

Perception of teaching performance in the virtual learning environment

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ABSTRACT

This article aims to analyze the perception of the students of the professional school of business administration about the teaching performance in the virtual learning environment during the COVID-19 pandemic. When developing the research, it was determined that there is a good teaching performance, according to the perception of the students. However, it was identified that the factors of domain of the topic and class session management, present a better perception in this context of virtual learning; while the didactic strategies factor is the one that presents a not so favorable perception. In addition, through a comparative analysis, it was determined that the didactic strategies and planning factors have suffered a negative variation with respect to the perception per teacher, when moving from face-to-face to virtual learning, since, of the total of 17 specialty teachers, seven of them one negative variation. These results are validated by the linear regression test, where an R2 value of 0.965 is calculated, with respect to the didactic strategies factor. It means that this factor influences 96.5% on the perception of students with the global factor and an R2 value of 0.921 for the planning factor, which indicates an influence of 92.1%.

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1. INTRODUCTION

In recent years, the university system has undergone substantial modifications, both in structure and in the planning of activities associated with university teaching [1]. This new form of teacher performance in the classroom, in which went from being a content exhibitor to an information facilitator, has meant that the perception of students regarding their development is important and necessary to measure it, in order to achieve continuous improvement with respect to university academic quality [2], [3]. The overcrowding of

higher education, the diversification of institutions and students, the impact of new technologies on access to knowledge and the need to meet the demands of the academic supply of the labor market, have led the state to promote policies to ensure the university academic quality [4].

Under the aforementioned, we are faced with a context where we must adopt a rapid change without neglecting the pedagogical principles that allow us to develop a quality teaching process [5], [6]. Although university institutions constantly change their educational model, in the same way the way of learning and teaching must change [7]. This is where the need to assess whether the teacher really complies with what is expected becomes relevant.

University teaching is exercised from a complex network in which multiple intersections coexist. In that sense, the evaluation of teacher performance is assumed from the institutional perspective in the understanding that from its definitions the scenario is established from which all teachers it can build its identity and projection of academic life [8], [9]. Teaching performance is one of the pillars that can sustain the quality of the university education system [10], [11]. The more attention is paid to assessment and the more its results are used for decision-making, the more relevant its role in teaching will be [12]. Even more so, if the problem of university educational quality has as a leverage factor the teaching performance and that is the actions carried out during their teaching and research work show the precariousness of their personal and pedagogical skills [13], [14]. Given this, the evaluation of teaching performance is essential from the student's perspective, which must be obtained through a questionnaire [15].

The importance of the results of teacher performance evaluation resides in assumption that the information provided to the teacher as a result will stimulate improvement and make pertinent changes in their way of covering the teaching process [16], [17]. Now if we take into account the scenario of the health emergency generated by the COVID-19 pandemic, it is pointed out that the derived exceptional situation has covered all areas of our functioning as a society: health, relational, economic and of course the educational [18], [19]. In many countries in order to give continuity to the learning of university students, educational institutions opted for a totally virtualized teaching [20], [21]. Not all teachers are prepared to assume the teaching process using digital tools [22], [23] which implies that it is necessary to evaluate teacher performance in this context.

Now if we focus strictly on the business administration career, it is pointed out that this professional career is related to skills such as entrepreneurship, strategic administration, management. In order for them to be reached by students, it is necessary for teachers to have a profile that allows them to achieve optimal performance, from the perspective of university students [24], [25].

Having made the introduction, the objective of this article is to analyze the perception of the students of the professional business administration school about the teaching performance in the virtual learning environment of a state university in Peru. The analysis will be carried out for each factor that make up the data collection instrument (specific factors and global factor). Likewise, it will be supported statistically if there is a correlation between the results obtained. This in order to generate a frame of reference in the authorities in order to establish action plans that contribute to improving teaching-learning in the next academic semesters, considering even more that in this year 2021, classes will still be developed in a virtual.

2. RESEARCH METHOD

2.1. Research level

The research design is non-experimental, since no action is taken or any improvement plan is applied to the university teachers of the professional school of business administration, which alters or generates any effect on their performance evaluation. It is intended is to analyze in a natural way the teaching performance, under the context of virtual learning implemented by the declaration of health emergency due to the COVID-19 pandemic in Peru.

2.2. Population and sample

The population is made up of all teachers who are in charge of specialty subjects, assigned to the professional school of business administration, whose number is 17 teachers. While it was possible to carry out the evaluation of teacher performance, from the perspective of the students to all teachers who are part of the population under analysis; is that the population and the sample will be the same. It should be noted that the evaluation of teaching performance is carried out from the perspective of the 155 students from the 7th to the 10th clic of the academic semester 2020-A, because, in these cycles, specialty subjects are taught.

