

EVALUATING THE EFFECTIVENESS OF TEACHING STRATEGIES: THE CASE OF A NATIONAL VOCATIONAL SCHOOL IN HILONGOS, LEYTE

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Evaluation of teaching strategies serves as a guide for diagnosis and improvement for effective teaching. However, studies focusing on the effectiveness of teaching strategies in Region 8, Philippines is a bit limited. Hence, this paper aims to evaluate the teaching strategies of teachers at the Hilongos National Vocational School using a total of 23 randomly selected teachers and 294 students. The data was analyzed using descriptive measures and Spearman rank correlation coefficient was also computed to determine the relationship between student's perception and student's performance for each teaching strategy. Results show that 11 academic teachers are using five teaching strategies namely computer assisted lessons, peer tutoring, modeling and teaching demo, oral recitation and reporting, and group work. In addition, there are 12 vocational teachers who are also using the same teaching strategies plus lecture with laboratory. The students rated high or strongly approve all the teaching strategies. In addition to computer assisted lessons and peer tutoring, the following teaching strategies such as modeling, teaching demo, oral recitation and reporting are effective for both academic and vocational teachers. The student's perception on peer tutoring and academic performance under an academic teacher is positively correlated. Further, no relationship was found between the student's perception of teaching strategies and academic performance under vocational teachers.

Keywords: teaching strategies, vocational school, student's perception, academic performance

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1. INTRODUCTION

According to Gage (1958), evaluation of teaching strategies serves as a guide for diagnosis and improvement not only of the person as a teacher, but also of the teacher as a person. Evaluation can facilitate personal growth as well as in professional growth. Teachers are expected to learn from the feedback of the students on their teaching strategies in class (Hashey and Conners, 2003). Evaluation of teaching strategies is part of the teacher's life because it is one of the bases for one's improvement and promotion. Evaluation of teaching strategies has been practiced for a very long time, and interest in evaluation has been rising for the past years for improvement and effectiveness. According to Mastropieri and Scruggs (1997), the teaching strategy enables students take a more active role in controlling and managing group dialogues. A good teacher is considered the most important element in the learner's educational environment and a good teacher can be determined through evaluation (Millman, 1981; Villavicencio, 2006; Zulueta, 2004). The teaching strategy used can contribute to the teaching effectiveness of the teacher (Ahmann and Glock, 1975). Hence, evaluation of the teaching strategy may also be undertaken to have a more thorough evaluation of teaching performance (Taylor and Frye, 1992).

At the Hilongos National Vocational School (HNVS), there are 59 academic and vocational teachers and about 1,900 students. To date, HNVS has been serving the academic and vocational training needs of the high school students of Hilongos as well as those from the neighboring municipalities. Evaluation of the teaching strategies at HNVS has never been done but teaching performance had been evaluated through students' performance. The teaching performance is measured through the mean percentage score (MPS) in the students' periodical exams. Tyler (1949) and Tenedero (2009) stated that evaluation is the process of determining the extent to which the goals and objectives of a program are being attained. Hence, teaching strategies evaluation is the systematic process of determining the effectiveness of educational endeavors in the light of evidence. Teaching strategies represent a modest attempt to present some models of teaching approaches that easily lead to a wide range of content across disciplines, ability levels, and age groups (Gagne et al., 1967). It should be recognized that teaching strategies offer a repertoire of teaching methodologies that have been tried and proved effective in different yet conducive teaching-learning environments (Salandanan, 2000).

This study is focused on identifying the different teaching strategies at HNVS which are effective for student learning by analyzing students' perceptions

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and performance from random samples of students. This study was limited to the perceptions and academic performance (based on the second grading period) of the regular junior students only. They were viewed to be in a better position to evaluate the teaching strategies considering the range of vocational majors they have taken and their level of maturity. These students were also expected to answer more seriously than the irregular ones. Freshman and sophomore students are perceived to lack the experience and maturity for such an inquiry. Also, the seniors were quite busy with graduation requirements and might not find time for this study. The general objective of this study is to evaluate the effectiveness of the different teaching strategies used by teachers at the third year level at the HNVS. The specific objectives are: (i) to identify the different teaching strategies used by the third year HNVS academic and vocational teachers; (ii) to know the students' perceptions of these teaching strategies; (iii) to determine if the teaching strategies are effective based on student performance; and (iv) to know if there is a relationship between the student's perception of a teaching strategy and the student's performance under this teaching strategy.

