Do learning styles influence the academic performance of the English language in higher education?

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Abstract

The research was based on the workshop EAPRAIFE (learning styles and academic performance of the English language in the Faculty of Education). It aimed to determine the difference between the control and experimental group in the post test, after applying the workshop EAPRAIFE of the learning styles in the academic performance of English language in the students of the Language Center in the Faculty of Education at the National University of Chimborazo, term 2015-2016. The population of study consisted of 200 students. The instruments fulfilled the qualities of validity and dependability. The obtained results allowed to reject the null hypotheses and to accept the hypotheses investigated due to according to the Mann-Whitney U test there are significant differences between the control and experimental group regarding the academic performance when applying the workshop mentioned above, being the significance level to 95% smaller than the 0.05 that is to say, 0.000. So that it was proven that there is a significant difference between the control group and the experimental group after the post test.

Keywords: Learning styles, Academic Performance, National University of Chimborazo

1. Introduction

The teaching and learning process in university settings is a practice that urges to be scientifically assumed with a social pertinence. During the development of academic activities within educational centers, it is common to observe that the students face difficulties in their academic performance, especially during the testing time. When academic performance is mentioned, it is necessary to take into account that the main goal for the students is to approve each term in their major along with the recognition of their peers and instructors.

The importance of the present study pretends to mitigate a social problem and see if the students consciously improve their academic performance and acquire norms for their meaningful learning no matter the qualitative evaluation they obtain; on the other hand, the educators will perform a personalized work with their students, something that will not only benefit their teaching practice but also their experience as human beings due to a personalized contact with their pupils gives them the opportunity to listen to their problems and encourage them for an integral growth.

This Research was conducted with the students of the Language Center from the Faculty of Education at the National University of Chimborazo-Ecuador. If it is analyzed the learning style of each student, each one of them will have their own way of learning, that is to say, the awareness of their strengths and weaknesses in such a way that they may be able to develop...
their academic capacities. Besides, the teaching staff would also be the beneficiaries of this study due to the knowledge of the different learning styles of their students will help them to create specific techniques for each group considering that the more activities they develop, the better they exercise in this field of study. It should also be considered that this topic must be mastered by all of the teachers to make their job more efficient.

2. Materials and Methods

2.1. Design

The applied design is causal, predictive and experimental because there are two groups: the controlling and experimental group. Classes are given to group 1 (the experimental group) by applying the learning styles. Group 2 (the controlling group) classes are given without considering the learning styles. Then, a test was applied to both groups in order to verify the effect of the application of the learning styles. Consequently, it can be observed that the methodological strategy of applying the learning styles has a positive effect on the academic performance of the students.

There were some questions that were considered: Which course has a low rate of desertion? Which course has the best academic record? Which is the level with fewer rates of failure? Hence, the fifth semester showed the best results so it was excluded from the study. The criteria for exclusion was to verify the level where students have reproved the most; the course with a low rate of desertion? and the course with the best academic record. Second semester showed all of the characteristics mentioned before.

50% of the population of study was considered for both the controlling and the experimental group.

2.2. Population and sample

The study was conducted with the cooperation of the Language Center students from the Faculty of Education at the National University of Chimborazo, during the academic term October 2015-February 2016. The study needed 200 students who were divided into six groups from the second level of English, class A-B-C-D-E-F-G in order to determine the participants of the research, a stratified and probabilistic analysis was carried out to calculate and anticipate each sample. Due to the number of students on each course, it was possible to establish the controlling group with the levels A-B-C whereas the experimental group was composed by the second levels D-E-F. The population of study on each group consisted of 100 students.

3. Results and Discussion

3.1. Data collection

It was necessary to ask to the secretary’s office of the Language Center in the Faculty of Education a printed academic record of the participants which contains: the students’ given name, their identity number, their codes, and their average of attendance and scores.

