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Students' performance of BSIE and BSHE in drawing subjects in the University of Eastern Philippines

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Abstract

Aim: The purpose of the performance was to compare the Drawing grades of BSIE and BSHE majors. The study's specific aims were to (1) ascertain the socio-demographic profile of respondents in terms of age, sex, type of high school graduate, parental educational attainment, and learning resources at home; (2) ascertain the level of performance of respondents in their Drawing subject; and (3) test the significance of any relationship between the respondents' profile and their performance in the Drawing subject.
Methodology: The research was done in Northern Samar, Philippines, at the University of Eastern Philippines in University Town. In this study, we employed a descriptive correlation strategy. The sample's socioeconomic characteristics were determined through a questionnaire administered as part of the data collection process for the study. We also obtained the respondents' ratings/grades in Drawing from the University Registrar's Office to use as a basis for quantifying their performance in that course.
Findings: The majority of participants in the study performed well in the Drawing subject, according to the results. Students learned to analyze data and apply principles to concepts presented through the project method, which encouraged an exploratory approach. The demonstrative method, in which the instructor shows students how to do something for them to learn, understand, and appreciate what they're being taught, was also employed.
Implications/Novelty: The student values drawing as highly as they do industrial arts and home economics. This study has considered several factors to enhance students' performance in the Drawing subject area, as there is much to be done to enhance learning outcomes.

Keywords: Performance, Drawing, Students

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INTRODUCTION

Students majoring in Industrial Arts and Home Economics typically take Drawing as their required electives. This material is meant to supplement courses in technical fields focusing on a particular area. College graduates, Industrial Arts, and Home Economics students can improve their employment prospects by learning these skills. The researcher is a Drawing teacher who has noticed that despite the topic's significance, his or her students exhibit poor study habits, less interest, or an unfavorable attitude whenever required to apply drawing theories and principles in the context of in-class laboratory activities. However, only a small fraction of them have come to appreciate the value of art education. This could be because students need more experience and exposure to experimental practical arts.

In light of this difficulty, educators have a particularly important role to play in facilitating the learning process. Because they play such a central role, they require much attention. Teachers should take a more proactive frontline role in fixing the gaps in the educational and instructional processes to ensure that their students receive a quality and relevant education. Teachers have a decisive effect on shaping current and future pedagogical and instructional models, which are then reactivated to meet the needs and requirements of raising students' achievement levels.

The educational system in the Philippines is constantly trying new programs to find and implement more effective ways of doing things. Every educator at the school where the researcher works is strongly urged to conduct their own research into ways to boost their students' academic performance. The researcher is also a

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professor of Drawing, and in that role, he has used various teaching strategies, including the exploratory approach, illustration, project, and demonstrative methods, to provide his students with the knowledge they need. However, there is still a lot of room for improvement in the learning outcome, despite using various instructional approaches and teaching models. Consequently, the researcher's interest and motivation in conducting this study to identify the factors that affect students' academic performance in the Drawing subject were piqued by this context.

LITERATURE REVIEW

The study conducted by Pareda et al., as cited by Probadora (2011) on "The level of Difficulties along Skills Development Operations in Drawing II of the First Year, Bachelor of Science in Industrial Education of the Isabela State University", it disclosed that the learning difficulties encountered by the students have something to do with their environment, interest or motivation, personal background, and the mode of instruction in the school. It has been found personal background of the students has a significant relationship with difficulties that affect learning. Further, Azodo (2017) pointed out that students have a positive attitude towards drawing as a subject and teaching methodology. However, they were unsure about classroom environment and background information but obviously negative about the instructional and educational items. Similarly, Emotin-Bucjan (2011) found out that the varied activities and techniques used in the modules were very helpful to the learners and the tandem of appropriate teaching and learning strategies were evident allowing the students to work independently.

In line with strategies, Wekesa (2013) found out that strategies used in helping the students master biological drawing were inadequate. Moreover, the problems students encountered in making drawing and strategies used by the teachers to develop drawing skills in students had a significant effect on performance. The problem of making proportional drawing and assistance of learners at individual level as a strategy to develop drawing skills in learners had the greatest effect on performance. Moreover, Elbitar and Uminadi (2016) affirmed that there was a number of diverse opinions of students with regards to their learning styles at various levels and institutions. The study opined that learning styles as a prerequisite for writing examination is an order as this can lead to effectiveness of students; adapt the best style suitable to individual students to enhance familiarity with course content and lecture as well as to provide adequate documents for records purposes. The study further revealed that there is a significant difference between the mean perception of students in Nigeria and Egypt. The implication is that students should be properly guided on the best learning style in Nigeria and Egypt universities to enable the students to achieve the best technical drawing in the different countries.