The results of this study can be used for self-assessment by the teachers to further improve their teaching effectiveness (Pilten, 2016). According to Hacker and Tenant (2002), there is a need to account for the purpose of the evaluation, the sources of evaluative information, the focus of evaluation, the way that information can be transmitted, and the quality of that information to improve teaching strategy.

2. METHODOLOGY

The permission of the principal of HNVS was asked prior to the conduct of the study. The lists of academic and vocational third year teachers were provided by her office. The lists of junior students were provided by the Registrar's Office. Primary data on teaching strategies were gathered using developed questionnaires. Secondary data on student performance were used. Descriptive statistics were computed and correlation analysis was undertaken.

The Target Populations and the samples

All third year academic and vocational teachers who were currently teaching during the conduct of the study comprised the first population of interest. The junior students who satisfied both the following conditions were included in the second population of interest: (1) officially enrolled at HNVS during the School Year 2011-2012; and (2) regular junior student.

One teacher under each teaching strategy was selected randomly. For each sample teacher, one class was chosen randomly for the evaluation of each teaching strategy.

Identification of the Teaching Strategies Used by the Third Year Teachers at HNVS

The identification of the teaching strategies used by the third year HNVS academic and vocational teachers was undertaken through a complete enumeration using a questionnaire. Each teacher was asked to identify the teaching strategies used over the years, the number of years of using those teaching strategies, and the reason these teaching strategies were used. The qualitative responses were analyzed as multiple responses with the aid of SPSS Windows V.17.0. The number of years of using each teaching strategy was summarized using the median due to the presence of extreme values (Conover, 1980). Table 1 and 2 shows the different teaching strategies used by academic and vocational teachers, respectively. It also shows the sample size distribution of students under the different teaching strategies.

Table 1. Distribution of sample size by teaching strategy used by academic teachers

| Teaching Strategy | Sample/Class Size |
|-------------------------------|--------------------------|
| Computer Assisted Lessons | 32 |
| Peer Tutoring | 38 |
| Modeling and Teaching Demo | 37 |
| Oral Recitation and Reporting | 35 |
| Group Work | 34 |

Table 2. Distribution of sample size by teaching strategy used by vocational teachers

| Teaching Strategy | Sample/Class Size |
|-------------------------------|--------------------------|
| Lecture with laboratory | 26 |
| Computer Assisted Lessons | 14 |
| Peer Tutoring | 15 |
| Modeling and Teaching Demo | 16 |
| Oral Recitation and Reporting | 24 |
| Group Work | 23 |

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The Sample Teachers and Students Studied for the Evaluation of Teaching Strategies

The academic and vocational teachers were stratified within their group in relation to the different teaching strategies used and one teacher under each teaching strategy was selected randomly. One class of each sample teacher was chosen randomly for the evaluation of each teaching strategy. The sample students were all students in the chosen classes who were regular juniors.

Determination of Students' Perceptions of the Teaching Strategies Used

Another questionnaire was constructed to obtain the students' perceptions of the teaching strategy used by the teacher in their class. Each student in the sample class was asked to answer all 11 items in the questionnaire. Each item used a 4-point rating scale and followed a uniform coding to yield a meaningful response for each student, namely: 1 – strongly disagree, 2 – disagree, 3 – agree, and 4 – strongly agree. The higher the perception score of a student, the more favorable is the teaching strategy to the student. Descriptive statistics (quantiles) and frequency histograms were used to summarize the perception scores for each class/teaching strategy. To determine if the perception scores in a class are consistent, the coefficient of quartile variation was computed (Walpole, 1982). The sample coefficient of quartile variation for the perception scores in a class was computed as follows:

$$V_Q = \frac{Q_3 - Q_1}{Q_3 + Q_1} \times 100 \quad (1)$$

where:

Q_1 = first quartile of the perception scores in a class;

Q_3 = third quartile of the perception scores in a class.

