Revista Innova Educación

ORIGINAL ARTICLE

Teaching styles and academic performance in university education

Estilos de enseñanza y desempeños académicos en educación universitaria

Estilos de ensino e desempenho acadêmico no ensino universitário

Nancy Yana[1]
Universidad Nacional del Altiplano, Puno-Puno, Perú
https://orcid.org/0000-0001-7589-9469
yanasallucanancy@gmail.com

Guillermo Puño
Universidad Nacional del Altiplano, Puno-Puno, Perú
https://orcid.org/0000-0002-7097-0323
puñoguillermo@gmail.com

Hector Adco
Universidad Nacional del Altiplano, Puno-Puno, Perú
https://orcid.org/0000-0001-5642-6164
Hector.adco@gmail.com

Rebeca Alanoca
Universidad Nacional del Altiplano, Puno-Puno, Perú
https://orcid.org/0000-0003-1795-7549
r.alanoca@gmail.com

Marisol Yana
Universidad Nacional del Altiplano, Puno-Puno, Perú
https://orcid.org/0000-0001-7223-1201
Marisol.yana@gmail.com

Ronny Lagos
Universidad Nacional de Huancavelica, Paturpampa-Huancavelica Perú
https://orcid.org/0000-0003-1425-9972
r.lagos@gmail.com

ABSTRACT. The research had the purpose of determining the relationship between the teaching style and academic performance in the students of the Professional School of Initial Education of the National University of Altiplano, Puno. Methodologically, the research is descriptive and correlational. The sample consisted of 233 students to whom a questionnaire with 71 indicators was applied, corresponding to the teaching styles, and a document analysis guide was used for the academic performance variable. To determine the correlation, the Spearman correlation coefficient, ρ (rho). The results show a moderate positive correlation between teaching styles and academic performance, which are represented in a 0.452 * relationship. In conclusion, the higher the level of applicability of the different teaching styles, the better and the higher the students' academic performance.

[1] Director IEI N 217
Correspondencia: yanasallucanancy@gmail.com

PALABRAS CLAVE

aprendizaje, desempeño académico, educación, estilos de enseñanza, evaluación.

RESUMEN. La investigación tuvo como objetivo determinar la relación entre el estilo de enseñanza y el desempeño académico en las estudiantes de la Escuela profesional de educación inicial de la Universidad Nacional del Altiplano, Puno. Metodológicamente, la investigación es de tipo descriptivo correlacional. La muestra estuvo constituida por 233 estudiantes a quienes se les aplicó un cuestionario con 71 indicadores, correspondiente a los estilos de enseñanza y para la variable rendimiento académico se aplicó una guía de análisis documental. Para determinar la correlación se utilizó el coeficiente de correlación de Spearman, ρ (rho). Los resultados muestran que existe una correlación positiva moderada entre los estilos de enseñanza y el desempeño académico, que se representan en un 0.452* de relación. En conclusión, en cuanto mayor sea el nivel de aplicabilidad de los diferentes estilos de enseñanza mejor y mayor será el desempeño académico de los estudiantes.

PALAVRAS-CHAVE

aprendizagem, desempenho acadêmico, educação, estilos de ensino, avaliação.

RESUMO. O objetivo da pesquisa foi verificar a relação entre o estilo de ensino e o desempenho acadêmico nos alunos da Escola Profissional de Educação Inicial da Universidade Nacional do Altiplano, Puno. Metodologicamente, a pesquisa é descritiva e correlacional. A amostra foi composta por 233 alunos aos quais foi aplicado um questionário com 71 indicadores, correspondentes aos estilos de ensino e para a variável desempenho acadêmico, foi aplicado um roteiro de análise documental. Para determinar a correlação, o coeficiente de correlação de Spearman, ρ (rho), foi usado. Os resultados mostram que existe uma correlação positiva moderada entre estilos de ensino e desempenho acadêmico, os quais são representados por uma relação de 0,452 *. Em conclusão, quanto maior o nível de aplicabilidade dos diferentes estilos de ensino, melhor e mais elevado é o desempenho acadêmico dos alunos.

1. INTRODUCTION

Talking about teaching is complex because we find several meanings covering aspects from methods, styles, characteristics, teacher, student, curriculum, and many others oriented to define it. On the other hand, learning, considered a process, does not occur in a vacuum but through strategies and contextual mediations that the teacher relies on for teaching (Gravini et al., 2009). Likewise, the relationship between teaching styles and teachers' ways of thinking become a critical factor in the configuration of a particular style (Zhang, 2009). Therefore, educational practices must be carried out within a framework of flexibility and adaptation, aimed at designing strategies that the teacher will implement so that learning is authentic and meaningful. That is, teaching acquires the accurate alignment to achieve the generation of knowledge in its students, implementing innovative resources and teaching strategies not only to promote work but also to consolidate the intrinsic motivation of its students (Schneider, 2004).

