PSYCHOLOGY AND EDUCATION (2020) 57(5): 342-345
An Interdisciplinary Journal

Review Article

Evaluation of Teacher and Student performance in teaching and learning processes, respectively, in Nursing and Psychology Schools in a Peruvian university

Rafael Urrelo Guerra, Gina Dávila Moncloa, Juan Castillo Rodríguez, Jorge Zapata Echegaray, Pablo Huerta Fernández, Rosa Mercedes Palomino Huaman

Universidad Privada San Juan Bautista, Lima, Peru

***Correspondence to:** Rafael Urrelo Guerra, Universidad Privada San Juan Bautista, Lima, Peru, Email: rafael.urrelo@upsjb.edu.pe.

Abstract

This work aimed to determine the level of efficiency of the teaching-learning process in the professional schools of Nursing and Psychology of the San Juan Bautista Private University, back in 2018. Surveys were carried out to seven professors of cycles II and IV of Nursing and Psychology, considering six evaluation parameters: Fulfillment, Knowledge, Applied Strategy, Attitude, Motivation and Formative Research. Furthermore, students' grades of the aforementioned professional schools were considered, as well as from the respective cycles. As a result, high statistical significance was obtained from the scores given to teachers per subject. We had a high average score (18.41) in the teaching of the subject ¨Teaching Methods and Observation¨, while the subject ¨Personality Psychology¨ showcased a low score (13.03). From the linear regression analysis, there is a positive association and correlation between the teacher's scores and the students' grades, which showcases an optimal level between scores (18.3) and grades (16.19), related to the Professional School of Psychology. As for the Professional School of Nursing, we also found a high statistical significance among the teachers' scores; with an average score in the teaching of the subject ¨History of Art¨ (15.99) and a very low score in the subject ¨Introduction to Nursing¨ (11.44). Moreover, no correlation was found between teaching and learning, since there were no differences between the average scores of teachers and the students' grades, probably due to lack of motivation or subjectivity in students. Also, because the evaluations in the Professional School of Nursing have a higher weighting.

Keywords: Teaching and Learning, Evaluation, Nursing, Psychology.

Introduction

Graduates from University programs are expected to demonstrate academic, professional or scientific competencies upon job assumption of responsibilities, expressed in the wellbeing of persons, better public or private institution or enterprise performance, environmental concern, increased prestige of their alma mater, and personal satisfaction.

According to Tobón (2012) the educational management based on competencies, taking into account a socio-formative focus, relies on the execution of formative projects with students in order to assure integrity and compliance with expected competencies for they be able to face contextual challenges. To this end, it is required to have compromised and competent executives and teachers whose results should be demonstrated in the consolidation of the social structure, socioeconomic development, environmental equilibrium and sustainability and scientific advancement.

The above statements bring us to the teaching and learning processes, which should be seen as an integrated one, in which the teacher and the student come together, each one to comply with his respective duties and responsibilities. The teacher, to apply a methodology, procedures and techniques, in order the student be able to acquire the competencies for each of the subjects considered in the curriculum and the types of competences required; and the student, to reach the university graduated profile.

It has already been established that competences have to do with students getting knowledge, skills and attitudes, Schunk. (2012) in explaining about learning theories as an educational perspective, indicated that teachers understand intuitively the motivational students' state they must reach to be able to learn. Some of them may reach it, but others might be experimenting apathy, sadness, hyperactivity, and distraction. This situation leads to the necessity of including these motivational factors when looking students and teacher performances in the classroom.

Bakhrou, K.M. (2017) in a review based study about "Personal Competencies for Effective Teaching" at the Jaypee Institute of Information Technology, Noida, UP, India, has found that graduates from a Management Study Program must comply, in order to achieve personal competencies, with competences related to: a) Communication (verbal, non-verbal, written and, presentation skills); Managerial (adaptability, strong self-concept, being responsible, risk-taking, take initiative and, concern for standard, personality (resilience, open minded, being enthusiastic, humor, self-disclosure, creativity and patience; emotional (self-knowledge, persistence, self-control and, stress handling).

A study made by Olafsdóttir (2018) to determine gender bias in student evaluation of teaching among undergraduate business students at the Reykjavik School of Business, showed that women were significantly less likely to receive higher student evaluation of teaching than men. From the interaction analysis of independent variables with gender it was revealed that there are stronger indications of bias against women for full-time faculty than for part-time instructors. One of the reasons could be selection bias in hiring part-time instructors. On the other hand, female part-time instructors received higher student evaluation of teaching than male part-time instructors. Considering these results, the author suggests that a question mark should be put in the use of student evaluation of teaching as an indicator for the quality of teaching in promotion decisions for faculty.

