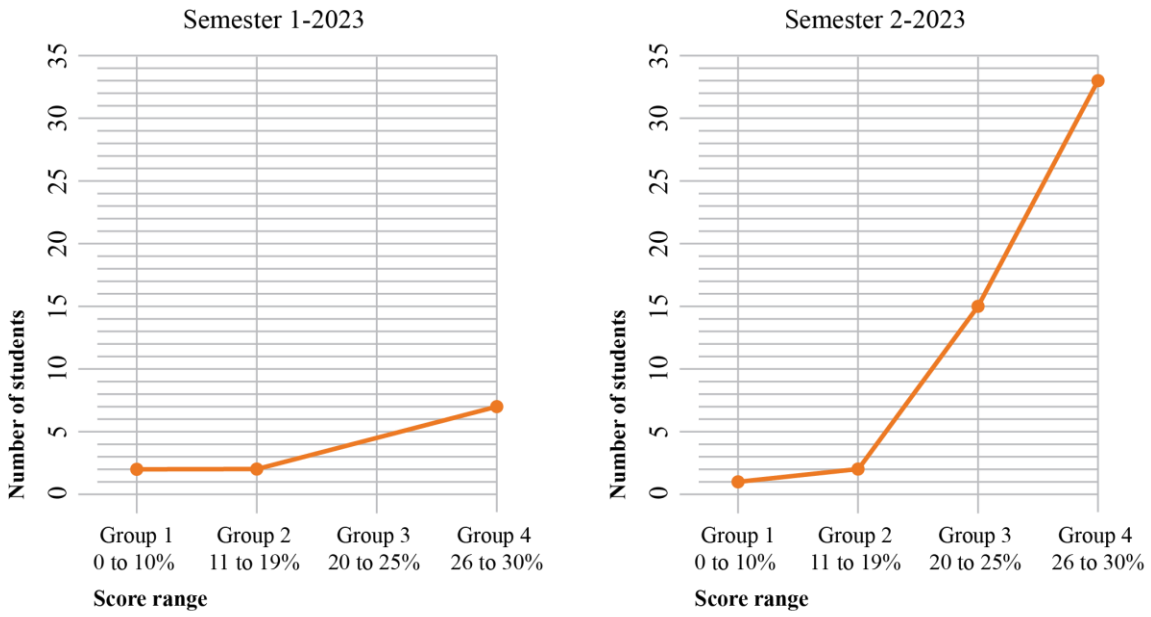

Figure 2: Results Comparison from the Rubric Score Criteria in the Final Assignment between Semester 1 and Semester 2, 2023.

Measuring in percentages relative to the class size in each semester and subsequent to the intervention involving the redesign of the final assignment in the second semester, significant progress in drawing quality is evident based on rubric evaluations compared to the preceding semester. As delineated in Table 2, a higher proportion of students achieved high-range scores in group 4 during the second semester. Conversely, following the intervention in the final assignment design, there was a notable decrease in the proportion of students obtaining scores in the low range in group 1. It is noteworthy that no scores ranging from 20 to 25% were recorded in the first semester, indicating a pronounced disparity between students with prior experience and those experiencing stagnation or diminished motivation, possibly due to the complexity of assignments involving the anatomy of facial features. These findings suggest a favorable trajectory in final outcomes attributable to the assignment redesign.

Semester year 2023	No. of Students	Attained students' score range from minimum (group 1) to maximum (group 4)				Mean	Std. Deviation.S
		Group 1 0%-10%	Group 2 11%-19%	Group 3 20%-25%	Group 4 26%-30%		
1	11	18.18%	18.18%	0%	63.63%	18	13.10509785
2	52	1.92%	3.84%	28.84%	63.46%	25.98076923	5.077788559

Table 2: A Comparative Analysis of Score Percentages for the Final Assignment, Including Mean Values and Standard Deviations (S), Across Two Semesters of The Academic Year 2023.

