Level of Mastery of the Industrial Technology Students at the Pangasinan State University

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Abstract. This is a descriptive analysis that measured the level of mastery of Bachelor of Industrial Technology (BIT) students majoring in Drafting Technology at PSU-LC (PSU-LC) during the second semester of the academic year 2019 - 2020 as the foundation for the proposed intervention steps to increase students' Drafting Technology mastery. The research enlisted the participation of 99 students enrolled in Drafting Technology. The key data collection instrument for this analysis was a questionnaire checklist, which was used by the researcher. To calculate and qualify the results, frequency counts, percentages, ranks, and weighted mean averages were used. Based on the findings of the report, intervention interventions were suggested to increase the degree of mastery of Drafting Technology students at PSU-LC. The Microstat computer software was used for all computations. The following were the study's main findings: according to the Demographic Profile of Students, the majority of the respondent students were males between the ages of 18 and 25. Respondents usually believed that the skills or competencies in Drafting Technology were "well learned by them, such as addressing the historical history of drafting" on the Level of Mastery of Students in Drafting Technology. Respondents usually believed that drawing competencies were "highly established among them, such as addressing the historical history of drawing" when asked about the extent of effect of the factors affecting the level of mastery of students. On the Level of Effectiveness of the Strategies Used in Teaching Drawing, for Student-Related Factors, respondents usually reported to have a "great extent" of impact on the level of their mastery in the various skills/competencies in Drafting Technology. Respondents usually believed that Instructor-Related Factors had a "moderate degree" of impact on their level of mastery in the various skills/competencies in Drafting Technology. Respondents usually believed that School-Related Factors have a modest impact on their degree of mastery in the various skills competencies in Drafting Technology. Respondents usually said that they faced "moderately severe problems in the teaching of Drafting Technology. Respondents usually believed that the remedial measures to address the problems experienced in the teaching of Drafting Technology were particularly relevant in terms of the Level of Applicability of the Remedial Measures to Address the Problems Encountered. As a result of the study, The following suggestions were made: the suggested action steps should be implemented to increase the level of mastery of Drafting Technology students at PSU-LC; Drafting Technology instructors should provide students with adequate practice exercises and mastery learning practices to master the least mastered skills or competencies in Drafting Technology; and Drafting Technology instructors should provide students with adequate practice exercises and mastery learning activities to master the least mastered skills or competencies in Drafting Technology, School administrators should provide appropriate administrative assistance to students' Drafting Technology-related events, plans, and projects in order to improve their success. School administrations should set aside funds for the maintenance and renovation of school buildings/classrooms/laboratories, as well as services and supplies. Finally, highly applicable remedial steps should be introduced and applied to resolve the issues faced by students during

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Drafting Technology instruction.

Keywords: Level of Mastery, Industrial Technology Students, Drafting Technology, Pangasinan State University.

INTRODUCTION

Technological advancement has drastically influenced the course of the educational system. School administrators have taken steps to cope with these changes. Hence, tertiary schools offering technology-oriented courses have repositioned themselves to produce competitive and hardworking workers. Drafting Technology is one of the curricular offerings in Higher Education Institutions (HEI's). This is viewed as a skill-oriented course. The PSU is one of the Higher Education Institutions in the region which offers the Drafting Technology curriculum. This program endeavors students to be equipped with the necessary skills, knowledge, and attitudes to become competitive workers in the industry. The mastery of drafting technology skills or competencies underscores the need for quality education which emanates from quality teaching Instruction is effective if it meets standards of performance usually in terms of academic achievement. Thus, the ultimate basis of teaching effectiveness is measured on the students' achievement. These scenarios posed a challenge to drafting technology instruction. Are standards met to realize mastery and produce a capable technological workforce? In the university, the teaching of drafting technology is faced with various issues and concerns. The attainment of mastery on the part of the students' entails a concerted effort of school administration, faculty, and staff. Furthermore, the learning environment to include facilities and equipment is likewise a point to reckon with to attain mastery of desired competencies. These conditions prompted the researcher to ask about students' proficiency in drafting technology. As a result, this study was conceptualized.