Table 3 shows the different range of values that the median of the perception scores in a class will possibly fall, the description of the overall perception of the teaching strategy by the class, and the class rating of the teaching strategy.

Table 3. Evaluation of teaching strategy by a class based on the median perception score

| Range of Median Perception Score | Description | Rating |
|----------------------------------|--------------------|-------------------|
| 11 – 19 | Strongly disagrees | Poor |
| 10 – 28 | Disagrees | Satisfactory |
| 29 – 37 | Agrees | Very Satisfactory |
| 38 – 44 | Strongly Agrees | Outstanding |

Determination of the Effectiveness of a Teaching Strategy Based on Student Performance

According to the majority of the teachers at HNVS, a teaching strategy can be considered effective if the average grade of students in the class is 86 or better. For this purpose, the grades in the second grading period were considered since these were the latest grades available during the data collection period. In determining if the students' grades in a class are consistent, the sample coefficient of variation (CV) was computed as:

$$CV = \frac{s}{\hat{\mu}} \times 100 \quad (2)$$

where:

s = sample standard deviation of students' grades in the class;

$\hat{\mu}$ = sample mean of students' grades in the class.

Determination of the Relationship Between the Student's Perception of the Teaching Strategy and the Student's Performance Under this Teaching Strategy

The Spearman rho correlation coefficient was used to determine the relationship between the student's perception of the teaching strategy and the student's performance under this teaching strategy. For each teaching strategy, the perception scores and grades in the second grading period of all the students in the class were correlated. The perception scores and the second grading grades were first ranked independently. Then, the sample correlation coefficient was computed as follows:

$$\hat{r}_s = 1 - \frac{6}{n(n^2-1)} \sum_{i=1}^n d_i^2 \quad (3)$$

where:

n = number of paired ranks in the sample section;

d_i = difference between the paired ranks.

The significance of the computed correlation coefficient was tested under the following hypotheses:

$$H_0: r_s = 0$$

$$H_a: r_s \neq 0$$

The test statistic was computed as follows:

$$t_c = \frac{\hat{r}_s \sqrt{n-2}}{\sqrt{1-\hat{r}_s^2}} \quad (4)$$

The null hypothesis was rejected whenever $|t_c|$ is greater than or equal to $t_{\alpha/2, df=n-2}$.

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In interpreting the sample correlation coefficient, Table 4 was used (Albert, 2008).

Table 4. Rule of thumb for interpreting the size of the sample correlation coefficient

| Range of $ r $ | Degree of Correlation |
|-------------------|-----------------------|
| $0 < r < 0.3$ | Weak |
| $0.3 < r < 0.7$ | Moderate |
| $ r > 0.7$ | Strong |

3. RESULTS AND DISCUSSION

The different teaching strategies presently used by the third year teachers at the Hilongos National Vocational School (HNVS) were identified through a complete enumeration. The students' perception of these teaching strategies, and performance under these teaching strategies were analyzed based on random samples of teachers and students to evaluate these teaching strategies.

Teaching Strategies Used by the Third Year HNVS Academic Teachers

There are five teaching strategies used by the 11 academic teachers (Table 5). Computer assisted lessons is lecture assisted with new technology such as using MS PowerPoint presentation with LCD, using transparencies with the overhead projector, and the like. Peer tutoring is usually done if there are fast learners in the class. They are paired to slow learners to do the tutoring until learning takes place. Peer tutoring considers that slow learners are usually shy. Thus, if their own classmates will be their tutor, they will feel more comfortable.