2.3. Data collection technique

The technique used for data collection was the survey, and the instrument used is the questionnaire [26], in which two evaluation factors are established: specific evaluation factor and global evaluation factor. In the case of the specific evaluation factor, it has as indicators: planning, didactic strategies, communication, class session management and finally domain of the topic. It should be noted that the factors established in the questionnaire were approved by resolution at the Rectory level of the State University of Peru.

2.4. Validation of the data collection instrument

The validation of the data collection instrument is made up of two aspects. The first is the validation of the content of the instrument; and the second is the validation of the data collected from the instrument. For this, the statistical software SPSS V25 was used, in order to determine Cronbach's alpha, the result of which shows us that the scale obtained presents a Cronbach's alpha of 0.975, which indicates a high homogeneity and equivalence of response of all indicators [27].

3. RESULTS AND DISCUSSION

3.1. Analysis of the perception of teaching performance by each factor

Figure 1 shows the average qualification of teaching performance for each factor, according to the perception of administration students, as can be seen the range is between 14.4-14.9, so it can be qualitatively indicated that there is good teaching performance in each factor. It should be noted that teaching performance was rated within a range of 0 to 20. Although on average there is good teaching performance, the results obtained by each factor will be specifically described. Regarding the specific planning factor, which reflects the ability and effort of the teacher for the preparation and achievement of the subject, it can be indicated that 47% of the teachers presented a good performance, 29% had a regular performance, 12% had a very good performance, while 6% had a poor and good performance.

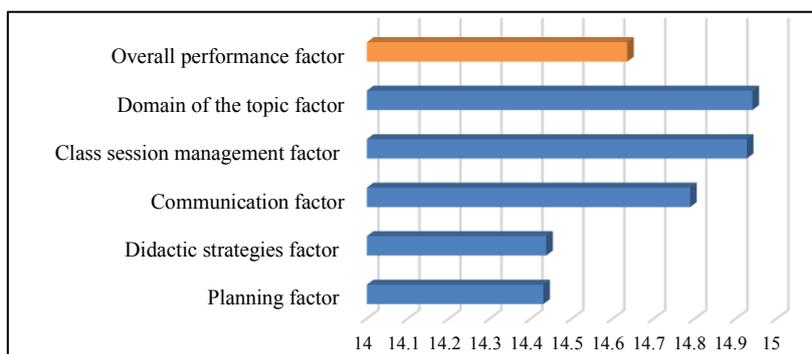


Figure 1. Average teaching performance for each factor

Regarding the specific factor didactic strategies, which reflects the use of tools or techniques by the teacher, so that their students acquire relevant knowledge, skills and attitudes. It can be indicated that 53% of the teachers presented a good performance, 29% presented a regular performance, and 6% presented both an excellent, very good and poor performance.

Regarding the specific communication factor, which reflects the motivation that the teacher arouses for the participation of the students and suitable language in the development of the subjects. It can be indicated that 47% of the teachers presented a good performance, 23% presented fair performance, 6% presented both excellent and poor performance, and 18% presented very good performance.

Regarding the specific factor class session management, which reflects the optimal management of the group and full compliance with the development of the subjects by the teacher. It can be indicated that 65% of the teachers presented a good performance, 17% presented a regular performance, 12% presented a very good performance, and 6% presented a poor performance.

Regarding the specific factor domain of the topic, which reflects the ability of the teacher to interact positively under their academic and professional experiences with the students, with proactive attitudes for the development of the subjects. It can be indicated that 59% of the teachers presented a good performance, 18% presented a regular performance, 17% presented a very good performance, and 6% presented a poor performance.

On the other hand, regarding the factor overall performance, which reflects the acceptance of the student with the teacher. It can be indicated that 41% of the teachers presented a good performance, 35% presented a regular performance, 18% had a very good performance, and 6% had a poor performance. This factor is always taken into consideration because, although it indicates how much the student wants the teacher to continue teaching this subject. It is also a reference that the authorities must take to train and recommend the teacher in their self-evaluation for the improvement in their performance.

According to these results, the factors domain of the topic and class session management are those that present a better perception by the students in this context of virtual learning, while the didactic strategies factor is the one that presents a not so favorable perception. The good perception of the student can be given, by the creation by teachers of forums as communication and information spaces, where there are different learning activities that promote teamwork and interaction between the teacher-student.

Now if we take into consideration the results obtained in the 2019-B semester when the learning was face-to-face, we can determine the factors that have presented the highest number of teachers with negative variation with virtual learning, these results are shown in Figure 2. Figure 2 indicates that from 17 specialty teachers in the professional business administration school, seven of them show a negative variation compared to the 2019-B semester, when face-to-face learning was carried out, the factors overall performance, domain of the topic, didactic strategies and planning, which resulted with greater negative variation when the virtual learning was dictated.

