

Students' Choice of Elective Courses in Technology and Livelihood Education (TLE) and their Academic Performance

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Abstract— This study was conducted to determine the students' choice of elective courses in TLE and their academic performance. The TLE Elective Course is a program in which Grade 9 students can enroll in their chosen elective courses, which are Bread and Pastry, Cookery, Mechanical Drafting, and Dressmaking. One class per elective course was chosen involving 76 Grade 9 students. The results reveal that Bread and Pastry as a TLE elective course has the highest number of enrolled students while Dressmaking has the lowest. Furthermore, students enrolled in the Bread and Pastry elective course garnered a very satisfactory academic rating during the First Grading, while students from the three elective courses received a satisfactory rating. However, in the Second Grading, students enrolled in Bread and Pastry, Cookery, and Dressmaking elective courses attained a very satisfactory rating, while students enrolled in Mechanical Drafting course had a satisfactory rating. With these results, there is an increase in the academic performance of students from First Grading to Second Grading in all TLE elective courses. Finally, the implementation of the Elective Program of the TLE Department is effective since students in all elective courses are performing well, as manifested in their academic performance.

Keywords— Elective Course, Technology and Livelihood Education, Bread and Pastry, Cookery, Mechanical Drafting, Dressmaking

I. INTRODUCTION

Education is viewed as crucial for rapid economic growth and plays a vital role in the productivity of the people by providing them with the necessary skills to participate in the economy fully and in the nation in general (Lawal, 2014). With this challenge, the Department of Education continuously implements and develops initiatives and programs so that Filipino students can acquire the necessary competencies and skills to compete in the globalized world. One of the innovations and initiatives of the Department of Education is the inclusion of Technology and Livelihood Education (TLE) as part of the curriculum in the Junior High School, which many educational theorists agree has an extremely important role in the educational system of the Philippines today and in national development (Agrawal, 2013; Maclean & Lai, 2011; Di Gropello, Tan, & Tandon, 2010).

Technology and Livelihood Education is one of the subject areas in the secondary education curriculum in all public and private schools in the Philippines. This subject primarily intends to provide students with knowledge and develop skills that will transform their lives toward economic productivity (Valles, 2012). With the implementation of the K-12 program, TLE is currently composed of four (4) components: Agri-Fishery, Home Economics, Industrial Arts, and Information and Communications Technology (DepEd, 2017). This academic program primarily aims to promote technical and vocational education, which are indispensable instruments for improving labor mobility, adaptability, and productivity, thus contributing to enhancing students' competitiveness and redressing labor market imbalance (Tan & Nam, 2012). Most significantly, the essence of TLE lies in students acquiring necessary skills and competencies that hold relevance in their current lives and remain consistently applicable as they progress and develop (Garba, 2010; Asis & Battiastella, 2013).

However, despite the integration of TLE in the curriculum, many issues and challenges continue to arise that need to be addressed in the school, such as the lack of facilities and laboratories (Postlethwaite & Thomas, 2014; Cassity, 2014), competency requirements of teachers to teach TLE (Pavlova, 2014), and students' interests in learning TLE (Al-Dajeh, 2012). With these challenges, students' interest should be given an important consideration by school administrators and teachers. Many studies revealed that several students are not performing in technical and vocational education since the curriculum is prescribed and students are required to take the course (Hummersheim & Baur, 2014; Cabansag, 2014; Chong, 2014; Spaull, 2015). As a result, students' skills and competencies were not fully developed since the prescribed subject content is not aligned with students' interests (Yang & McCall, 2014; Anityara, 2011).

With this situation, the University of Saint Louis - Junior High School Department designed a TLE curriculum that caters to the needs and interests of students. In this scheme, Grade 9 students are given the opportunity to choose their elective course in TLE, which includes Bread and Pastry, Cookery, Mechanical Drafting, and Dressmaking. Thus, this study was conducted to assess the effects of the elective course scheme of the TLE Department on students' academic performance.

II. METHODS

This study utilized a descriptive method of research to determine the effects of the implementation of the Elective Courses in TLE on the academic performance of Grade 9 students of the Junior High School Department of the University of Saint Louis for the School Year 2017-2018. The academic performance of students from First Grading to Second Grading was compared to determine if there is an increase in the academic performance of students in their chosen TLE elective courses. Document analysis was utilized by collecting the First Grading and Second Grading Grades of the Grade 9 students.