Table 5. Teaching strategies and median number of school years used by third year academic teachers at HNVS (multiple response, N=11).

| Teaching Strategy | No. of Teachers | Percent of Total | Median Number of School Years Used |
|-------------------------------|-----------------|------------------|------------------------------------|
| Computer Assisted Lessons | 3 | 27.3 | 2.0 |
| Peer Tutoring | 3 | 27.3 | 5.0 |
| Modeling and Teaching | 2 | 18.2 | 21.0 |
| Demo | | | |
| Oral Recitation and Reporting | 7 | 63.6 | 7.0 |
| Group Work | 9 | 81.8 | 7.0 |

Note: Only one teaching strategy is used in a class by a teacher.

Modeling and teaching demo is when the learning activity is performed by a few while the rest of the members observe. Usually, the teacher, a student, or a small group of students do the demonstration. This method develops self-confidence among the students chosen to perform such activity. Oral recitation and reporting develops the students for real and active experiences in planning and carrying out objectives. The students enhance their public speaking skills and learn how to handle people. Group work helps the students develop their manipulative skills. It highlights the students' resourcefulness and creativity. The students are given the opportunity to express their own ideas and share these with the other members of the group. Except for one teacher using four teaching strategies, the rest use two. Each teacher uses only one teaching strategy in a class.

Table 5 shows that most (82%) of the academic teachers used group work for a median of 7 school years. The reason for its use is that it provides creative options and opportunities for the students to grow and explore their talents and abilities. Oral recitation and reporting came second (64%). They have used this method for the same length of time, on the average, and for the reasons that the students are led towards understanding the concepts or lessons and they are learning with activities that have something to do with carrying out objectives. Computer assisted lessons and peer tutoring came third with the former being the latest teaching strategy used. Computer assisted lessons was used since it provides opportunities for real and active experiences in planning and carrying out objectives. Peer tutoring was used since the weak students are encouraged to get down to work as soon as school tasks are given. Modeling and teaching demo is the least used but the oldest of the five teaching strategies. Its use is based on the belief that the students are encouraged to find time to analyze and think as the lesson progresses. The common reasons for using these five teaching strategies are that the students are actively participating in class and are also performing well.

Teaching Strategies Used by the Third Year HNVS Vocational Teachers

There are six teaching strategies used by the 12 vocational teachers for the third year students (Table 6). The five teaching strategies used by the academic teachers are also used by the vocational teachers. The new addition is lecture with laboratory. Lecture with laboratory is usually done by the teacher from whom the students seek information by simply listening and performing activities later. The teacher first explains, clarifies, emphasizes points, illustrates ideas, and the students perform exercises/activities to apply the concepts after.

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Table 6. Teaching strategies and median number of school years used by third year vocational teachers at HNVS (multiple response, N=12).

| Teaching Strategy | No. of Teachers | Percent of Total | Median Number of School Years Used |
|-------------------------------|-----------------|------------------|------------------------------------|
| Lecture with Laboratory | 3 | 25.0 | 14.5 |
| Computer Assisted Lessons | 3 | 25.0 | 2.0 |
| Peer Tutoring | 1 | 8.3 | 16.5 |
| Modeling and Teaching | 11 | 91.7 | 23.0 |
| Demo | | | |
| Oral Recitation and Reporting | 2 | 16.7 | 15.0 |
| Group Work | 4 | 33.3 | 13.5 |

Note: Only one teaching strategy is used in a class by a teacher.

For the vocational teachers, modeling and teaching demo is the most commonly used (only one did not) and also the oldest used. The most common reason indicated was that the students are learning with activities that look at the artistic side of things such as forms, designs, and patterns. One-third used group work since the students are learning with activities that follow a set of procedures and routines. One-fourth used lecture with laboratory and computer assisted lessons, respectively, with the latter being the most recent teaching strategy used. The common reason for using lecture with laboratory is that the students are led to develop their manipulative skills. For computer assisted lessons, the students are encouraged to take time to analyze and think with the lessons. One-sixth used oral recitation and reporting since the students are led to develop their manipulative skills. Only one used peer tutoring, the second oldest teaching strategy in this group, for the reasons that the students are encouraged to buckle down to work as soon as tasks are presented and the students are learning with activities that have something to do with carrying out projects. The common reasons indicated for using these six teaching strategies are that the students are performing well, and learning and enjoying at the same time.