Statement of the Problem

During the 2019-2020 academic year, the report evaluated the degree of mastery of Drafting Technology students at PSU-Department LC's of Technology, as a foundation for planned intervention tests implementation of a proposed training curriculum to increase students' mastery level The analysis specifically sought answers to the following questions:

1. What is the demographic profile of respondents in terms of (a) age, (b) gender, (c) parents' educational attainment, (d) family monthly income, and (e) type of secondary school graduated from?
2. What is the level of mastery of the students along with the different skills/competencies in Drafting Technology as perceived by themselves?
3. What is the extent of the effect of the factors affecting the mastery level of students in Drafting Technology?
4. What is the degree of seriousness of the problems encountered by the students in the teaching of Drafting Technology?
5. What is the level of applicability of the remedial measures to address the problems encountered by the students in the teaching of Drafting Technology?
6. Based on the findings of the study, what intervention measures can be proposed to improve the mastery level of students in Drafting Technology?

Scope and Delimitation of the Study

During the 2019-2020 academic year, this research was carried out at PSU-Department LC's of Technology. The thesis was restricted to determining the degree of mastery of students in Drafting Technology at PSU-College LC's of Technology, Technology Department. It determined the demographic profile of respondents in terms of (a) age, (b) gender, (c) parents educational attainment, (d) family monthly income, and (e) type of secondary school graduated from It assessed the level of mastery of the skills/competencies in Drafting Technology. The research also measured the magnitude of the influence of the factors influencing

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students' mastery degree in Drafting Technology. It also evaluated the severity of the problems faced by students during Drafting Technology instruction, as well as the degree of applicability of the corrective steps to resolve these issues Based on the study's results, intervention interventions were recommended to enhance students' mastery of Drafting Technology. The research included a total of 99 students enrolled in Drafting Technology for the first semester of the 2019-2020 academic year.

METHODOLOGY

The descriptive research method was used in this report [1] [2] [10] [11]. It is descriptive because it described the level of mastery of students in Drafting Technology at PSU-LC. It is descriptive since it describes the degree of mastery of Drafting Technology students at PSU-LC. It defined the demographic profile of respondents in terms of (a) age, (b) gender, (c) educational attainment of parents, (d) family monthly income, and (e) the sort of high school from which you graduated. It represented the level of mastery of the Drafting Technology skills/competencies. The study also identified the magnitude of the influence of the factors influencing students' mastery level in Drafting Technology. It also defined the severity of the problems faced by students during the teaching of Drafting Technology, as well as the extent of applicability of the corrective steps to solve these problems. Based on the study's results, intervention interventions were recommended to increase students' mastery level of Drafting Technology. The research included a total of 99 students enrolled in Drafting Technology for the first semester of the 2019-2020 academic year.

Data Gathering Tool

The researcher used a built questionnaire as the primary data collection method for this analysis [3]. Part I of the questionnaire collected data on the demographic profile of respondents in terms of (a) age, (b) gender, (c) parents educational attainment, (d) family monthly income, and (e) type of secondary school attended. Part II collected knowledge on the degree of mastering of the Drafting Technology skills/competencies. Part III concentrated on the magnitude of the impact of the influences influencing students' Drafting Technology mastery levels. Part IV delves into the severity of the challenges faced by students when learning Drafting Technology. Part V collected statistics on the extent of applicability of remedial interventions to resolve issues faced by students during Drafting Technology instruction. Items in the questionnaire, especially those concerning competencies or skills in Drafting Technology, were adapted from Manaois's [4] book on Drafting. The things on the problems found in the teaching of Drafting Technology were derived from Munar's research [5]. Other questionnaire elements were culled from the researcher's readings in drawing books, journals, theses, and dissertations.

Validation of the Questionnaire

The questionnaire was pre-tested on ten (10) first-year BIT students who were not research participants. The pretest was carried out to determine the validity of the questionnaire in terms of material, vocabulary, and structure. The pretest results were used to restructure the sections where pretest respondents had trouble responding.

Administration of the Instrument

Before the administration of the questionnaire, the researcher sought permission from the President of PSU. Dr. Dexter R. Buted, DBA., through the Dean of the College of Technology, Department of Technology, to float his questionnaire to the target respondents. The questionnaires were administered to the respondents during the vacant hours of the respondents (12:00 - 1:00 pm) with the help of the researcher's co-instructors. Retrieval of the accomplished questionnaires was personally done by the researcher on the same day of administration

Statistical Treatment of Data

To maintain consistency and order, and for detailed review of the processed results, the data was ordered, tallied, and displayed in tables. The descriptive statistics of the analysis were presented using occurrence counts, percentages, and weighted ranks. The descriptive statistics of the analysis were presented using means and rankings [6]. The demographic profile of respondents was calculated and represented using frequency counts and percentages in terms of (a) age, (b) gender, (c)

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parents' educational attainment, (d) family monthly income, and (e) form of secondary school graduated from. The level of mastery of students around the various Drafting Technology skills/competencies was assessed. The magnitude of the influence of the factors influencing students' mastery degree of Drafting Technology was also calculated. The severity of the problems faced by students when learning Drafting Technology was assessed. The level of applicability of the corrective steps to solve the problems faced by students during the teaching of Drafting Lingayen, Pangasinan Technology was also assessed.