In the same vein, according to Rebadulla (2012), the students' academic performance plays a vital role in the educative and reward system of an individual. It is an avenue of viewing skills and growth of the professional itself. As a process, it becomes a success indicator in both teaching and learning and the performance of the students in order to find a good job. Therefore, it is necessary to determine the degree of students'their good performance in T.E.D. include electrical, electronics, mechanical performance to improve the instructional components of the educational program, which are crucial for the overall development of the learner.

In the study also of Medupin et al. (2015) it stressed that the academic performance of students in Engineering drawing is not necessarily affected by attendance of technical school. Also the mere possession of drawing tools is not enough to guarantee good academic performance in Engineering drawing. Other factors including the real usage of the tools come into play to achieve success. The study also discovered that there is a generally below-average academic performance in Engineering drawing in FPB. But SET recorded the highest A's overall.

In another study of Diraso et al. (2013) which delved on performance, it stressed that students' career aspirations due to their good performance in T.E.D. include electrical, electronics, mechanical engineering, and Technical and Vocational Education (TVE). Students' likely contributions to society from their career choices in engineering and TVE due to their good performance in T.E.D. include town planning, engineering contracting, land use development, and entrepreneurship development. Monaois (2008) pointed out in a study that drawing or drafting courses should prepare the students for initial gainful employment after they graduate or to help them prepare for enrollment in a technical or engineering course in the college. To Horton (1998), Drawing is still one of the best ways to convey information. Anyone can learn if they adopt the best approach. Just as with any other subject one might tackle, practice is essential to achieve good results.

In addition, Fajardo Jr. (2002) claimed that there is no fixed formula as final solution to a particular design problem but students should be guided to explore the unlimited fields of analysis of every design which reflects their unlimited creative abilities. Moreover, Callaghan (2013) gleaned that the secret to success in any creative field is the dedicated work ethics. Commitment to practice is more important than any "natural ability" or "God-given-talent." Like in drawing, the craft of painting is no different; it requires love of process and willingness to do. Along with this, Dewey (1977) promoted the idea of "learning by doing." He believes that the teacher is not in the school to impose certain ideas or to form certain habits, but is there as a member of the community to select the influences which shall affect the child and to assist him in different activities through project-based learning.

Further, Barber (2013) stressed that practice is the key to any discipline and one always becomes good on what he practices often. While one who involves in the creative process will understand why nobody ever reaches its end, which is what makes it so fascinating. Concerning the teachers' characteristics, Orleans (2007) stipulated that researches confirmed the teachers' quality appears to be the most important factor influencing students' performance. Among many factors, school factors and students' background (parents' education, income, race, location, and others) are the two important factors influencing students' academic achievement. Teachers' academic preparation, certification type, and years of teaching experience are often taken as indicators of teachers qualities. Those teachers with sufficient academic preparation are seen to be competent in subject matter content and pedagogical skills enabling them to be effective in classroom and produce better student academic achievement.

Corollary to this, Wenglinsky (2003) found out in a study that various aspects of teacher quality are related to student achievement when class size and SES are taken into account. The following variables are positively associated with achievement: teacher major, professional development in higher order thinking skills, professional development in diversity, hand-on learning, and higher order thinking skills.

METHODOLOGY

This study was conducted in the University of Eastern Philippines, University Town, Northern Samar. This study used descriptive design because this involved description, recording, analysis, and interpretation of the students' performance in drawing. Further, correlational was also employed because this delved on the relationship of students' profile and their performance in drawing. There was a complete enumeration of BSIE and BSHE students enrolled in the Drawing subjects in the second semester SY 2015-2016 as respondents of the study. A survey questionnaire was used in gathering the necessary data of the study. Furthermore, the actual Drawing subject grade ratings of the respondents were secured from the University Registrar's Office and were used as the basis to quantify the respondents' academic performance for the subject. Data concluded were treated statistically using percentage, weighted mean, and multiple regression analysis.