Students' Perception of the Teaching Strategies Used by the Academic Teachers

One class section was randomly selected for each teaching strategy. Table 7 shows that there are 5 teaching strategies, so this suggests that in total, 5 sections will be randomly selected for the evaluation process.

Table 7. Class median perception scores and overall evaluation of the teaching strategies used by the academic teachers based on students' perception.

| Teaching Strategy | Sample/Class Size | Class Median Perception Score (a) | Coefficient of Quartile Variation (%) | Overall Rating (b) |
|-------------------------------|-------------------|-----------------------------------|---------------------------------------|--------------------|
| Computer Assisted Lessons | 32 | 36.00 | 4.11 | Very Satisfactory |
| Peer Tutoring | 38 | 37.00 | 7.80 | Outstanding |
| Modeling and Teaching Demo | 37 | 38.00 | 4.52 | Outstanding |
| Oral Recitation and Reporting | 35 | 42.00 | 4.76 | Outstanding |
| Group Work | 34 | 35.00 | 7.22 | Very Satisfactory |

(a) The highest possible perception score is 44.

(b) Based on Table 3.

The class median perception scores of the five teaching strategies all indicate a strong approval (Table 3) of all the teaching strategies used by the academic teachers (Table 7). A rating of outstanding is then given to peer tutoring, modeling and teaching demo, and oral recitation and reporting. Also, a rating of very satisfactory is then given to computer assisted lessons and group work. Since the coefficient of quartile variation of the perception scores is less than 10% for each teaching strategy, the rating of "outstanding and very satisfactory" is consistent in all teaching strategies under an academic teacher.

Students' Perception of the Teaching Strategies Used by the Vocational Teachers

Similar to the group of academic teachers, one section per teaching strategy was randomly selected. Thus, six sample sections evaluated the six teaching strategies used by vocational teachers. A rating of outstanding is then given to the first four teaching strategies and very satisfactory is given to oral recitation and reporting, and group work which is used by the vocational teachers (Table 8). Thus, the sample students strongly agree with or perceive very favorably all the teaching strategies used. Computer assisted lessons and modeling and teaching demo were the top two most favored. The coefficient of quartile variation for the perception scores of all the teaching strategies are all less than 10% indicating that the ratings are all consistent.

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Table 8. Class median perception scores and overall evaluation of the teaching strategies used by the vocational teachers based on students' perception.

| Teaching Strategy | Sample /Class Size | Class Median Perception Score (a) | Coefficient of Quartile Variation (%) | Overall Rating (b) |
|-------------------------------|--------------------|-----------------------------------|---------------------------------------|--------------------|
| Lecture with Laboratory | 26 | 38.50 | 3.90 | Outstanding |
| Computer Assisted Lessons | 14 | 41.50 | 5.71 | Outstanding |
| Peer Tutoring | 15 | 39.00 | 7.89 | Outstanding |
| Modeling and Teaching Demo | 16 | 44.00 | 2.33 | Outstanding |
| Oral Recitation and Reporting | 24 | 36.00 | 4.23 | Very Satisfactory |
| Group Work | 23 | 36.00 | 5.56 | Very Satisfactory |

(a) The highest possible perception score is 44.

(b) Based on Table 3.

Effectiveness of Teaching Strategies Used by Academic Teachers Based on Student Performance

The second grading grades of the randomly selected sections taught with a particular teaching strategy by an academic teacher were used to evaluate the effectiveness of the teaching strategies in this group. For the academic teachers, modeling and teaching demo, and oral recitation and reporting are the effective teaching strategies since the mean grade of the students were above 86 (Table 9). Both coefficients of variation are less than 10% indicating implies that the students' grades are consistently high under these two teaching strategies. On the other hand, the students' grades are consistently not high in the other three teaching strategies having also coefficients of variation of less than 10%.