RESULTS AND DISCUSSIONS

It attempted to draw on the researcher's readings, skills, and insights, as well as his personal experiences as a Drafting Technology teacher at PSU-LC.

Demographic Profile of the Respondent Students

Table 1 displays the profile of the study respondents in terms of their age and gender. As shown in the table, the drafting technology students of the college are of different ages. It is however predominated by eighteen-year-old freshmen, the normal age of first-year college students. Twenty-nine though reported to be of age nineteen or about 30 percent of the group. Others were older like those who are twenty years (13), twenty-one years old (7) and who are twenty-one years and above. This means that some stopped schooling after high school and waited for better economic conditions before resuming their college education. Others though claimed that they enrolled late in grade school and therefore finished late in elementary and eventually in high school. Some others still had broken secondary schooling due to poverty or some other personal reasons.

Table 1

Profile of the Respondent Drafting Technology Students in Terms of Age and Gender, N - 99

Variable	Frequency
AGE	
Below 18 years old	0
18 years old	29
19 years old	13
20 years old	7
21 years old	4
21 years old and above	99
Total	
Gender	
Male	68
Female	31
Total	99

As regards gender, the course is predominantly male with a ratio of three females is to seven males. There are than females in the drafting course as this is one course where anybody could fit regardless of gender as long as there is the capability to draw and to be imaginative and creative. The drafting course is related to the courses in architecture and fine arts. Usually, some end up as teachers in drawing when drafting technology becomes their major in the Bachelor of Technical Vocational Teacher Education. And so, if one is inclined to become a draftsman, an architect, or one who wants to have good knowledge of drawings or plans, then drafting technology is the right course.

Table 1-A projects the socio-economic profile of the study respondents in terms of the educational attainment of their parents and the estimated monthly income of their families. As could be gleaned from the table, the education of the mothers is a little bit higher than the fathers although,

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at a glance, they seem to be on equal footing First, there was one father who had not given the chance to attend formal schooling while there was none among the mothers. Then five fathers were dropouts in the grade school against two mothers. As regards high school education for both sets, they are more or less equal as they have an identical number of high school graduates and that of high school dropouts. It remains however that the mean educational attainment of the parents is high school education as this is the highest frequency for both sexes. However, there were lesser college dropouts and more college graduates on the part of the mothers than the fathers.

Table 1-A

Profile of Respondent Drafting Technology Students in Terms of Educational Attainment of Parents and Family Monthly Income N = 99

Variables	Frequency	Percentage
A. Parents Educational Attainment		
Educational Attainment of Father		
College Graduate	18	18.18
College Undergraduate	20	20.20
High School Graduate	34	34.34
High School Under Graduate	12	12.12
Elementary Graduate	9	9.09
Elementary Undergraduate	5	5.05
No formal Schooling	1	1.01
Total	99	**100.00**
Educational Attainment of Mother		
College Graduate	20	20.20
College Undergraduate	17	17.17
High School Graduate	38	38.38
High School Undergraduate	12	12.12
Elementary Graduate	10	10.10
Elementary Undergraduate	2	2.02
Total		

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		100.00
B. Monthly Family Income	10	10.10
P5,000 and below	37	37.37
P10,001 - P15,000 P15,001 - P20,000	23	23.23
P20,001 - P25,000	16	16.16
P25,001 and above	8	8.08
	5	5.05
Total	99	**100.00**

As regards monthly family income, the mean earnings are between the income bracket of P5001 to P10,000 with thirty-seven or 37.37 percent followed closely by those who claimed to earn between P10,001 to P15,000. Only very few seem to be a little bit better in economic standing than the rest or those who earn more than P20.000 a month. Only thirteen belong to this category. Those who earn between P10, 000 and below are within the poverty threshold which is about forty-seven percent, nearly one-half of the total number. In effect, it could be said that the respondents come from poor families but with a passion that their children would be able to finish a course in college as a passage from poverty or a better quality of the life.