Taking into account a preferred learning style can facilitate the teacher to understand why they prefer to teach in one way and identify why it is easier for a student to process information (Gallego & Nevot, 2008). With this, we want to point out that it is not only teacher reflection on the teaching style they adopt importantly but also the analysis of the factors and strategies that guide the adoption of these learning-centered styles (Gargallo et al., 2017).

In university teaching, the challenge of determining a teaching style is more complex. It consists of moving from an information transmission approach to the active participation of students (Silva & Maturana, 2017). Hence, they must develop competencies, capacities, abilities, and autonomy in their learning process. Teachers must

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be managers and guides of the learning of their students (Baelo & Arias, 2011; Suárez et al., 2019) since higher education requires changes that allow responding to the needs of students, the knowledge society, and the field labor (Silva & Maturana, 2017).

Furthermore, it is not only necessary to consider methodology courses to understand teaching styles for teacher training in the study plans (Laudadío & Mazzitelli, 2019). The development of competencies must also be taken into account to guarantee the development of skills to implement in the teaching processes (Sánchez et al., 2019). Regarding the definition of teaching style, Provitera and Esendal (2008) affirm that it is a particular pattern of needs, beliefs, and behaviors that the teacher develops. Thus, they are teaching preferences and behaviors usually exhibited in the teaching activity and abstracted from the academic and professional experience, taking learning styles as a reference (Martínez, 2002). However, university teachers have not yet managed to become habitually familiar with these learning styles, so the development of each style continues to occur at low levels and does not guarantee educational quality (Yana et al., 2019).

The teaching styles proposed by Renés et al. (2013) there are four: the open, the formal, the functional and the structured.

The open style is typical of teachers whose teaching behaviors favor active learning in students (Chiang et al., 2013). They motivate with novel activities, often around real problems in the environment, and encourage students to search for originality in carrying out tasks (Muchmore, 2004). Teachers with this style frequently propose new content; even if it is not included in the program, it does not adhere strictly to the planning, they motivate students with new activities, etc.

The Formal style occurs in teachers whose teaching behavior favors reflective learning in students. They are in favor of the detailed planning of their teaching (Sanjurjo, 2002). They are strictly governed by what is planned, do not allow improvisation, do not teach content that is not included in the program, encourage and value both reflection and analysis in students to enable them to support their ideas from rationality, and leave time for revisions and reviews, etc.

The structured style is typical of teachers whose teaching behaviors favor students to learn theoretically. They tend to impart content integrated into a broad, articulated and systematic theoretical framework (Sevillano et al., 2007). Teachers with this style place a lot of importance on planning and emphasize that it is coherent, structured, and well-presented since class dynamics often develop under pressure.

The functional style is typical of those teachers whose teaching behavior guides students to learn pragmatically. They give more weight to procedural and practical contents than theoretical ones (Zabala & Arnau, 2009). Teachers with this style favor planning, but they emphasize its viability, functionality, and concreteness.

Thus, the presence of teaching styles in learning activities, in teacher-student interaction is essential. The diversification of teaching methodologies seeks to achieve satisfactory academic performance or achievement (Ventura, 2013).

Academic performance results from different social, personal, institutional factors, educational experiences, and previous expectations that interact with each other (Edel, 2003; Garbanzo, 2007) and that are measured through grades. Or averages of degrees obtained, a product of the effort and work capacity of the student, of the hours of study, of the competition, etc., (Silvestre & Zilberstein, 2003; Véliz et al., 2020). Obtaining these academic

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achievements in which external and internal variables of the subject intervene results from curricular efforts that are firmly based on what the student must do instead of what he must know (Chadwick, 2001).

Thus, teaching styles influence learning styles (Calisaya, 2017). The teacher must be able to master them, to take them into action after establishing a previous analysis of the situation, to combine them appropriately and transform them to generate new ones (Isaza & Henao, 2012).

Considering the exposed literature, the objective of the research was to determine the relationship between teaching styles and academic performance in students of the professional school of Initial Education of the National University of the Altiplano de Puno (UNA - Puno).

2. METHODS AND MATERIALS

Place of study

The research was carried out in the Puno region, the province, and the district of the same name. It is located in the south of Peru. The scope of the study includes the 233 students of the Professional School of Initial Education enrolled in complementary areas, that is, pre-professional practice courses.