3.3. Responses from The Self-Reflection Questionnaire

The self-reflection questionnaire, administered anonymously, garnered responses from a limited number of students. In the first semester, only four out of eleven students participated, while in the second semester of 2023, forty-one out of fifty-two enrolled students provided responses. Given the notably low response rate in the first semester, where less than 50% of students participated, the analysis from this cohort may lack the necessary depth to accurately depict the evaluation of instructional delivery or to allow for meaningful comparison with the responses from the second semester. Consequently, for the purposes of this analysis, only responses from the second semester are considered, as presented in Table 3 below. The aim of the questionnaire was to assess the effectiveness of instructional delivery, with the overarching objective of obtaining insights into class efficiency from the perspective of the students, thereby identifying potential areas for improvement.

Analysis of the responses indicated that a significant proportion (39%) of participants reported engaging in freehand drawing habits and expressed a keen interest in enhancing their skills. Conversely, 29.3% indicated that they occasionally engage in casual drawing but do not pursue it seriously. These responses suggest that the majority of enrolled students have an expectation of acquiring freehand drawing techniques rather than merely seeking recreational activity or easy scores. Regarding instructional delivery preferences, a substantial percentage (68.3%) expressed a preference for feedback directly from the lecturer during class sessions, particularly when the lecturer provides suggestions and demonstrates drawing techniques with pencil on paper. This inclination indicates a high reliance on the instructor's professional

expertise and aligns with the tutorial-based class concept. In terms of future considerations for the course, a surprising 73.2% of students expressed an interest in life drawing using still-life motifs over photo references. This suggests a readiness among students to engage in more advanced art course experiences.

Demographic information	Thai student	90.2% (37)
	International student	9.8% (4)
From the statements listed below, please choose one closest to your drawing experience.	I do not have a habit of drawing.	14.6% (6)
	Sometimes I scribble on paper, but nothing serious.	29.3% (12)
	Sometimes I draw and I would like to improve my skills.	39% (16)
	I often draw and I want to have deeper understanding of drawing and art fundamentals.	9.8% (4)
	I constantly draw every day and already have good drawing skills ready to bring it to a professional level.	7.3% (3)
From the list of statements below, choose one that would be the closest to your reason for choosing this subject.	I am curious about this subject and maybe it's fun.	46.3% (19)
	I like to draw and I want to learn more.	53.7% (22)
	It is easy to pass or get high grade.	0%

Table 3: Survey responses regarding drawing habits and skills.