Table 1-B displays the type of secondary schools where the respondents completed the secondary education.

Table 1-B

Profile of Respondent Drafting Technology Students in Terms of the Type of Secondary School Graduated from N=99

Variable	Frequency	Percentage
Public Secondary School	64	64.65
Private Secondary School	35	35. 35
Total	99	100.00

The table shows that sixty-five were graduates of public secondary schools while the remaining thirty-five graduated from private secondary schools. The average student, therefore, is a male, who is either 18 or 19 years old, whose parents are high school graduates and earning just enough to make both ends meet.

Level of Mastery of Students in Drafting Technology

Table 2 presents the perceived level of mastery of the student respondents of the different skills and competencies in drafting technology from their assessments. As reflected in the table, 24 of the

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27 competencies or skills were given categorical ratings of 'highly mastered and the remaining three, 'moderately mastered'. It has to be mentioned that none among the topics or competencies were rated as very highly mastered' or those categorized as 'least mastered. Sometimes, this is the so-called error of the mean in research where respondents tend to rate themselves as average. Occupying the top slot of the competencies claimed to have been highly mastered is on their ability to discuss the historical background of drawing and that of identifying and using the different tools and equipment used in drawing. This is a must as the students have to be familiar with the tools and the use of these tools in drawing as these are likened to the carabao and the plow to the farmer or the carpentry tools to the carpenter. Coming as the third rank is their alleged familiarity to differentiate the various classification and principles involved in letterings. However, it does not mean that when one knows the principles and classification of things, he/she is already conversant or familiar with using them.

Table 2

Level of Mastery of Students in Drafting Technology as Perceived by Themselves N = 99

Skills/Competencies in Drafting Technology	Weighted Mean	Descriptive Rating	Rank
Discuss the historical background of the drafting	3.69	HM	1
Identify the different drawing tools, and equipment and their uses	3.67	HM	2
Differentiate the various classification and principles involved in lettering	3.63	HM	3
Construct angles and triangles	3.61	HM	4
Discuss the different kinds of the ellipse	3.58	HM	5.5
Construct arcs and circles	3.58	HM	5.5
Apply the principles of isometric projection	3.56	HM	7
Apply the techniques in line sketching	3.54	HM	8
Conduct inventory of tools, materials, and equipment in drafting	3.53	HM	9
Apply the principles of perspective	3.52	HM	10.5

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projection			
Draw isometric projection	3.52	HM	10.5
Use the different drawing tools and equipment properly	3.50	HM	12
Perform the strokes in freehand lettering	3.49	HM	13
Differentiate the different kinds of regular polygons	3.48	HM	14.5
Discuss the methods and principles of orthographic projection	3.48	HM	14.5
Apply the basic principles and techniques in pictorial drawing	3.47	HM	16.5
Apply the principles of oblique projection	3.47	HM	16.5
Draw orthographic projection	3.45	HM	18
Classify the different tools, materials, equipment in drafting according to use	3.44	HM	19.5
Use different kinds of sectioning symbols	3.44	HM	19.5
Draw the oblique projection	3.43	HM	21.5
Perform the different strokes and spacing of letters and words	3.41	HM	21.5
Apply the techniques of dimensioning	3.42	HM	23
Draw perspective projection	3.41	HM	24
Discuss the importance of auxiliary views	3.37	MM	25
Discuss the different kinds of dimensions	3.35	MM	26
Draw auxiliary views of symmetrical	3.30	MM	27

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and asymmetrical figures		
Average Weighted Mean	**3.49**	**HM**

Legend:

Numerical Values	Statistical Limits	Descriptive Ratings (DR)
5	4.21 -5.00	Very Highly Mastered (VHM)
4	3.41 – 420	Highly Mastered (HM)
3	2.61 -3.40	Moderately Mastered (MM)
2	1.81 -2.60	Slightly Mastered (SM)
1	1.00 - 1.80	Not Mastered (NM)

The fourth highest skill is their capability to construct angles and triangles, a very basic skill, followed by discussing a different kind of ellipses and the construction of arcs and circles. These two were given identical ratings or means of 3.58, coming as close seventh rank is the capability of applying the principles of isometric projection. The respondents claim that they are well versed in applying the principles of isometric projection in presenting objects. They also claim that they could apply the techniques in line sketching, both in freehand drawing and in mechanical drawing. They also claim to be able to conduct an inventory of tools, materials, and equipment used in drawing.