Effectiveness of Teaching Strategies Used by Vocational Teachers Based on Student Performance

For the vocational teachers, the second grading grades of the randomly selected sections taught by a particular teaching strategy were used to evaluate the effectiveness of teaching strategies in this group. For the vocational teachers, computer assisted lessons, peer tutoring, modeling and teaching demo, and oral recitation and reporting are the effective teaching strategies (Table 10). Students' grades are most consistent under modeling and teaching demo and least consistent under computer assisted lessons. For the not effective teaching strategies namely, lecture with laboratory and group work, it is also noted that the

students consistently did not perform well. Group work, however, is shown to be the more ineffective between the two.

Table 9. Class mean grades (a) and overall evaluation of the teaching strategies used by academic teachers based on the students' grades.

| Teaching Strategy | Sample /Class Size | Class Mean Grade (%) | Coefficient of Variation (%) | Effective? (b) |
|-------------------------------|--------------------|----------------------|------------------------------|----------------|
| Computer Assisted Lessons | 32 | 77.25 | 4.9 | No |
| Peer Tutoring | 38 | 81.92 | 3.3 | No |
| Modeling and Teaching | 37 | 90.65 | 3.6 | Yes |
| Demo | | | | |
| Oral Recitation and Reporting | 35 | 89.26 | 4.8 | Yes |
| Group Work | 34 | 84.68 | 3.2 | No |

(a) Second grading period.

(b) Class mean grade of 86% or better.

Table 10. Class mean grades (a) and overall evaluation of the teaching strategies used by the vocational teachers based on the students' grades

| Teaching Strategy | Sample/ Class Size | Class Mean Grade (%) | Coefficient of Variation (%) | Effective? (b) |
|-------------------------------|--------------------|----------------------|------------------------------|----------------|
| Lecture with Laboratory | 26 | 84.58 | 5.5 | No |
| Computer Assisted Lessons | 14 | 92.93 | 7.6 | Yes |
| Peer Tutoring | 15 | 93.93 | 3.2 | Yes |
| Modeling and Teaching | 16 | 94.50 | 2.2 | Yes |
| Demo | | | | |
| Oral Recitation and Reporting | 24 | 86.63 | 2.5 | Yes |
| Group Work | 23 | 78.70 | 7.3 | No |

(a) Second grading period.

(b) Class mean grade of 86% or better.

Relationship Between the Student's Perception of a Teaching Strategy and the Student's Performance Under this Teaching Strategy

The student's perception of a teaching strategy and the student's performance under this teaching strategy were correlated using Spearman rho. Except for computer assisted lessons and oral recitation and reporting the

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computed coefficients are all positive for the academic subjects (Table 11). Performance under peer tutoring and group work exhibited moderate correlation with student's perception of the teaching strategy while weak correlation was exhibited under the other teaching strategies. However, it is only for peer tutoring where the correlation is significant, even at the 2.2% level. This implies that students who favorably perceived peer tutoring as a teaching strategy tended to perform better under this teaching strategy. This statement cannot be said of the other two teaching strategies exhibiting positive correlation using the 5% significance level. It should be noted that at the 6.1% significance level, this is now true for group work.

Table 11. Correlation (Spearman rho) between the student's perception of a teaching strategy and the student's performance under this teaching strategy in academic subjects

| Teaching Strategy | Sample/Class Size | r_s | $r_s^2 \times 100$ (%) | p - value |
|-------------------------------|-------------------|-----------------------|------------------------|-----------|
| Computer Assisted Lessons | 32 | -0.2713 ^{ns} | 7.4 | 0.1330 |
| Peer Tutoring | 38 | 0.3706** | 13.7 | 0.0219 |
| Modeling and Teaching Demo | 37 | 0.2742 ^{ns} | 7.5 | 0.1005 |
| Oral Recitation and Reporting | 35 | -0.0738 ^{ns} | 0.5 | 0.6735 |
| Group Work | 34 | 0.3245* | 10.5 | 0.0611 |

**-Correlation is significant at the 0.05 level (two-tailed).

*-Correlation is significant at the 0.10 level (two-tailed).

ns - not significant.