The validation of instruments was done by the opinion of 3 recognized postgraduate educators from the Universidad Nacional Mayor de San Marcos who determined the pertinence of each item in the questionnaires. They considered a close relationship among the criteria, objectives of the study and the constitutive items of two instruments for data collection. The reliability of the instrument is 0.91 which implies the Kurder Richardson’s chart of reliability is considered as excellent as it ranges from 0.72 to 0.99.
3.2. Analysis of information

The analytic section applied the Mann Whitney U test in order to establish its statistical validity. The resources to analyze the information were the statistical software SPSS version 19.0, EPIINFO 2000, and the SOTAM which is a program to optimize the sample.

The testing of the hypothesis was done by following 7 stages:

Stage 1. To select a statistic program to analyze the information.
Stage 2. To execute the SPSS program, Minitab, Stats, SAS etc.
Stage 3. To explore the information.
   a. To descriptively analyze the information according to each variable.
   b. To visualize the information according to each variable.
Stage 4. To evaluate the reliability and validity of the instruments.
Stage 5. To validate the hypothesis through statistical analysis.
Stage 6. To perform additional analysis.
Stage 7. To prepare the results in order to be presented (tables, graphics, charts)

3.3. Presentation of the information

Auditory Learning Style.- During the pretest in the controlling group, 37 students achieved an insufficient level, 34 students a regular level, 14 students a satisfactory level and 15 students a very satisfactory level. After the posttest 34 students achieved an insufficient level, 38 students a regular level, 11 students a satisfactory level and 13 students a very satisfactory level. During the pretest in the experimental group, 30 students achieved an insufficient level, 48 students a regular level, 12 students a satisfactory level and 10 students a very satisfactory level. After the posttest 12 students achieved an insufficient level, 21 students a regular level, 22 students a satisfactory level and 45 students a very satisfactory level. It can be said that in the experimental group, the satisfactory level increased from 15 to 45 students after the application of the posttest.

Visual Learning Style.- during the pretest in the controlling group, 36 students achieved an insufficient level, 44 students a regular level, 17 students a satisfactory level and 3 students a very satisfactory level. After the posttest 35 students achieved an insufficient level, 42 students a regular level, 20 students a satisfactory level and 3 students a very satisfactory level. During the pretest in the experimental group, 27 students achieved an insufficient level, 53 students a regular level, 17 students a satisfactory level and 3 students a very satisfactory level. After the posttest 27 students achieved an insufficient level, 42 students a regular level, 20 students a satisfactory level and 3 students a very satisfactory level. During the pretest in the experimental group, 27 students achieved an insufficient level, 53 students a regular level, 18 students a satisfactory level and 2 students a very satisfactory level. After the posttest 8 students achieved an insufficient level, 7 students a regular level, 18 students a satisfactory level and 67 students a very satisfactory level. It can be said that in the experimental group, the satisfactory level increased from 3 to 67 students after the application of the posttest.

Kinesthetic Learning Style.- For the CONTROL GROUP in the pre-test, there are 19 students in the insufficient level, at the regular level 40 students, at the satisfactory level 19 students and 22 at the very satisfactory level. In the post-test there are 18 students in the insufficient level, in the regular level 35 students, in the satisfactory level 22 students and 25 in the very satisfactory level. For the EXPERIMENTAL GROUP in the pre-test there are 17 students in
the insufficient level, at the regular level 48 students, at the satisfactory level 15 students and 20 at the very satisfactory level. In the post-test there are 0 students in the insufficient level, in the regular level 10 students, in the satisfactory level 37 students and 53 in the very satisfactory level. It is concluded that there is an increase in the very satisfactory level of the experimental group, which is significant because it moved from 25 to 53 students who reached this level in the post-test.