The participants of the study are the 76 Grade 9 students currently enrolled in the four TLE elective courses. Cluster sampling was utilized to determine the total number of respondents in the study. One class per TLE elective course was considered in the study. The table below shows the total number of respondents of the study.

Table 1. Total Number of Respondents in the Study

| Elective Courses | Frequency | Percentage |
|---------------------|-----------|------------|
| Bread and Pastry | 35 | 46.05 |
| Cookery | 17 | 22.37 |
| Mechanical Drafting | 16 | 21.05 |
| Dressmaking | 8 | 10.53 |
| Total | 76 | 100.00 |

The study followed a systematic procedure in gathering the data. A letter of approval was sent to proper authorities prior to the conduct of the study. Furthermore, ethical considerations were strictly followed in the conduct of the study. Finally, the data were analyzed using frequency and percentage to describe the current number of enrolled students per TLE elective course and the academic performance of the participants. Weighted mean was also used to describe the general weighted average of the students. Finally, a paired sample t-test was used to determine the significant difference in the academic performance of Grade 9 in their First Grading and Second Grading terms in their chosen TLE Elective courses.

III. RESULTS AND DISCUSSION

Table 1. Students' Choice of Elective Courses in TLE

| Elective Courses | Frequency | Percentage | Rank |
|---------------------|-----------|------------|------|
| Bread and Pastry | 252 | 41.18 | 1 |
| Cookery | 192 | 31.37 | 2 |
| Mechanical Drafting | 127 | 20.75 | 3 |
| Dressmaking | 41 | 6.70 | 4 |
| Total | 612 | 100.00 | |

Table 1 presents the total number of students enrolled in the four elective courses in TLE subject in Grade 9. It can be gleaned from the table that Bread and Pastry has the highest number of enrolled students as an elective course in Grade 9. This means that most of the Grade 9 students have a great interest in bakery and pastry. This could be attributed to the fact that this elective course is one of the in-demand professions in today's industries. Meanwhile, Cookery and Mechanical Drafting ranked second and third, respectively, in terms of the highest number of enrolled students in TLE elective courses among Grade 9 students. Finally, the table also shows that Dressmaking has the least number of enrolled students among the different elective courses in TLE offered in Grade 9.

Table 2. First Grading Academic Performance of Grade Nine Students in their Elective Courses

| Grade | Bread and Pastry | | Cookery | | Mechanical Drafting | | Dressmaking | |
|--------------|------------------|--------|---------|--------|---------------------|--------|-------------|--------|
| | N | % | N | % | N | % | N | % |
| 96-100 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 91-95 | 27 | 77.14 | 0 | 0.00 | 3 | 18.75 | 0 | 0.00 |
| 86-90 | 8 | 22.86 | 1 | 5.88 | 5 | 31.25 | 1 | 12.50 |
| 81-85 | 0 | 0.00 | 13 | 76.47 | 7 | 43.75 | 3 | 37.50 |
| 75-80 | 0 | 0.00 | 2 | 11.75 | 3 | 18.75 | 4 | 50.00 |
| 75 and below | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| Total | 35 | 100.00 | 17 | 100.00 | 16 | 100.00 | 8 | 100.00 |
| Mean Grade | 91.71 | | 88.13 | | 85.40 | | 89.63 | |

Table 2 presents the First Grading academic performance of Grade 9 students along the four TLE elective courses offered. It can be gleaned from the table that students enrolled in the Bread and Pastry courses are performing well since they received a very satisfactory mark. This means that students in this elective course excelled very well academically. Moreover, it is also important to note that students enrolled in other elective courses are also performing since they attained a satisfactory mark. However, among the four elective courses, students enrolled in mechanical drafting have the lowest mark. This can be attributed to the fact that this subject focused more on the conceptual and procedural skills of students. Also, the subject is quite technical; hence, there is difficulty in terms of concepts and application. However, in general, students are performing in their chosen elective courses.