The ability to apply the principles of perspective projection and isometric projection got identical means which indicates that they are good in applying these two skills or competencies in presenting objects usually these two skills are taught simultaneously. They also claim to be good in the use of the drawing tools and that they could use them properly followed by their ability to perform the different strokes in freehand lettering. Also, they claim to be good at working with the different kinds of polygons and that of orthographic projection, pictorial drawing such as oblique drawing or oblique projection. However, the respondents were found to be least knowledgeable with auxiliary views and projections, symmetrical and asymmetrical figures, and the different kind of dimensions. This finding was supported by the study Munar [5] when she found out that students were mastered almost all the skills in an orthographic projection such as drawing the isometric views (front, top and side views) and identifying the conventional lines or alphabet of lines. However, some of the skills or competencies least mastered by the students in the drawing include drawing of auxiliary views to include symmetrical and unsymmetrical figures and applying the techniques of the different kinds of dimensions.

The extent of Effect of the Student Related Factors to Students Mastery Level

Table 3 illustrates the manner the student-respondents assessed the perceived effect of student-related factors on the level of their mastery of the different competencies and skills in drafting technology. As could be gleaned from the data, the students claimed a general level of the great effect of student-related factors to lesson mastery. This means that the students contend that their unique situations and conditions had in the way affected their performance in school.

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Table 3

The extent of Effect of the Student-Factors on the Level of Mastery of Students in Drafting Technology

N = 99

Student-Related Factors	Weighted Mean	Descriptive Rating	Rank
Economic status	3.48	GE	1
Poor study habits	3.44	GE	2
Irregular attendance (Absenteeism)	3.42	GE	3
Lack of interest in classroom activities	3.41	GE	4
Poor health condition	3.32	ME	5
Average Weighted Mean	3.41	GE	6

Legend:

Numerical Values	Statistical Limits	Descriptive Ratings (DR)
5	4.21 -5.00	Very Great Effect (VGE)
4	3.41 – 420	Great Effect (GE)
3	2.61 -3.40	Moderately Effect (ME)
2	1.81 -2.60	Slightly Effect (SE)
1	1.00 - 1.80	Not at all (NA)

As shown in the table, topping the list is the alleged effect of their economic status on their performance in drafting. For instance, due to limited budget, the drawing tools and settings that they acquired were only commensurate to what they could afford. Perhaps the quality of the tools and equipment could affect the quality of their work. Or that their low economic capability also affects their ability to procure materials, books, or whatever necessary materials that they need as a project of schoolwork or that they could not readily purchase what the course requires them to produce or procure due to unavailability of finance Sometimes, the time element is necessary And since many of the respondents come from poor families, it is then Implied that many of them suffer from the financial crisis. There is also some degree of admission of poor study habits as greatly affecting their school performance. Add to this problem is the problem of irregular attendance or absenteeism, which is their own making. It seems that the students admit that some of them frequently get absent for personal reasons which in turn is taking a toll on their school performance. Moreover, there is also some kind of self-admission that some of them lack the necessary interest in classroom activities and that this lack of self-discipline and interest is greatly affecting their performance. And some of them perhaps have some

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health problems that also, in some way, affect their school activities. This finding was supported by the study of Pintado [7] when he revealed that the performance of first-year BS Industrial Education students in Technical Drawing at Benguet State University, La Trinidad, Benguet was affected by student-related factors such as absenteeism, poor economic status, poor health condition, poor study habits, etc.

The extent of Effect of the Instructor-Related Factors to Students Mastery Level

Table 3-A projects the perceived effects of different instructor-related factors on

the level of mastery of the student-respondents in drafting technology. As a matter of comparison, this set of factors was seen as giving a lesser impact or effect on the performance of the students as against their factors or student-related problems. In effect, the students do not consider the instructors as giving them too many problems. As could be gathered from the table, the only table, only two of the conditions were seen to be ticklish to the students as provided by their instructor. One is on the perceived limited classroom activities provided by the instructor in effect, such limited activities such as exercises, plates, or projects could make some students do some loafing activities rather than be serious with the school work. Limited classroom activities become boring to the bright students who could easily accomplish a given task or project and have time to while away. Add to this is their claim of poor motivational techniques or capability.