Boring, A, et.al (1916) mentioned that Student Evaluation of Teaching (SET) as a measure of teaching effectiveness is often used

in academic personnel decisions. In the study they carried out it was found that SET are biased against female instructors by an amount that is large and statistically significant, varies by discipline and by student gender, it is not possible to adjust for the bias because it depends in so many factors, are more sensitive to students' gender than to teaching effectiveness, gender bias can be large enough to cause more effective instructors to get lower SET than less effective instructors.

Giridharan, K. and R, Raju (2016) as a result of their investigation they found that demonstration strategy was found to be significantly better than lecture strategy. Teacher-B (more experienced) was found to be significantly better than Teacher-A, regarding students' academic achievement. Significant interaction effect was seen only regarding lecture strategy with Teacher-B being better than Teacher-A. It was established from the findings that the demonstration strategy had produced significantly better academic achievement among engineering students independent of Teacher Effect

Methods

The methodology was based on non-experimental research of exploratory, correlational and descriptive type. We selected students from the Professional Schools of Nursing and Psychology of cycles II and IV, respectively in a Peruvian university.

For this study we applied the student survey method. It comprised a questionnaire based on six evaluation parameters applied to seven teachers of each Professional School identified as: Course schedule compliance, knowledge of the course taught, teaching strategy applied, attitude, motivation and formative research. For the School of Nursing, this was applied to seven teachers in charge of the following courses: History of Art, Philosophy, Constitution and Human Rights, Ethics and Deontology, National Reality, Human Anatomy and Introduction to Nursing. In the case of the School of Psychology, the same number of teachers were evaluated: Interview and Observation Methods, Elective Course, Human Development, Motivational Affective Processes, Research Basics in Psychology, Design and Construction of Psychological Tests and Personality Psychology.

Within the conceptual framework of the Continuous Quality Improvement of the teaching-learning process, the investigation was oriented to the analysis of students grades given by the teachers in each of the afore mentioned courses in relation to the poll' results filled by registered students in each one of them.

The courses belong to the II and IV cycles of study as well as the surveyed students. We gathered data from the evaluation to seven teachers, classified as A, B, C, D, E, F and G in each School. The grades by course of 25 students, on average, from the School of Nursing; and also the grades by course of 38 students, on average, from the School of Psychology, in order to carry out the respective statistical analyses by the sum of squares method and correlation and regression analyses.

Results and Discussion

Results of the surveys applied by the students of Psychology

From the surveys applied by 38 students to teachers of the School of Psychology, who taught six subjects, we gathered the scores in six dimensions, as it can be seen in Table 1 of Annex 1. This information was analyzed statistically through the analysis of variance and the Duncan's test (α=0.05).

High statistical significance was found for the source of variation treatments (teachers), indicating differences between the averages of each treatment. The coefficient of variation of 9.70% shows an efficient work. The 65.26% (R^2) of the response is due to the independent variable and 34.74% is due to random factors.

Duncan's test (α=0.05) indicates a lack of differences between subjects E, F, B and A, which grades vary from 17.2133 to 18.4183 points, respectively, with a higher score in the subject "Interview and Observation methods" (Figure.1). Subjects D and C are in last place, with averages of 13.6537 and 13.0300 points, respectively.

Analysis of simple linear correlation and regression

Regression and correlation analysis were carried out based on data from the abovementioned surveys, teachers' scores and students' grades shown in Table 2 of Annex 1.

The regression coefficient b = 0.2599 is positive non-significant, and the correlation coefficient r = 0.6402 is positive non-significant as well. Both indicate a positive association between the average teachers' scores and the students' grades (Figure. 2).

According to the Student **t** test, there are no differences between the averages of the two samples; averages of scores by subjects and the students' grades, since Pr=0.9724 is greater than α = 0.05.

Results of the surveys carried out by the Nursing students

From the 25 surveys carried out by Nursing students to seven teachers of the Professional School of Nursing, who taught six courses, we gathered the scores evaluated in six dimensions – data shown in Table 3 of Annex 2, which were submitted to analysis of variance and the Duncan's Test (α=0.05).