Based on the coefficient of determination, only 13.7% and 10.5% of the differences in students' performance can be attributed to their perception of peer tutoring and group work, respectively. For the other teaching strategies, the students' strong acceptance of the teaching strategy does not necessarily translate to better grades. Even if the students highly favor the teaching strategy, they may still not perform well in class.

For the vocational subjects, only group work yielded a negative correlation coefficient (Table 12). However, no correlation is significant even at the 10% level. It should be noted that, for the computer assisted lessons and modeling and teaching demo, the observed moderate positive correlation may not be significant due to the small sample sizes.

The coefficient of determination, however, indicates that 19.2% and 15.3% of the differences in students' performance can be attributed to the students' perception of the two teaching strategies, respectively.

Table 12. Correlation (Spearman rho) between the student's perception of a teaching strategy and the student's performance under this teaching strategy in vocational subjects

| Teaching Strategy | Sample/Class Size | r_s | $r_s^2 \times 100$ (%) | p - value |
|-------------------------------|-------------------|-----------------------|------------------------|-----------|
| Lecture with Laboratory | 26 | 0.0311 ^{ns} | 0.1 | 0.8801 |
| Computer Assisted Lessons | 14 | 0.4383 ^{ns} | 19.2 | 0.1169 |
| Peer Tutoring | 15 | 0.0885 ^{ns} | 0.8 | 0.7538 |
| Modeling and Teaching | 16 | 0.3909 ^{ns} | 15.3 | 0.1343 |
| Demo | | | | |
| Oral Recitation and Reporting | 24 | 0.2009 ^{ns} | 4.0 | 0.3463 |
| Group Work | 23 | -0.0574 ^{ns} | 0.3 | 0.7946 |

ns - not significant.

4. CONCLUSIONS

There are different teaching strategies employed by the third year teachers at HNVS with the common goal of having students learn thoroughly and effectively. The academic teachers are using five teaching strategies namely, computer assisted lessons, peer tutoring, modeling and teaching demo, oral recitation and reporting, and group work. The vocational teachers are also using the same plus lecture with laboratory. Based on the instrument used, the perception scores of the students, indicated that, on the average, they strongly favored all the teaching strategies used by their academic and vocational teachers. For the academic subjects, only modeling and teaching demo, and oral recitation and reporting are considered effective teaching strategies based on student performance. For the vocational subjects, computer assisted lessons, and peer tutoring were also found to be effective in addition to modeling and teaching demo, and oral recitation and reporting. A significant positive linear relationship between the student's perception of a teaching strategy and the student's performance under this teaching strategy was only shown for peer tutoring under an academic teacher. No significant relationship was found with the teaching strategies used by the vocational teachers. Similar studies in the literature reported

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similar findings that students mostly do not perceive the teaching strategy but still performing well in class (Duffy, 2002, King and Johnson, 1999; Pilten, 2016; Rosenshine et al., 1996). These students expressed negative ideas about the teaching strategy, because they thought that the strategy was complicated to follow because it involved too many stages and also time consuming.

The study lends insight to the belief that teaching strategies are vital in the learning process but it is still up to the students at HNVS to get good grades. The students may still not perform well even if they highly favor the teaching strategy. They may not be striving hard enough due to their own individual capacities and personal goals. The student's performance may still remain to be limited by his knowledge, interest, and capability, among others, despite the teaching strategy. The highest coefficient of determination found in this study between a student's perception of a teaching strategy and the student's performance under this teaching strategy was only 19.2%. This indicates that at least 80.8% of a student's performance can be explained by other factors. Thus, these factors put together are more important than the teaching strategy used.

5. RECOMMENDATIONS

A similar study should be conducted periodically in any school to better understand the role of teaching strategies in student performance. Periodic evaluation can help the teachers improve their teaching strategies as they get feedback from their students and relate this to their performance. At the same time, the students must also be motivated to learn and do their best in each subject. In this aspect, the teacher can definitely directly influence the students. The teacher can foster a more stimulating class atmosphere to better encourage all students to participate in class discussions and class activities. It will certainly help if the teacher has a positive attitude, good personal qualities, and good teaching skills, too, which will surely have a positive impact on student performance under any teaching strategy.

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