Table 3-A

The extent of Effect of the Instructor-Factors on the Level of Mastery of Students in Drafting Technology N = 99

Instructor-Related Factors	Weighted Mean	Descriptive Rating	Rank
Limited classroom activities provided by the instructor	3.48	GE	1
Poor motivational technique	3.44	GE	2
Lack of mastery of the lesson	3.25	ME	3
Poor communication skill	3.17	ME	4
Lazy	3.12	ME	5
Strict and arrogant	3.08	ME	6
Average Weighted Mean	3.26	ME	

Legend:

Numerical Values	Statistical Limits	Descriptive Ratings (DR)

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5	4.21 -5.00	Very Great Effect (VGE)
4	3.41 – 420	Great Effect (GE)
3	2.61 -3.40	Moderately Effect (ME)
2	1.81 -2.60	Slightly Effect (SE)
1	1.00 - 1.80	Not at all (NA)

Or perhaps, the teacher has taken for granted the need to motivate the learners whenever there is a new lesson or skill to be taught. There is always the necessity of trying to lure students to pay attention to a new cognitive or psychomotor lesson as there are a hundred ways to motivate people to learn something new. There is also to some extent the problem of poor communication skills of the instructor, the tendency to be lazy, and to become strict and arrogant. While these situations were of moderate extent, it means that this is not the general situation but there are instances where they are exhibited by the instructor. This finding was supported by the study of Pintado [7] when he revealed that the performance of first-year BS Industrial Education students in Technical Drawing at Benguet State University, La Trinidad, Benguet was affected by teacher-related factors such as poor motivational technique, poor communication skills, lack of mastery of the subject matter, strict and arrogant, etc.

The extent of Effect of the Instructor-Related Factors to Students Mastery Level

Table 3-B portrays the perceived effect of some school-related factors on the level of mastery of the student-respondents on their school performance along with the competencies and skills in drafting technology. As a matter of comparison, the average weighted mean of the student factors seemed to be equal with the mean of the school factors to indicate that more or less, these two sets of factors are given an equal level of effects to the effective learning of the student-respondents.

Table 3-B

The extent of Effect of the School-Factors on the Level of Mastery of Students in Drafting Technology

N = 99

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School-Related Factors	Average Weighted Mean	Descriptive Rating	Rank
Poor teaching-learning environment	3.49	GE	1
Lack of administrative support to activities, programs, and projects in drafting technology	3.45	GE	2
Inadequate tools, equipment, and facilities	3.42	GE	3
Limited time allotment for the subject	3.41	GE	4
The curriculum in drafting technology is not responsive to the needs of the society	3.34	ME	5
Average Weighted Mean	**3.42**	**GE**	

Legend:

Numerical Values	Statistical Limits	Descriptive Ratings (DR)
5	4.21 -5.00	Very Great Effect (VGE)
4	3.41 – 420	Great Effect (GE)
3	2.61 -3.40	Moderately Effect (ME)
2	1.81 -2.60	Slightly Effect (SE)
1	1.00 - 1.80	Not at all (NA)

One of the five given situations or conditions by the researcher was rated as giving "moderate extent of effect" while the other "great extent". In comparison, this is somewhat similar to that along with student factors, it seems that there is some kind of problematic situations as regards the learning environment in the campus. Seemingly, there are situations where the students do not consider themselves very healthy. Perhaps some faculty members do not see eye to eye with their fellow teachers or there is a situation where the student-teacher relationship is healthy and sound. There seems some gap somewhere and this condition as far as the students are concerned is affecting their school performance or mastery of their lessons. Also, the students seem to decry the lack of administrative support of campus authorities towards programs and activities or projects in drafting. Perhaps the students would like to see more aggressive instances where the administration would openly suggest or sponsor activities that would challenge the ingenuity and creativity of students such as painting contests, industrial design contests, poster making contests, and the like that would motivate the creativity and resourcefulness of students. Painting the walls perhaps of the campus fence where different sceneries or trying to depict a theme where there will be prizes to be awarded by the winning works or entries. Added to this woe is the claim of the students of the inadequacy of tools, equipment, and facilities. Perhaps, due to wear and tear, some of the former equipment and tools were already lost or missing dilapidated. Since the institution had been there for many years, there might have some equipment or

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tools for the courses that no longer exist. Or that the available tools and equipment do not much the need of the students. Then there is the claim of inadequate time allotment for students to stay in the room or drawing laboratory. In effect, the students do not consider the time allotment given to the subject ample enough for them to accomplish their drawing plates or projects. And ultimately, the students are implying that there should be some drastic innovations to be introduced in the subject due to technology change and availability of state-of-the-art technology such as computer-aided drawing, whereby the students are guided to perform miracles and make-believe edifies through tinkering with the latest brand of computers. It seems that the students are wanting some curricular innovations to keep them abreast of trends and issues and or technologies that are emerging.