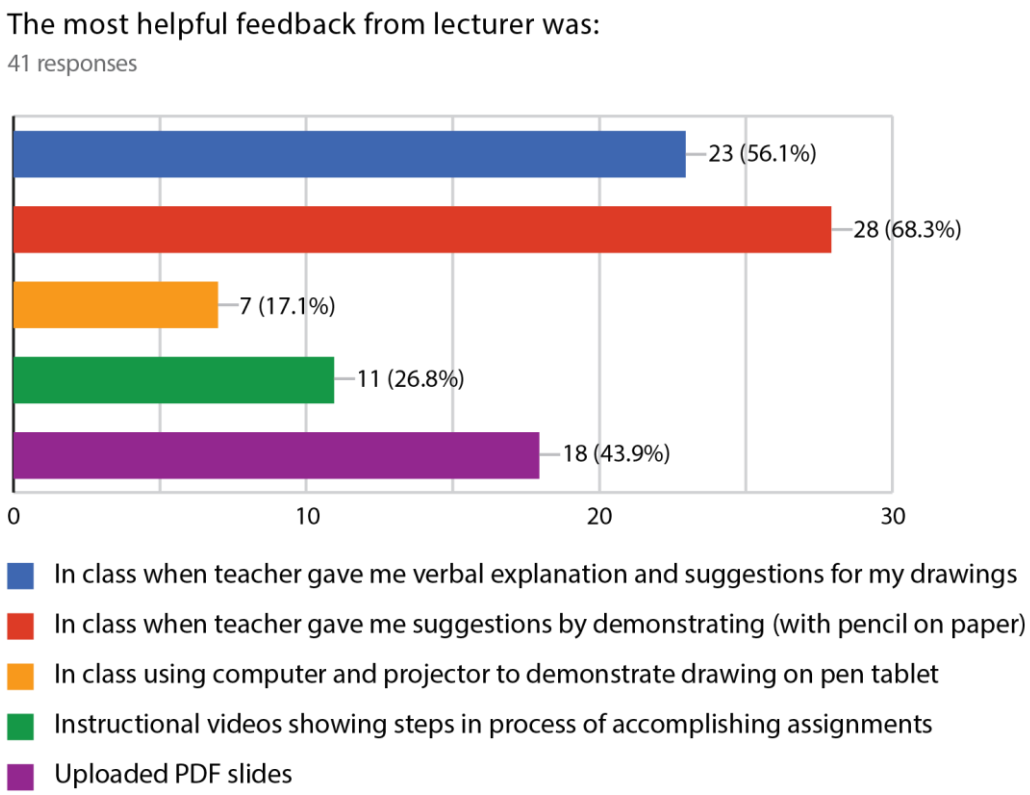

Figure 3: Survey responses regarding preferred learning modalities/feedback.

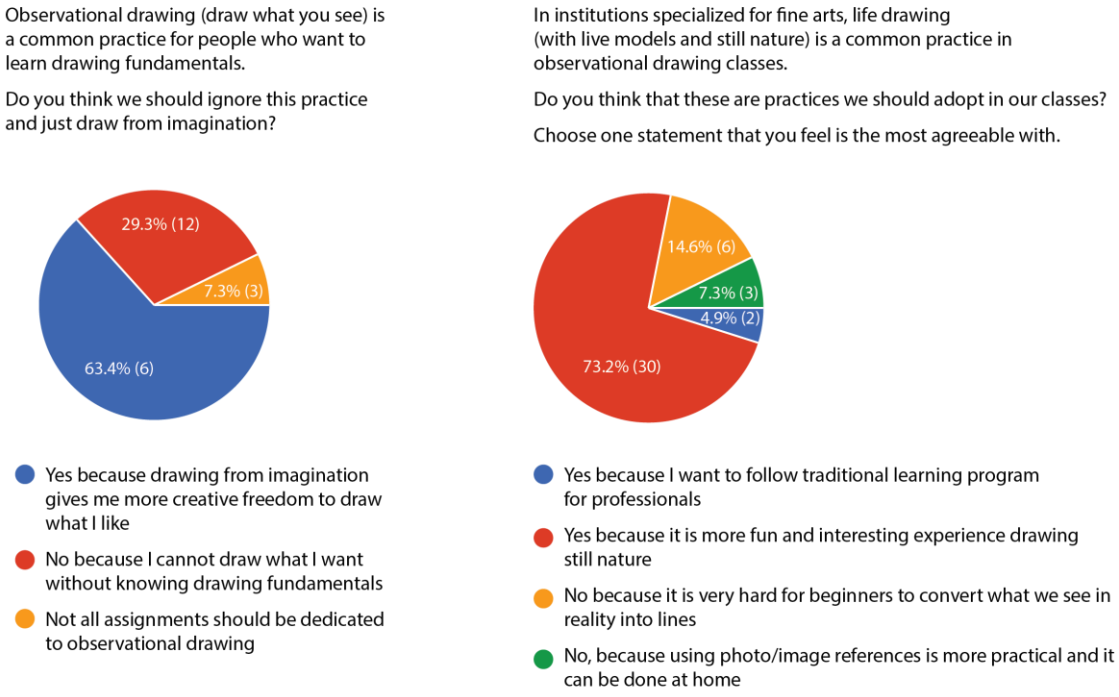

Figure 4: the survey responses concerning considerations for future practices within the class.