Description of Methods

The research was carried out within the quantitative approach of the descriptive correlational type (Hernández et al., 2014). The sample was intentional and not probabilistic for convenience and consisted of students from the National University of the Altiplano of the Professional School of Initial Education, 233 students enrolled in the courses that develop the pre-professional practices.

The variables evaluated were teaching styles and academic performance. To evaluate the first, the adapted teaching styles questionnaire from Martínez (2002), was applied, which consists of 72 indicators: open style (18 hands), formal style (18 indicators), structured style (18 indicators), and functional style (18 indicators). To collect data on academic performance, a document analysis guide (student qualification record) was used. Both instruments were validated by the judgment of expert experts on the issues in question and were applied strategically.

To determine the correlation between the variables studied, the Spearman correlation coefficient, ρ (rho), was used. The data were processed in the statistical package SPSS V-24.

3. RESULTS

Table 1
Degree of relationship between teaching styles and academic performance

			Teaching styles	Academic performance
Rho of Spearman	Teaching styles	Correlation coefficient	1,000	0.452**
		Sig. (bilateral)		0.000
		N	233	233
	Academic performance	Correlation coefficient	0.452**	1,000
		Sig. (bilateral)	0.000	
		N	233	233

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Source: Results obtained with SPSS software

According to the results obtained from the estimation of the Spearman correlation, ρ (rho) shows that the value of the estimated coefficient is 0.452 (Table 1). That is, the correlation that exists between the variables studied is 45.2 % of cases. This value is located in moderate positive correlation within Spearman's correlation coefficient table. This means that teaching styles mark the results in academic performance in a good way. Likewise, the P-value was 0.000, this value being less than 0.01 (1%). Therefore, the estimated Spearman correlation is statistically significant in 99% confidence.

Levels of teaching styles
Table 2

Levels of application of the open style

	Open style		Alternatives		Total
			No	Yes	
	Scheduling is a limitation for the teacher when teaching.	f	36	197	233
		%	15.5	84.5	100
	The questions that arise (spontaneous or current) are placed before what she is doing.	f	112.0	121.0	233
		%	48.1	51.9	100
	The teacher is attracted to classes when students are spontaneous, dynamic, and restless.	f	30.0	203.0	233
		%	12.9	87.1	100
	It is difficult for the teacher to hide her mood in the class.	f	25.0	208.0	233
		%	10.7	89.3	100
	When she plans activities, she tries to keep them from being repetitive.	f	0.0	233.0	233
		%	0	100	100
	She frequently proposes to students that they pose questions, challenges, or problems to address and/or solve.	f	134.0	99.0	233
		%	57.5	42.5	100
	In department, faculty, and other meetings, she contributes original or new ideas.	f	179.0	54.0	233
		%	76.8	23.2	100
	If in-class some situation or activity does not go well, it does not become a problem and, without hesitation, rethink it in another way.	f	150.0	83.0	233
		%	64.4	35.6	100
	She often asks for volunteers from among the students to explain the activities to others.	f	18.0	215.0	233
		%	7.7	92.3	100
	She encourages and encourages routines to be broken.	f	0.0	233.0	233
		%	0.0	100.0	100
Items	The methodical and detailed work makes her uncomfortable, and she is tired.	f	141.0	92.0	233
		%	60.5	39.5	100
	In class, she intentionally encourages brainstorming without any formal limitations.	f	151.0	82.0	233
		%	64.8	35.2	100
	If possible, her explanations are brief.	f	157.0	76.0	233
		%	67.4	32.6	100
	In evaluations, she usually asks open-ended questions.	f	30.0	203.0	233
		%	12.9	87.1	100
	She frequently changes methodological strategies.	f	28.0	205.0	233
		%	12.0	88.0	100
	Whenever homework allows, she prefers students to work as a team.	f	116.0	117.0	233
		%	49.8	50.2	100
	She usually takes evaluations (questions or tests) in classes, even without having announced them.	f	0.0	233.0	233
		%	0.0	100.0	100
	In exercises and student work, she considers presentation, details, and order to be not as important as content.	f	1.0	232.0	233
		%	0.4	99.6	100
Mean		f	72.67	160.33	233

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| | | % | 31.2 | 68.8 | 100.0 |

Source: Systematization of data on open teaching style

The research results indicate that the teaching of the open style (Table 2) is the least developed in higher education with 68.8% compared to the others. However, these results contradict those obtained by Villa (2017), who points out that teachers predominantly adopt the open style. Likewise, Chiang et al. (2013) state that teachers who apply the available type favor the student's active learning style with high and very high preference. However, using this style promotes novel activities in the students' learning, often encompassing real problems in the environment, and encourages them to search for originality in the performance of tasks (Muchmore, 2004). In addition, as stated by Chiang et al.,(2013) the application of the open and functional styles promote active style learning, including the pragmatic type of the students respectively, coinciding with Zabala and Arnau (2009).