As various studies indicate [28], [29], this new context undoubtedly makes it necessary to restructure, the act of planning and administration of teaching. As a consequence of certain factors, student dissatisfaction can be perceived, a case to indicate is in the evaluation of the teacher, this process under virtual teaching. It becomes quite a challenge, since it brings with it the requirement to redesign an evaluation process that goes hand in hand with a new way of teaching. In these situations, the importance of technological tools is identified to verify the learning process in students, even more so if many students do not have the resources to access online education in an optimal way. Therefore, the use of didactic strategies for both teachers and students become essential for feedback on their progress and setbacks in the discipline.

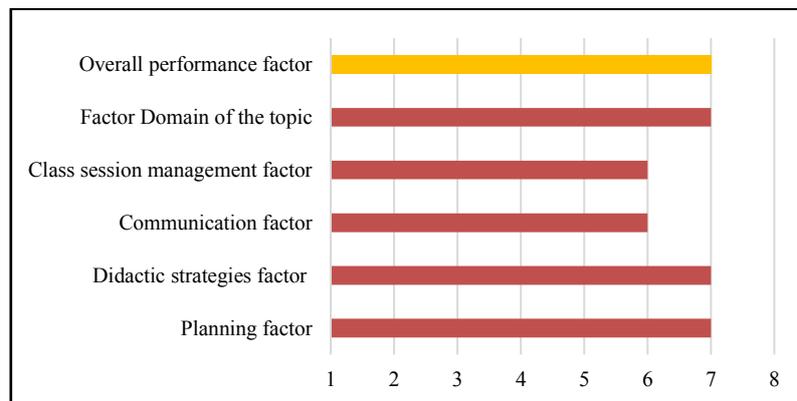


Figure 2. Comparison of teachers with negative variation for each factor (2019 B-2020 A)

3.2. Influence and relationship between specific factors and global factor

Now the influence is analyzed and the relationship that the specific factors have on the global teacher performance factor will be statistically supported, by means of the linear regression test in the SPSS software. Initially we will begin with the analysis of the planning factor and the overall performance factor. The ANOVA statistic informs whether or not there is a significant relationship between the factors analyzed through the critical value of significance. Table 1 shows the value of significance is equal to 0.000, which indicates that both factors are linearly related. In turn, the multiple correlation coefficient R, or Pearson's coefficient, is 0.959, which means that the degree of relationship is very high. Likewise, by means of the R squared, it can be indicated that 92.1% of the variation of the qualification of the overall performance factor (Y) is due to the perception of the students with the planning factor (X). This is translated by means of the following linear regression:

$$Y = -0.815 + 1.071X \approx \text{Overall performance} = -0.815 + 1.071 \text{ Planning.}$$

Regarding the didactic strategies factor, Table 2 shows the critical value of significance equal to 0.000, which indicates that both factors are linearly related; in turn, the Pearson coefficient is 0.982, which means that the degree of relationship is very high. Likewise, R squared is equal to 0.965, so it can be indicated that 96.5% of the variation of the rating of the overall performance factor (Y) is due to the perception of the students with the didactic strategies factor (X). This is translated by means of the following linear regression:

$$Y = -0.418 + 1.043X \approx \text{Overall performance} = -0.418 + 1.043 \text{ Teaching strategies.}$$

Table 1. Planning factor and overall performance factor

Model	R	R square	Parameter estimates		ANOVA
			Constant	b	Significance
1	.959 ^a	.921	-0.815	1.071	.000

a. Predictors: (Constant), Planning factor

Table 2. Didactic strategies factor and overall performance factor

Model	R	R square	Parameter estimates		ANOVA
			Constant	b	Significance
1	.982 ^a	.965	-.418	1.043	.000

a. Predictors: (Constant), Didactic strategies factor

Given this, it is indicated by Ramkissoon, Belle, and Bhurosy [29] that the teachers interviewed agree, although no one was prepared for something of this magnitude, this refers to the virtual teaching modality. They have had to innovate in new methodologies and learn in the virtual learning process, since their role as mediator opens a new window to this virtual format in which autonomy and self-direction become the appropriate way to manage the learning process.

Regarding the communication factor, Table 3 shows the critical value of significance equal to 0.000, which indicates that both factors are linearly related. In turn, the Pearson coefficient is 0.881, which means that the degree of relationship is very high. Likewise, R squared is equal to 0.776, so it can be indicated that 77.6% of the variation in the rating of the overall performance factor (Y) is due to the perception of the students with the communication factor (X). This is translated by means of the following linear regression:

$$Y = 0.598 + 0.949X \approx \text{Overall performance} = 0.598 + 0.949 \text{ Communication.}$$

Table 3. Communication factor and overall performance factor

Model	R	R square	Parameter estimates		ANOVA
			Constant	b	Significance
1	.881 ^a	.776	0.598	.949	.000

a. Predictors: (Constant), Communication factor

The results show that there is a moderate influence between the communication factor and the optimal perception of teacher performance, as indicated by various studies [30], [31], where the importance of communication is based on leadership capacity, which is the key factor in shaping attitudes of the students. This factor must create an environment of motivation and interaction between the teacher-student, this will allow the professional development of the student, who will feel capable of making decisions and having a collaborative participation in the teaching-learning process.