4. CONCLUSIONS AND DISCUSSION

This study followed a cyclical process of planning, implementing changes, observing outcomes, and reflecting on experiences to inform further action. It resulted in evidence-based improvements tailored to the needs of students and courses. Based on the results obtained, it can be affirmed that the methodology implemented in the subject in the second semester 2023, has had a positive impact on the students. Research questions Q1 and Q2 are affirmed, leading to the following conclusions:

- Artwork analysis revealed a notable improvement in the completion rate of students' work, with a majority demonstrating consistent application of specific visual styles compared to previous semesters, where instances of incomplete artworks were prevalent. This underscores the significance of assignment design in fostering student motivation.

- Technical quality, encompassing the art elements covered in class, showed visible enhancement, although line quality remained an area for further improvement. Achieving proficiency in line strokes necessitates extended practice and dedication.

- The majority of students selected random artworks they found appealing online for their observational drawing tasks, while a minority opted for fine arts from classical periods. This suggests that incorporating modern illustrations related to animation, film, comic books, and other contemporary media as observational drawing motifs could enhance student engagement.

- Responses from the self-reflection forms indicated a preference for live demonstrations in class as the most effective instructional component for understanding task execution processes and exercise objectives.

- A majority of students enrolled in the class exhibited various drawing habits, ranging from occasional scribbling on paper to more frequent drawing, with an intention to refine their skills through advanced drawing courses. These findings underscore the need for

regularly updating class materials and ensuring instructors possess the requisite professional skill set to effectively demonstrate drawing quality aligned with assessment criteria during class sessions. Additionally, these trends reflect a broader shift in higher education towards fostering proficiency in visual language irrespective of students' professional fields of study.

Drawing upon insights gained from the previous semester, it becomes apparent that assignments pertaining to human anatomy should be considered optional or potentially excluded altogether. This stems from the recognition of the prerequisite skills essential for mastering this aspect of art, as well as the considerable time investment required to comprehend the intricacies of human facial features. Offering flexibility in the selection of visual motifs emerges as a viable strategy to accommodate the preferences of both novice students and those with prior experience. Felip-Miralles and Navarro-Lizandra (2018) underscore the benefits of tailoring assignments to specific objectives, noting its positive impact on industrial design students' proficiency in discerning various formal proportions and spatial features of products, particularly through the integration of real models in observational drawing exercises. Nevertheless, it is advisable to conduct both pre-assessment and post-assessment exercises to gauge students' current drawing skills and evaluate the efficacy of instructional strategies and assignments throughout the course. Pre-assessment serves to ascertain students' prior experience and skill levels, providing valuable insights into their baseline competencies. Conversely, post-assessment conducted at the conclusion of the course allows for an appraisal of the effectiveness of instructional approaches and assignments employed during the instructional period. Marji et al. (2023) exemplify the benefits of this approach through their action classroom research, which demonstrated significant improvements in learning outcomes for orthographic drawing concepts compared to conventional learning models. Their study underscores the efficacy of incorporating real models in enhancing learning experiences and emphasizes the importance of integrating pre-assessment and post-assessment drawing exercises into the instructional framework.