Table 3
Level of application of the formal style

Formal style		Alternatives		Total
		No	Yes	
During the course, he prefers to develop few topics but in depth.	f	38	195	233
	%	16.3	83.7	100
When you leave exercises, you leave enough time to solve them.	f	23.0	210.0	233
	%	9.9	90.1	100
In teamwork meetings with other colleagues, he listens more than he talks. Therefore, it is not very participatory.	f	17.0	216.0	233
	%	7.3	92.7	100
Encourage and insist that students think carefully about what they are going to say before doing it.	f	19.0	214.0	233
	%	8.2	91.8	100
In class, you only work on what was planned, leaving the rest for other times.	f	6.0	227.0	233
	%	2.6	97.4	100
He makes evaluations in classes only if he has previously communicated them.	f	1.0	232.0	233
	%	0.4	99.6	100
The evaluations give a score to the presentation and the order.	f	1.0	232.0	233
	%	0.4	99.6	100
At the beginning of the course, he has planned, almost in detail, what he is going to develop.	f	0.0	233.0	233
	%	0.0	100.0	100
Most of the time, in the explanations, he contributes several points of view regardless of the time he takes on it.	f	19.0	214.0	233
	%	8.2	91.8	100
Considers it essential that students are calm, reflective, and with a particular method of work.	f	0.0	233.0	233
	%	0.0	100.0	100
Often proposes activities that need to find information to analyze it and draw conclusions.	f	14.0	219.0	233
	%	6.0	94.0	100
In the first days of the course, he presented and, in some cases, agreed with the students on the planning.	f	24.0	209.0	233
	%	10.3	89.7	100
He ponders the facts a lot before making decisions in the development of his activities.	f	8.0	225.0	233
	%	3.4	96.6	100
In class dynamics, it is not often that he puts students to work in groups.	f	8.0	225.0	233
	%	3.4	96.6	100
The dates of the evaluations are announced more than two weeks in advance.	f	29.0	204.0	233
	%	12.4	87.6	100
He explains a lot and in detail since he considers that this way, I favor learning.	f	19.0	214.0	233
	%	8.2	91.8	100
Faced with any fact, it favors a rational search for the causes.	f	14.0	219.0	233
	%	6.0	94.0	100
He prefers to work individually, allowing me to move at my own pace and not feel stress.	f	18.0	215.0	233
	%	7.7	92.3	100
Mean	f	14.33	218.67	233
	%	6.2	93.8	100.0

Items

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Source: Systematization of data on formal teaching style

The research results show that 93.8% of the teaching is developed under the formal style. These results contradict those found by Rojas et al., (2016) when concluding that it is the least favorable. The same is stated by Collantes (2016) when pointing out that the university teachers of the Faculty of Education of the National University Federico Villarreal lack a formal and structured style.

Table 4

Structured style application level

Structured style		Alternatives		Total
		No	Yes	
The activities he proposes are always very structured and with clear and explicit purposes.	f	16	217	233
	%	6.9	93.1	100
Most of the exercises that she delivers are characterized by relating, analyzing, or generalizing.	f	21.0	212.0	233
	%	9.0	91.0	100
Most of the time, she works and makes them work under pressure.	f	0.0	233.0	233
	%	0.0	100.0	100
She has difficulty breaking methodological routines or changing teaching strategies.	f	0.0	233.0	233
	%	0.0	100.0	100
Try that the interventions of the students in the class are deduced with coherence.	f	0.0	233.0	233
	%	0.0	100	100
Allows students to be grouped by interest or equivalent grades.	f	17.0	216.0	233
	%	7.3	92.7	100
He prefers to work with professional colleagues, who since he considers them of an intellectual level equal to or higher than theirs.	f	0.0	233.0	233
	%	0.0	100.0	100
He dislikes leaving an image of lack of knowledge on the subject that he is teaching	f	13.0	220.0	233
	%	5.6	94.4	100
He is in favor of exercises and activities with theoretical demonstrations.	f	15.0	218.0	233
	%	6.4	93.6	100
Evaluate that the answers in the exams are logical and coherent.	f	1.0	232.0	233
	%	0.4	99.6	100
He prefers and tries that there are no spontaneous interventions in the classroom.	f	0.0	233.0	233
	%	0.0	100.0	100
The experiments (problems) that it poses are usually complex, although the steps to carry them out (responses) are well defined.	f	25.0	208.0	233
	%	10.7	89.3	100
It is more open to professional relationships than emotional ones.	f	19.0	214.0	233
	%	8.2	91.8	100
Always try to give the content integrated into a broader framework.	f	17.0	216.0	233
	%	7.3	92.7	100
In planning, it is fundamentally about that everything is structured logically.	f	0.0	233.0	233
	%	0.0	100.0	100
In meetings, he tries to analyze problems with objectivity and distance.	f	5.0	228.0	233
	%	2.1	97.9	100
Maintains a confident favorable attitude towards those who reason and are consistent between what they say and do.	f	2.0	231.0	233
	%	0.9	99.1	100
In evaluations, he values that the steps that are taken are reflected.	f	5.0	228.0	233
	%	2.1	97.9	100
Mean	f	8.67	224.33	233
	%	3.7	96.3	100.0