This finding was supported by the study of Pintado [7] when he revealed that the performance of first-year BS Industrial Education students in Technical Drawing at Benguet State University, La Trinidad, Benguet was affected by school-related factors such as inadequate tools, equipment, facilities, poor teaching-learning environment, etc.

Degree of Seriousness of the Problems Encountered

Table 4 reflects the perceived degree of seriousness of the situations or problems that has something to do relative to the drafting technology course as offered in the school understudy. A perusal of the table denotes that there is the general state of 'moderately serious' situations as assessed by the student-respondents relative to the implementation of the drafting technology course at PSU-LC. Three of the situations were considered more problematic over the other six problems. But since there are only three situations rated as "highly serious' over six others that were categorized as 'moderately serious', the overall mean rating is 'moderate. The highest-rated condition or situation and highly serious' in extent is the issue of poor teaching-learning environment earlier, this was identified as one of the school factors that affected student performance or mastery of the lessons learned in the course. It was not clear however whether this has something to do with the teacher-student relationship or teacher-administration problems. It could also mean that the room environment or the drawing laboratory is no longer conducive for effective teaching-learning encounters. But it remains that there is something wrong with the school environment, either it was classified as a school-related factor, it could be that students are craving for better classroom facilities and other things such as painted walls, A-1 school fixtures, and furniture such as tables, and chairs. The next serious problem though is student-related as this concerns their poor study habits. This is self-revealing as the student rated themselves seem to admit that some of them have very poor study habits that are conditioned by having other priorities or activities such as texting jamming, and other activities that are prioritized by today's young people. Text messaging for instance is time-consuming and before one knows it, a lot of unproductive time had been spent for text messaging with unimportant things.

Table 4

Degree of Seriousness of the Problems Encountered in the Teaching of Drafting Technology N=99

PROBLEMS ENCOUNTERED	Weighted Mean	Descriptive rating	Rank

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Poor teaching-learning environment	3.47	HS	1
Poor study habits of students	3.43	HS	2
Limited activities provided by the instructor for mastery	3.41	HS	3
Unorganized syllabus in Drafting Technology	3.36	MS	4
Lack of Teacher's mastery of the subject matter	3.35	MS	5
Inadequate tools, equipment, and facilities used in drafting	3.33	MS	6
Poor communication skills of instructors	3.31	MS	7
Absenteeism	3.22	MS	8
Strict and arrogant instructor	3.13	MS	9
Average Weighted Mean	3.33	MS	

Add to this problem is the situation where the students claim they have limited activities provided by their teachers. In effect, they are looking forward to more challenging activities and more problem-solving situations. Or that they want more innovations in the existing curriculum. It is because the next problem has something to do with the curriculum which some claimed to be not properly organized and needing more innovative topics such as those in the state-of-the-art like computer-aided instruction and computer-aided learning. Moreover, there is also a kind of complaint about the teacher's mastery of some subject matters. Perhaps there are instances where the students could sense that the teacher is not so very conversant or very knowledgeable of the subject matter. Students could sense whether the teacher is versatile and property prepared to one is lacking in preparation and groping in the dark. Add to this problem is the seeming lack of tools and equipment to use that could make students lazy or indifferent to the course or to the subject itself. This finding was supported by the study of Donguiz [8], Munar [5], and Barbadas [9].

The study of Donguiz [8] on the level of mastery of civil engineering students in Drawing at Cordillera University, Baguio City when he revealed that poor motivational technique, poor communication skill, and poor teaching-learning environment were some of the identified problems met by the engineering students in the teaching of their drawing subject. The study of Munar [5] on the performance of first-year BSIE students in Drawing at Don Mariano Marcos Memorial State University San Fernando City, La Union revealed that lack of mastery of the lesson poor motivational technique, and communication skills of the instructors in Drawing were some of the serious problems rated by the respondents. The study of Badbadaoi (2008) on the level of mastery of second-year mechanical engineering students of Don Mariano Marcos Memorial State University, Mid-La Union Campus, San Fernando, La Union in mechanical drawing revealed that strict and arrogant instructors and inadequate tools, equipment, and facilities were serious problems met by the students in the teaching of their drawing subject.