RESULTS AND DISCUSSION

Profile of the Respondents

Age of the respondents

Table 1 shows that almost half of the respondents are in the age range of 21 to 25 at 58 or 44.62 percent, at 54 or 41.54 percent are aged 16 to 20, while 18 or 13.85 percent are in the age range from 26 to 30. This table shows that most of the respondents' age is within the usual age of a college student.

Table 1: Age of the respondents

Age	Frequency	Percent
16 To 20	54	41.54
21 To 25	58	44.62
26 To 30	18	13.85
Total	130	100.00

Sex of the respondents

The next table shows the sex of the respondents. It shows that majority of the respondents are female at 80

or 61.54 percent. Only 50 or 38.46 percent are male. This table shows that the courses BSIE and BSHE are popular among females. This data further reflects the fact that teachers in the field are populated mostly by females.

Table 2: Sex of the respondents

Sex	Frequency	Percent
Male	50	38.46
Female	80	61.54
Total	130	100.00

Type of secondary school graduated

The next table presents the type of secondary schools where the respondents graduated from. It shows that majority, at 85 or 65.38 percent, are graduates from national/public schools across the province. There are also students who graduated from vocational/trade schools at 25 or 19.23 percent. Only 17 or 13.08 percent graduated from private schools, while 3 or 2.31 percent graduated from agricultural schools. These figures show that most students who take BSIE and BSHE courses come from public high schools where financial requirement is minimal.

Table 3: Type of secondary school graduated

Type of School Graduated	Frequency	Percent
Vocational/ Trade School	25	19.23
National/ Public School	85	65.38
Private School	17	13.08
Agricultural School	3	2.31
Total	130	100.00

Educational attainment of parents

Table 4 shows the educational attainment of the parents of the respondents. As to the father, 32 or 24.62 percent of them have fathers who just finished high school. Only 16 or 12.31 percent have fathers who finished college degrees, while 3 or 2.31 percent have earned post-graduate education. These findings show that most of the respondents' fathers were not able to reach college level. As regards to the mother's education, 36 or 27.69 percent did not graduate from high school, while 19 or 14.62 percent graduated from college. These figures show that most of the respondents' mothers did not earn college degree. A number of them reached college but were not able to finish their degrees which may be attributed to financial incapability.

Table 4: Educational attainment of parents

Educational Attainment of Parents	Father		Mother	
	Frequency	Percent	Frequency	Percent
Elementary Level	23	17.69	15	11.54
Elementary Graduate	11	8.46	3	2.31
High School Level	26	20.00	36	27.69
High School Graduate	32	24.62	20	15.38
College Level	19	14.62	35	26.92
College Graduate	16	12.31	19	14.62
Post-Graduate	3	2.31	2	1.54
Total	130	100.00	130	100.00

Learning resources at home

The following table shows the respondents' learning resources at home. It indicates that most of them possess one or more smart cellular phones as their means of acquiring information. This is followed by books and dictionary having both ranks of 2.5. Other learning resources mentioned were the internet and magazines. These findings show the ubiquity of smart phones as a learning medium in most homes. It shows that although most of the students come from poor parents, they can afford to buy smart cellular phones. This is, however, understandable as most smart cellular phones have nowadays become cheap and affordable.

Table 5: Learning resources at home

Learning Resources at Home	frequency	Rank
Books	46	2.5
Internet	29	4
Journals	8	8
Magazines	27	5
Encyclopedia	22	7
Computer	25	6
Dictionary	46	2.5
Smart Phones	122	1

Performance in Drawing

Table 6 presents the academic performance of the respondents in Drawing. It shows that most of them have good (1.75-2.25) performance at 92 or 70.77 percent. Only 10 or 7.69 percent have very good performance, while 9 or 6.92 percent have fair performance. However, it is sad to note that 19 or 14.62 percent failed the subject having a grade of 5.00. This finding shows the difficulty in performing well for the subject. Perhaps it could be implied that some respondents were not exposed to Drawing during their high school days. This finding should be taken seriously as Drawing is an important subject for BSIE and BSHE teacher education students.