Table 3. Second Grading Academic Performance of Grade Nine Students in their Elective Courses

| Grade | Bread and Pastry | | Cookery | | Mechanical Drafting | | Dressmaking | |
|--------------|------------------|--------|---------|--------|---------------------|--------|-------------|--------|
| | N | % | N | % | N | % | N | % |
| 96-100 | 1 | 2.85 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 91-95 | 26 | 74.28 | 7 | 41.17 | 7 | 43.75 | 0 | 0.00 |
| 86-90 | 8 | 22.87 | 8 | 47.05 | 8 | 50.00 | 0 | 0.00 |
| 81-85 | 0 | 0.00 | 1 | 5.88 | 0 | 0.00 | 4 | 50.00 |
| 75-80 | 0 | 0.00 | 0 | 0.00 | 1 | 6.25 | 4 | 50.00 |
| 75 and below | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| Total | 35 | 100.00 | 17 | 100.00 | 16 | 100.00 | 8 | 100.00 |
| Mean Grade | 91.97 | | 90.00 | | 86.87 | | 91.35 | |

Table 3 presents the Second Grading academic performance of Grade 9 students in their chosen elective courses in TLE. The table shows that the academic performance of the students has increased and is higher than their academic performance during the First Grading. Students enrolled in Bread and Pastry, Cookery, and Dressmaking have a very satisfactory rating, while students enrolled in Mechanical Drafting have a satisfactory rating. The table also shows that students are performing in their chosen elective courses.

Table 4. Significant Difference in the Academic Performance of Grade Nine Students in their TLE Elective Courses

| Elective Course | Grading Period | Mean Grade | df | t-value | p-value | Decision at 0.01 level |
|---------------------|----------------|------------|----|---------|---------|------------------------|
| Bread and Pastry | First Grading | 91.71 | 34 | - | 0.608 | 0.547 |
| | Second Grading | 91.97 | | | | |
| Cookery | First Grading | 88.13 | 16 | - | 4.858 | 0.000 |
| | Second Grading | 90.00 | | | | |
| Mechanical Drafting | First Grading | 85.40 | 15 | - | 3.128 | 0.003 |
| | Second Grading | 86.87 | | | | |
| Dressmaking | First Grading | 89.63 | 7 | - | 2.033 | 0.082 |
| | Second Grading | 91.35 | | | | |

Table 4 presents the significant difference in the academic performance of Grade 9 students in their TLE elective courses. It can be gleaned from the results that there is no significant difference on the First Grading and Second Grading academic performances of students who were enrolled in Bread and Pastry and Dressmaking elective courses. Meanwhile, there is a significant difference in the First Grading and Second Grading academic performances of students enrolled in Cookery and Mechanical Drafting. The table implies that though there are no significant differences in the academic performances of students in Bread and Pastry and Dressmaking, the results clearly show that the academic performance of students in all elective courses increased during the Second Grading. This indicates that students are performing well since their chosen courses are in line with

their skills and interests. Hence, the elective courses of TLE is effective. The results support the findings of previous studies concluding that students' interests toward a certain subject contribute to boosting their academic performance (Singh, Granville, & Dika, 2002; Hulleman, Godes, Hendricks, & Harackiewicz, 2010; Wigfield & Cambria, 2010).

IV. CONCLUSION AND RECOMMENDATIONS

The study concludes that Bread and Pastry as a TLE elective course has the highest number of enrolled students, while Dressmaking has the lowest. Furthermore, students enrolled in the Bread and Pastry elective course garnered a very satisfactory academic rating during the First Grading, while students from the three elective courses received a satisfactory rating. However, in the Second Grading, students enrolled in Bread and Pastry, Cookery, and Dressmaking elective courses attained a very satisfactory rating, while students enrolled in Mechanical Drafting had a satisfactory rating. The results show an increase in the academic performance of students from First Grading to Second Grading in all TLE elective courses. Finally, the implementation of the Elective Program of the TLE Department is effective since students in all elective courses are performing well, as manifested in their academic performance.

The TLE Department should continue implementing the Elective Courses Program since the results reveal a positive outcome on the students' academic performance.

A follow-up study should be conducted at the end of the school year, looking into whether students enrolled in their chosen elective course gained the necessary competencies and skills.

The TLE Department can explore other elective courses that are important, and that will address the needs of industries to be offered next school year so that students will be more competitive and will have more opportunities to develop and enhance their technical skills.

A possible extension of the study is to evaluate the current implementation of the program in order to reveal the strengths and weaknesses of the TLE Elective Course program.

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