Regarding the class session management factor, Table 4 shows the critical value of significance equal to 0.000, which indicates that both factors are linearly related. In turn, the Pearson coefficient is 0.909, which means that the degree of relationship is very high. Likewise, R squared is equal to 0.827, so it can be indicated that 82.7% of the variation in the rating of the overall performance factor (Y) is due to the perception of students with the class session management factor (X). This is translated by means of the following linear regression:

$$Y = -5.929 + 1.378X \approx \text{Overall performance} = -5.929 + 1.378 \text{ Class session management.}$$

With respect to the domain of the topic factor, Table 5 shows the critical value of significance equal to 0.000, which indicates that both factors are linearly related. In turn, the Pearson coefficient is 0.844, which means that the degree of relationship is very high. Likewise, R squared is equal to 0.712, so it can be indicated that 71.2% of the variation in the rating of the overall performance factor (Y) is due to the perception of the students with the domain of the topic factor (X). This is translated by means of the following linear regression:

$$Y = -2.073 + 1.118X \approx \text{Global performance} = -2.073 + 1.118 \text{ Domain of the topic factor.}$$

Table 4. Class session management factor and overall performance factor

Model	R	R square	Parameter estimates		ANOVA
			Constant	b	Significance
1	.909 ^a	.827	-5.929	1.378	.000

a. Predictors: (Constant), Class session management factor

Table 5. Domain of the topic factor and overall performance factor

Model	R	R square	Parameter estimates		ANOVA
			Constant	b	Significance
1	.844 ^a	.712	-2.073	1.118	.000

a. Predictors: (Constant), Domain of the topic factor

The study carried out by Tambunan, Sinaga, and Widada [32], indicate that the performance of teachers generates interest in students, so there is a very strong relationship between learning, motivation and actions of teachers towards the achievement of learning, this is indicated by the value of path coefficient P2, that is, $r_{X2X5} = 0.239 > r(\alpha = 0.01) = 0.137$. In addition, the study carried out by Wolomasi, Asaloei, and Werang [33], indicate that the job performance of teachers is significantly related to their job satisfaction as indicated by the value of the coefficient of $R^2 = .071$ and the significant value is .000. These results allowed to validate the alternative hypothesis (Ha).

Based on the statistical results, the didactic strategies factor is the one that has a greater influence on the perception of students with teaching performance, with an R^2 value of 0.965, this influence is 96.5%, then it is the planning factor, which has an R^2 value of 0.921, indicating an influence of 92.1%. Although the use of information and communications technology (ICT) in education has been the subject of debate by many professionals in the sector, indicating that these resources do not guarantee effective teaching. It should be taken into account that under this new context generated by COVID-19, the use of technologies is no longer an option but a necessity. For this reason, it is important that teachers and students are inserted in the digital environment, thus generating a pedagogical reconfiguration on the part of teachers [34].

Even more so if the students satisfactorily evaluate the teaching performance, when it provides quality teaching both in the explanation, in the use of tools and in the resources provided, therefore the ICT tools are intended to guide the methodological and didactic actions, to allow to improve the cognitive system, the qualities and principles, of the administration student [35].

4. CONCLUSION

The development of the research allowed to determine a good teaching performance, according to the perception of the students. Although the entire education sector has not been prepared for such an accelerated change in teaching-learning modality, many teachers have found it necessary to innovate in new teaching methodologies, incorporating interactive tools through videos and online forums, creating in this way friendly and flexible environments, taking into consideration the nature of the business administration career.

In general, the results validate that the teaching performance significantly influences the motivation and the satisfactory perception of the students of the professional school of business administration. It was determined that the factors domain of the topic and class session management, present a better perception by the students in this context of virtual learning; while the didactic strategies factor is the one that presents a not so favorable perception.

The study recommended educational institutions adapt virtual platforms and channels that meet the needs and interests of students, which should have an interactive and friendly approach for both the student and the teacher. These dissemination channels should serve as means for the student to provide their perception about their professional development, in this way the authorities in charge must take certain

measures to improve the educational service that is provided. Under this new context of virtualized education, teachers must be trained in the use of new technological tools, taking into consideration the different characteristics of each teacher. All this in order to meet the needs of students and at the same time to find teachers in a more productive environment and motivate, this will influence a better performance and greater development in terms of digitization.

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