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Level of Applicability of Remedial Measures

Table 5 presents the perceived degree of applicability of the different suggested solutions as envisioned suggested by the researcher. A perusal of the table shows that all suggested solutions as proposed by the researcher were all bought by the students as they perhaps consider them to be very applicable and meritorious. All suggested solutions were then very acceptable. The highest applicable solution as the data suggests is the development and cultivation of good study habits of students by providing them activities and tasks that will force them to study their lessons. Giving or assigning them more plates to accomplish would make them work overtime. Since they claimed that there are not activities and/or challenge given to them, it is but right that they are given more activities to do or accomplish according to their capabilities. They are insinuating that there is not enough work to do or accomplish. This is true with the application of the second-highest suggestion which is on providing students with adequate classroom activities in drafting for them to master the skills and concepts required of the lesson. It means more exercises or application of concepts and skills and or processes. There is also the urgency of conducting school-based training on communication to develop further the communication skills of teachers. Perhaps this does not only concern the teacher in drafting but perhaps some other teachers in the technical department. Moreover, the school-based training program should also tackle problems of motivation as this is one of the problems identified in the study. Coming close is the suggestion of implementing a closer monitoring system of school attendance to address the problem of absenteeism among students There is the policy of the university about the maximum number of absences that a student could incur or make and when such provision is being strictly followed, then students would think twice when they are to be absent or not. There is also a good suggestion for the procurement of additional drafting tools, equipment, and facilities as a motivation strategy for the students. This could also mean more support from the administration as there was an alleged lack of support from the administration. Other suggestions include the improvement of the course syllabi, restructuring and improving the make-up and outlook of the classroom to make it conducive to teaching-learning and at the same time would encourage students to work or stay even in their vacant time.

Table 5

Level of Applicability of the Remedial Measures to Address the Problems Encountered in the Teaching of Drafting Technology N = 99

REMEDIAL MEASURES	Weighted Mean	Descriptive Ratings	Rank

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Developing good study habits of students by providing them activities or tasks that will force them to study their lessons	3.55	HA	1
Providing students with adequate classroom activities in drafting to master the skills and concepts required of the lesson.	3.53	HA	2
Conducting school-based training on communication to develop further the communication skills of instructors	3.51	HA	3
Close monitoring of students attendance	3.48	HA	4
Procurement of additional drafting tools, equipment, and facilities	3.46	HA	5
Improving the course syllabus in drafting technology to be responsive to the needs of society and the labor market	3.44	HA	6
Structuring the classroom to make it more conducive for teaching and learning	3.43	HA	7
Conducting classroom observations to determine the mastery of instructors in the subject matters they are teaching	3.41	HA	8
Average Weighted Mean	3.48	HA	

Legend:

Numerical Values	Statistical Limits	Descriptive Ratings (DR)
5	4.21 -5.00	Very High Applicable (VHA)
4	3.41 – 420	Highly Applicable (HA)

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3	2.61 -3.40	Moderately Applicable (MA)
2	1.81 -2.60	Slightly Applicable (SA)
1	1.00 - 1.80	Not Applicable (NA)

CONCLUSIONS

1. Drafting Technology students are males of average age for their year level, mostly from the public high education system and from low-income backgrounds.
2. Drafting Technology students at PSU-LC typically possessed the fundamental competencies or skills in the subject.
3. Student-related and school-related influences had a significant impact on students' Drafting Technology mastery.
4. Drafting Technology students at PSU-LC faced both major and minor issues in their Drafting Technology class.
5. Developing strong study habits in students and offering appropriate classroom exercises

will help them increase their mastery level in their Drafting Technology subject.

RECOMMENDATIONS

In terms of the guidelines, the following conclusions are reached:

1. The suggested intervention interventions should be implemented to enhance students' Drafting Technology mastery at PSU-LC.
2. Drafting Technology teachers should offer sufficient practice exercises and mastery learning opportunities to students in order for them to master the least learned skills or competencies in Drafting Technology.
3. School administrators should provide appropriate logistical assistance to students' Drafting Technology-related events, plans, and initiatives in order to improve their success.
4. School administrations should set aside funds for the maintenance and enhancement of school buildings/classrooms, services, and supplies.
5. Highly applicable corrective steps should be followed and applied to resolve the issues faced by students during Drafting Technology instruction.
6. A related analysis should be performed using a different set of variables that were not used in this study.

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