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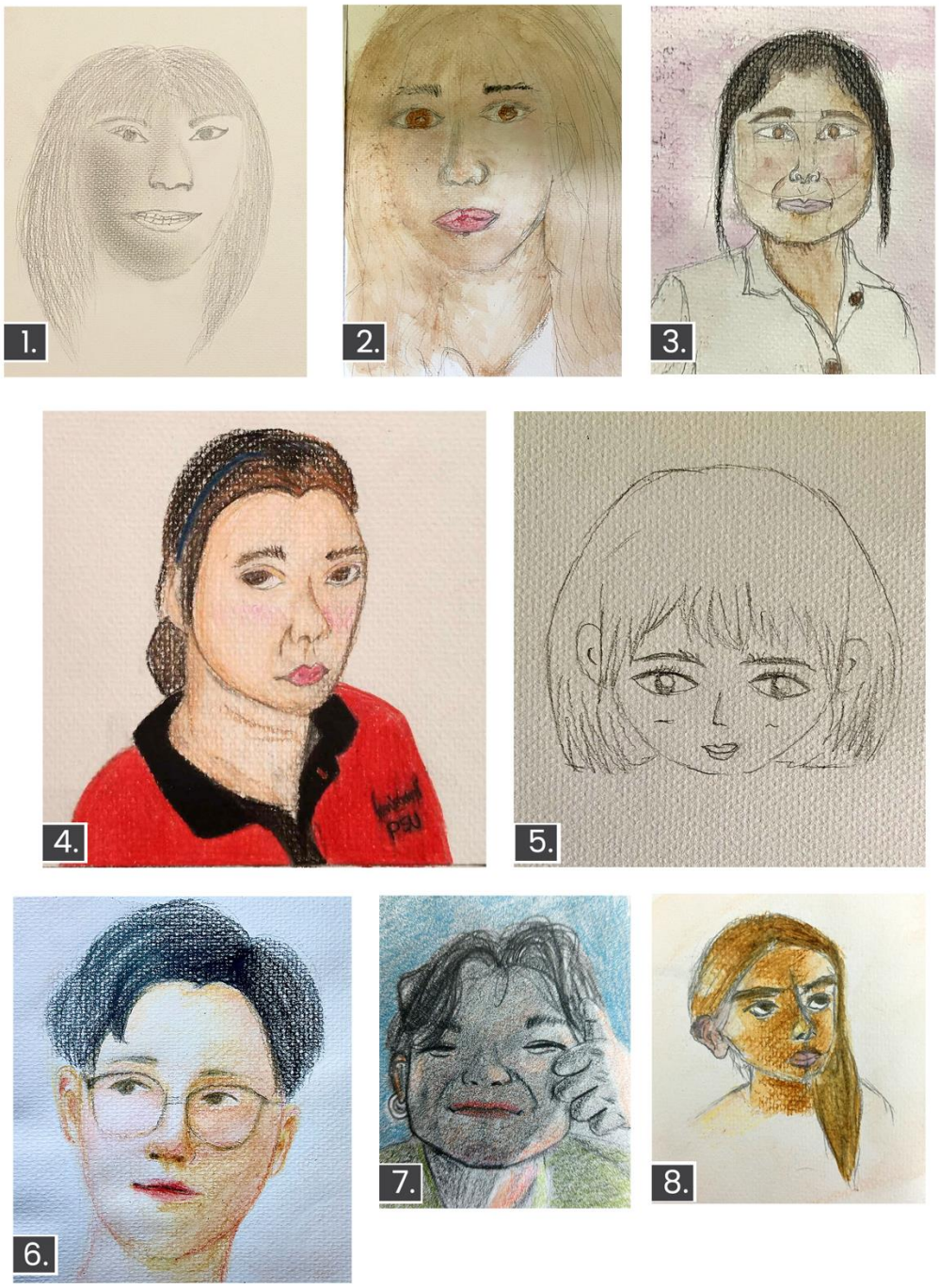
Appendix A

Example students' drawings from 142-137 Everyone Can Draw Class, semester 1, 2023.

1. Nattathida Saengpradub, 2. Chafina Daranitalae, 3. Pattama Narasupsiri, 4. Jinnaphat Mardlee, 5. Pichayapa Chotiraso, 6. Tanwarat Petgrod, 7. Shahid Sarikhan, 8. Tanyapat Doloh



Appendix B

Example students' drawings from 142-137 Everyone Can Draw Class, semester 2, 2023.

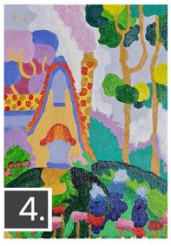
1. Khosanah Sapuding, 2. Fareeda Kumban, 3. Auranas Yaotak, 4. Paramaphon Panthep, 5. Natchareen Longji


1.


Khosanah Sopuding


2.


3.


4.


5.