4. Discussion

Learning Styles: the present study sets the null hypothesis: There is not a meaningful difference between the controlling and experimental groups after the application of the post-test in the workshop called EAPRAIFE about Learning Styles in the academic performance of the students of the Language Center in the Faculty of Education at the National University of Chimborazo, term 2015-2016. It was noticed a meaningful difference between the controlling group and the experimental group as for the academic performance after the application of the posttest according to the Mann Whitney U test, where the level of significance of 95% is lower than 0,05, that is to say, 000; therefore, the null hypothesis is rejected. Nevertheless, it is worth mentioning that there is a meaningful difference between the controlling group versus the experimental group after the application of the posttest in the workshop called EAPRAIFE about Learning Styles and the academic performance of the students in the Language Center, Faculty of Education at the National University of Chimborazo, term 2015-2016.

For the first specific hypothesis, it is concluded that there are significant differences between the control group and the experimental group in the post test, on visual academic performance, according to the Mann-Whitney U test, the level of significance being 95% lower than 0, 05 that is to say, 000 so that the null hypothesis is rejected and It can be said that: There is a significant difference between the control group and the experimental group in the post test, after applying the EAPRAIFE workshop in the dimension of the visual learning style of English in the students of the Language Center in the Faculty of Education at the National University of Chimborazo, term 2015-2016.

For the second specific hypothesis, it is concluded that there are significant differences between the control group and the experimental group in the post-test on auditory academic performance, according to the Mann Whitney U test, the level of significance being 95% lower than 0,05 that is to say, 000 so that the null hypothesis is rejected and it can be said that: There is a significant difference between the control group and the experimental group in the post test, after applying the EAPRAIFE workshop in the dimension of the auditory learning style of English in the students of the Language Center in the Faculty of Education at the National University of Chimborazo, term 2015-2016.

For the third specific hypothesis, it is concluded that there are significant differences between the control group and the experimental group in the post-test on kinesthetic academic performance, according to the Mann Whitney U test, the level of significance being 95% lower than 0,05 that is to say, 000 so the null hypothesis is rejected and it can be said that: There is a significant difference between the control group and the experimental group in the post test, after applying the EAPRAIFE workshop in the dimension of kinesthetic learning style of English in the students of the Language Center of the Faculty of Education of the National University of Chimborazo. 2015-2016.

5. Conclusions
It has been shown that according to the Mann Whitney U test, the level of significance is 0.000 and it is worth mentioning that there are significant differences between the control group and the experimental group in the post test regarding to the investigative skills of organizational information. So the null hypothesis is rejected and it can be said that: There is a significant difference between the control group and the experimental group in the post test, after applying the EAPRAIFE workshop in the dimension of the visual learning style of English in the students of the Center of Languages in the Faculty of Education at the National University of Chimborazo, term 2015-2016.

It has been demonstrated that according to the Mann Whitney U test, with a significance level of 0.000 and it is worth mentioning that there are significant differences between the control group and the experimental group in the post test regarding auditory academic performance. So the null hypothesis is rejected and it can be said that: There is a significant difference between the control group and the experimental group in the post test, after applying the EAPRAIFE workshop in the dimension of the auditory learning style of English in students of the Center of Languages in the Faculty of Education at the National University of Chimborazo, term 2015-2016.

The Mann Whitney U test has shown a significance level of 0.000 and it is worth pointing out that there are meaningful differences between the control group and the experimental group in the post test regarding kinesthetic academic performance. So, the null hypothesis is rejected and it can be said that: There is a significant difference between the control group and the experimental group in the post test, after applying the EAPRAIFE workshop in the dimension of kinesthetic learning style of English in students of the Center of Languages in the Faculty of Education at the National University of Chimborazo, term 2015-2016.

6. Recommendations

It is recommended to implement workshops to develop the learning styles in the students of the Language Center of the National University of Chimborazo, in order to increase their academic performance in the English language, during their vacation or in an alternative time.

It is recommended to carry out workshops on the learning styles in the students of the Language Center at the National University of Chimborazo, to improve the visual learning style of the English language, during vacation or actually in alternating hours to their studies.

The university authorities are requested to implement workshops to develop the learning styles in the students of the Language Center at the National University of Chimborazo, to improve the auditory learning style of the English language during their vacation or in an alternative time to their studies.

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