The analysis shows a statistical significance at 1% probability for the source of variation treatments, referring to the subjects taught by the participating teachers, which indicates real differences between averages of the treatments under study (Fig. 3). The coefficient of variation obtained is 1.73%, which indicates an appropriate statistical model. The determination coefficient (R^2) is 0.9753, which indicates

Table 1: Teaching-learning evaluation scores for teachers of the Professional School of Psychology

	Repetition						Total	Mean
Treatment (Teachers)	1*	2*	3*	4*	5*	6*		
A	17.59	17.07	17.24	16.55	17.24	17.59	103.28	17.21
B	17.36	17.43	17.62	16.91	17.44	17.94	104.7	17.45
C	12.82	12.5	12.17	12.9	14.82	12.97	78.18	13.03
D	13.94	13.41	13.05	13.33	15	13.18	81.91	13.65
E	18.54	18.62	18.03	18.62	18.08	18.62	110.51	18.42
F	18.02	17.43	17.52	17.87	17.63	17.94	106.41	17.74
G	17.5	17.13	17.06	16.91	17.34	17.06	103	17.17
* Dimension of evaluation								

Table 2: Summary of average students' grades and teachers' scores by subject from the Professional School of Psychology

TEACHER	SUBJECT	SECTION	EVALUATION OF THE TEACHER						AVERAGE	AVERAGE GRADE OF STUDENT
			FUFILLMENT	KNOWLEDGE	APPLIED STRATEGY	ATTITUDE	MOTIVATION	FORMATIVE INV.		
A	MOTIVATIONAL AFFECTIVE PROCESS	"A"	17.59	17.07	17.24	16.55	17.24	17.59	17.21	15.06
B	HUMAN DEVELOPMENT	"A"	17.36	17.43	17.62	16.91	17.44	17.94	17.45	15.35
C	PSYCHOLOGY OF THE PERSONALITY	"A"	12.82	12.5	12.17	12.9	14.82	12.97	13.03	14.61
D	DESIGN AND CONSTRUCTION OF PSYCHOLOGICAL TESTS	"A"	13.94	13.41	13.05	13.33	15	13.18	13.65	15.14
E	METHODS OF INTERVIEW AND OBSERVATION	"A"	18.54	18.62	18.03	18.62	18.08	18.62	18.42	16.19
F	ELECTIVE	"A"	18.02	17.43	17.52	17.87	17.63	17.94	17.74	16.66
G	FUNDAMENTALS OF RESEARCH IN PSYCHOLOGY	"A"	17.5	17.13	17.06	16.91	17.34	17.06	17.17	17.12

Table 3: Teaching-learning evaluation scores for teachers of the Professional School of Nursing

	Repetition						Total	Mean
Treatment (Teachers)	1*	2*	3*	4*	5*	6*		
A	16.07	16.01	15.84	16.07	16.07	16.07	96.13	16.02
B	15.3	15.86	15.88	16	16	15.86	94.9	15.82
C	11.33	11.33	12.04	11.33	11.33	11.33	68.69	11.45
D	15.78	15.94	15.48	15.4	15.68	15.48	93.76	15.63
E	15.63	15.03	15.09	15.19	15.53	15.18	91.65	15.23
F	15.6	15.24	15.28	15.52	15.43	15.34	92.41	15.4
G	15.05	14.26	14.04	13.98	13.9	14.34	85.57	14.26

* Dimension of evaluation

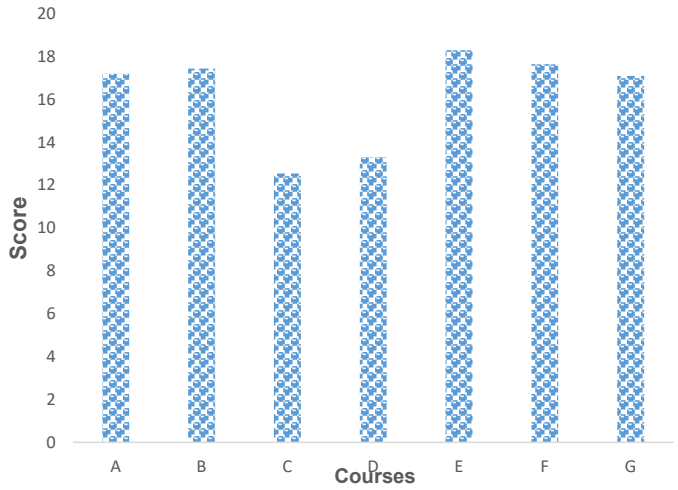

Figure. 1. Grade average in seven Psychology courses

Legend: A: Motivational Affective Processes; **B:** Human Development; **C:** Personality Psychology; **D:** Design and Construction of Psychological Tests; **E:** Interview and Observation methods; **F:** Elective; **G:** Research basics in Psychology.