Table 6: Performance in drawing

Performance in Drawing	Frequency	Rank
1.25 - 1.50 (Very Good)	10	7.69
1.75 - 2.25 (Good)	92	70.77
2.50 - 2.75 (Fair)	9	6.92
5.0 (Failure)	19	14.62
Total	130	100.00

Relationship between Profile and Performance in Drawing

To test the relationship between profile and performance in Drawing of the respondents, multiple regression analysis was used. Results of the analysis show that age (β = 0.234, p <0.05), educational attainment of mother (β = 0.568, p <0.05), and learning resources at home (β = 0.342, p <0.05) significantly predicted performance in Drawing of the respondents. However, sex, type of secondary school graduated, and educational attainment of father do not show a significant relationship with performance having low beta coefficient or significance values greater than the five percent margin of error. The significant effect of age on the Drawing performance means that older students are most likely to perform better compared to younger ones. This means that maturity is a factor among the respondents' performance in the subject. As for the educational attainment of the mother, it means that students with mothers who have higher educational attainment have a positive effect on their performance. Indeed, mothers could have done much better in bringing the best out of their children compared to fathers. Lastly, the significant relationship between learning resources at home and performance in Drawing shows that students who have more learning resources perform better in the subject compared to other students who do not have much

resources. This finding confirms the researcher's hypothesis that learning resources such as smart phones and dictionaries are important components for the twenty-first century learners. Technologies have become affordable that students are benefiting from them. This finding shows that technology works in the life of students nowadays, probably not only in Drawing but in other subject areas as well.

Table 7: Relationship Between Profile and Performance in Drawing

Independent Variables	Parameters	Performance in Drawing
Age	Beta Coefficient	0.234**
	Significance	0.003
	Interpretation	Significant
Sex	Beta Coefficient	-0.076
	Significance	0.286
	Interpretation Not	Significant
Type of High School Graduated	Beta Coefficient	-0.097
	Significance	0.171
	Interpretation	Not Significant
Educational Attainment of Father	Beta Coefficient	0.112
	Significance	0.092
	Interpretation	Not Significant
Educational Attainment of Mother	Beta Coefficient	0.568*
	Significance	0.019
	Interpretation	Significant
Learning Resources at Home	Beta Coefficient	0.342*
	Significance	0.0274
	Interpretation	Significant

CONCLUSION, RECOMMENDATIONS AND IMPLICATIONS

Generally, findings on respondents' profile show that most of the respondents' age is within the usual age of a college student and majority of the BSIE and BSHE students in the university are female. As to the type of secondary schools where the respondents graduated from, majority were graduates from national/public schools across the province. Most of them had fathers who finished high school. Only around 10 percent had fathers and mothers who finished college degrees. A number of them had reached college but could not finish their degrees. And the learning resources at home of the respondents show that most of them possess one or more cellular phones. This is followed by books and dictionary, the internet, and magazines.

In terms of performance in Drawing, the findings show that most of the respondents have good performance, while less than 10 percent have very good performance. However, it is noteworthy that quite a number of respondents failed in the drawing subject.

As regard to the relationship between profile of the respondents and their performance in Drawing, findings show the significant influence of age, educational attainment of mother, and learning resources at home. While sex, type of high school graduated, and educational attainment of father have nothing to do with the performance in drawing of the student respondents.

Conclusion

It can be gleaned from the findings of the profile of the respondents that most of the respondents are at their age of college level. Majority of the respondents are female, which implies that the teaching profession is more attractive to females. Majority are graduates of national/public high school, where financial requirement is minimal. The educational attainment of parents indicates that most of the parents of the respondents have finished

high school level only; this can be attributed to financial incapacity to support schooling. And cellular phones and books are the most common learning resources at home of the respondents, being affordable nowadays.

The performance in the Drawing subject of the respondents shows that majority have good performance. Although a significant 19 percent failed in the subject which can be accounted to a lack of interest in drawing and insufficiency of instructional materials to aid their learning process and also help the teachers facilitate teaching. This finding should be taken with caution as drawing is an important subject in BSIE and BSHE.

The test of relationship between the profile of the respondents and their performance in drawing discloses that sex, type of high school graduated, and educational attainment of father have no bearing on the performance in drawing of the students. However, age, educational attainment of mother, and learning resources at home have a significant effect on the performance in drawing of the respondents. This can be gleaned on the fact that maturity and interest are factors in learning; also the mothers of the respondents who have reached high school and college level can assist at home school activities of their children; and the availability of books and cellular phone enable the respondents to access assignment and aid school work.

Recommendations

- The younger group of students should have more focus on the subject through the assistance of their teachers.
- Monitoring of parents on children's performance in school is important, thus parents should monitor them regularly.
- Parents should provide other learning resources which aid their children in achieving academic success.
- Due to lacking or insufficient background in Drawing, a workbook in Drawing can be of great help to both students and teachers.

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