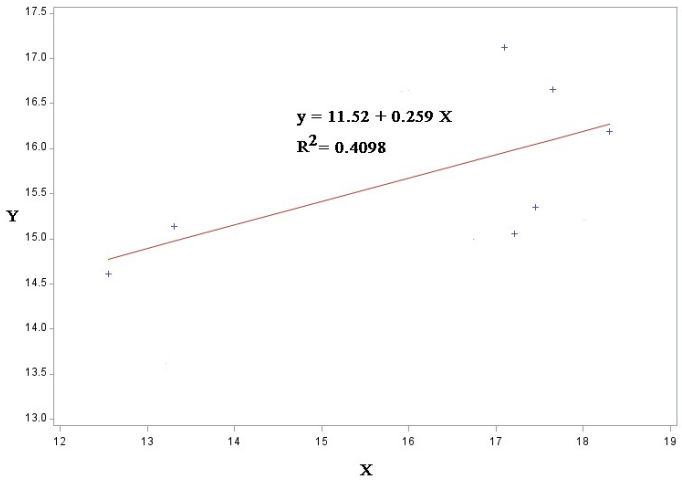

Figure. 2. Regression between students' grades (Y) and teachers' scores (X)

that 97.53% of the variable response is exclusively due to the variable teaching, and that 2.47% is due to unknown factors.

Duncan's test (α=0.05) points out the lack of difference between the average of treatment A and B, which average scores are 15,9983 and 15,8167, respectively – shown in Figure 3. Also, there are no statistical differences between treatment B and D, D and F and between F and E, which averages range from 12.275 to 15.8167, respectively. Treatment C is in last place, with the lowest score (11.4483). There is also variation among teachers' evaluation averages (treatments), which is confirmed by Duncan's multiple range test (α=0.05).

Simple linear correlation and regression analysis

The Regression and Correlation analysis was conducted based on the data from the abovementioned surveys, teachers' scores and students' grades shown in Table 4 of Annex 2.

The regression coefficient (b) has the value of b = -0.4038 and it is non-significant (Fig. 4). This value indicates us that this is a negative indicator for this study. The correlation coefficient is negative non-significant (r = -0.5016), which indicates us that there is a non-significant negative association between the two variables. This means

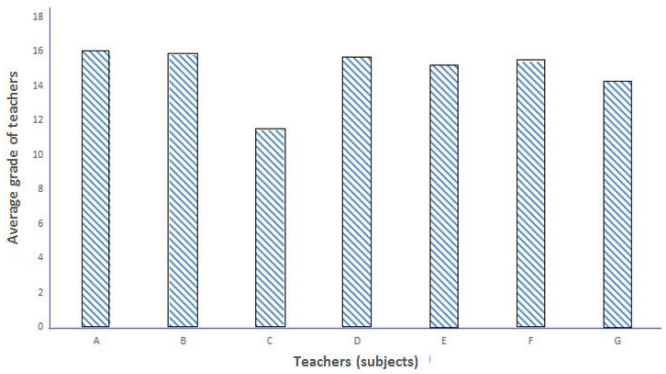

Figure. 3. Teacher Evaluation from the Professional School of Nursing

Legend: A: History of Art; **B:** Philosophy; **C:** Constitutional and Human Rights; **D:** Ethics and Deontology; **E:** National Reality; **F:** Human Anatomy; Introduction to Nursery

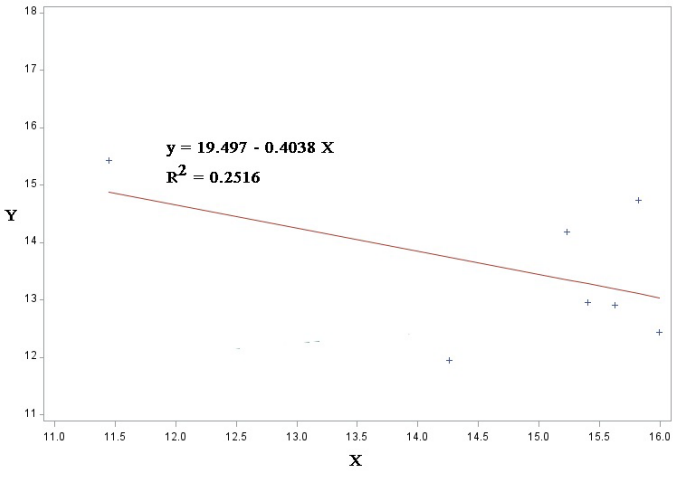

Figure 4: Regression between students' grades (Y) and teachers' scores (X)

Table 4: Summary of Average Student Grades and Teachers' Scores by Subject from the Professional School of Nursing

TEACHER	SUBJECT	SECTION	EVALUATION OF THE TEACHER						AVERAGE	AVERAGE GRADE OF STUDENT
			FULFILLMENT	KNOWLEDGE	APPLIED STRATEGY	ATTITUDE	MOTIVATION	FORMATIVE INV.		
A	ART HISTORY	"B"	16.02	16.01	15.84	16.07	16.07	16.07	16.02	12.43
B	PHYLOSOPHY	"B"	15.3	15.86	15.88	16	16	15.86	15.82	14.73
C	CONSTITUTION AND HUMAN RIGHTS	"B"	11.33	11.33	12.04	11.33	11.33	11.33	11.45	15.42
D	ETHICS AND DEONTOLOGY	"B"	15.78	15.94	15.48	15.4	15.68	15.48	15.63	12.91
E	NATIONAL REALITY	"B"	15.63	15.03	15.09	15.19	15.53	15.18	15.23	14.18
F	HUMAN ANATOMY	"B"	15.6	15.24	15.28	15.52	15.43	15.34	15.4	12.96
G	INTRODUCTION TO NURSERY	"B"	15.05	14.26	14.04	13.98	13.9	14.34	14.26	11.95

that the teaching style has a negative relationship with the divergent learning style (r = -0.5016). Such results are not consistent with the reports of Kohler (2013), who obtained positive correlation values in a similar work to this study. Kohler emphasized, in line with Schunk (op. cit), that "the variables predicting academic performance are analytical intelligence and the motivation component (attitude, motivation and anxiety)". In the same line that Kohler, we can assume that these results have an explanation in the motivation component or in the students' subjectivity when they score teachers in the dimensions evaluated.

The Student **t** value (t = 1.70) is positive non-significant (Pr = 0.1145 > α=0.05), which indicates the lack of differences between the average teachers' scores (X) and the students' grades (Y).

Conclusions

From this study it can be can concluded that there is a gradualness in the teaching-learning efficiency. In the School of Psychology, cycle IV, semester 2018-1, the learning-teaching process was relevant in the Interview and Observation Methods course, with a score of 18.41 that shows a significant difference between courses taught by each teacher. However, the simple linear correlation and regression analysis points out no association between teachers' scores and students' grades. Regarding the School of Nursing, we can infer that in the teaching-learning process, the score was relevant in the course History of Art, with a correspondence of 15.99, lower than the teaching-learning process in the School of Psychology in which a significant difference was found between courses taught by teachers. From the simple linear correlation and regression analysis, it was found a negative association between teachers' scores and students' grades, which may indicate, within the probability range, a lack of motivation or just subjectivity in students related to teacher' performance; or that evaluations in the School of Nursing have more difficulty or weight. Upon the results described above, it becomes a need in Peruvian universities programs to determine the biases that can affect the teacher' performance and quality of the teaching-learning process, in addition to grades obtained per course and polls' results of the teachers performance. New studies are needed oriented to determine influences of gender bias, as it was demonstrated in other studies.

References

1. Bakhru, K.M. 2017. Personal competences for Effective Teaching: A Review Based Study. Educational Quest: An Int. J. of Education and Applied Social Science: Vol. 8, Special Issue, p. 297-303. https:/w.researchgate.net/publication/31892528.
2. Boring, A. et.al. 2016. Student evaluation of teaching (mostly) do not measure teaching effectiveness. ScienceOpen Research 2016 (DOI:14293/s219-106.1.SOR-EDU.AETBZV.v1). 1-11
3. Giridharan, K. and R, Raju. 2016. Impact of teaching strategies: Demonstration and Lecture Strategies and impact of Teacher effect on Academic Achievement in Engineering Education. International Journal of Educational Sciences. Vol. 14: 174-186
4. Kohler, J.L. 2013. Rendimiento Académico, habilidades intelectuales y estrategias de aprendizaje en universidades de Lima. Universidad de San Martin de Porres, Perú
5. Olafsdótir, K. 2018. Gender bias in student evaluation of teaching among undergraduate business students. Timarit um vidskipti og efnahagsmál, 15, organgur, 1. tölublat,
6. Oliver, D. 2017. Relationship between Teacher effectiveness and Student achievement. An Investigation of Teacher Quality. Dissertation submitted to the Graduate School in partial fulfillment of the requirement for the Degree of Doctor of Education. Ball State University, Muncie, Indiana. USA.
7. Schunk, D.H. 2012. Teorías del Aprendizaje. Una Perspectiva Educativa. Pearson Educación de Mexico. 6ta. Edición. Pag. 59