(left margin label: Items; Mean)

Source: Systematization of data on structured teaching style

According to the results obtained, the teachers use the structured style with greater preference in 96.3% concerning the rest of the teaching styles in their teaching practice. A different result of the positions of the investigations carried out by Chiang et al., (2013) and Collantes (2016). The structured style, according to

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Sevillano et al., (2007) occurs when the teacher seeks to impart content that is always integrated into a broad, articulated and systematic theoretical framework, which is why most research teachers identify with the development of this.

Table 5

Application level of functional style

Functional style		Alternatives		Total
		No	Sí	
Class activities involve, most of the time, learning techniques to be applied.	f	11	222	233
Practical and useful examples always accompany the content explanations.	%	4.7	95.3	100
	f	0.0	233.0	233
He often gives students credit for good work.	%	0.0	100.0	100
He frequently brings experts in the field to class, since he considers that it is better to learn in this way.	f	0.0	233.0	233
	%	0.0	100.0	100
It puts the practical and the useful above feelings and emotions.	f	3.0	230.0	233
It favors the search to "shorten the path" to reach the solution.	%	1.3	98.7	100
It favors the search to "shorten the path" to reach the solution.	f	0.0	233.0	233
In the evaluations, the application / practical questions predominate over the theoretical ones.	%	0	100	100
Most of the activities you do are usually practical and related to reality.	f	0.0	233.0	233
Try to avoid failure in activities and for this I guide continuously.	%	0.0	100.0	100
If a class works well, it does not consider other considerations and / or subjectivities.	f	22.0	211.0	233
Feels a preference for practical and realistic students over theorists and idealists	%	9.4	90.6	100
You prefer students to answer questions briefly and accurately.	f	18.0	215.0	233
In planning, the procedures and practical experiences have more weight than the theoretical contents.	%	7.7	92.3	100
You do well with colleagues who have ideas that can be put into practice.	f	17.0	216.0	233
The theoretical contents are taught within experiences and practical work.	%	7.3	92.7	100
He does not like it or allow it to ramble. Immediately he asks to go to the concrete and practical.	f	17.0	216.0	233
	%	7.3	92.7	100
Class activities involve, most of the time, learning techniques to be applied.	f	22.0	211.0	233
Practical and useful examples always accompany the content explanations.	%	9.4	90.6	100
	f	0.0	233.0	233
He often gives students credit for good work.	%	0.0	100.0	100
He frequently brings experts in the field to class, since he considers that it is better to learn in this way.	f	0.0	233.0	233
	%	0.0	100.0	100
It puts the practical and the useful above feelings and emotions.	f	21.0	212.0	233
It favors the search to "shorten the path" to reach the solution.	%	9.0	91.0	100
It favors the search to "shorten the path" to reach the solution.	f	12.0	221.0	233
In the evaluations, the application / practical questions predominate over the theoretical ones.	%	5.2	94.8	100
Most of the activities you do are usually practical and related to reality.	f	29.0	204.0	233
Try to avoid failure in activities and for this I guide continuously.	%	12.4	87.6	100
If a class works well, it does not consider other considerations and / or subjectivities.	f	19.0	214.0	233
Feels a preference for practical and realistic students over theorists and idealists	%	8.2	91.8	100
You prefer students to answer questions briefly and accurately.	f	18.0	215.0	233
	%	7.7	92.3	100
Mean	f	11.61	221.39	233
	%	5.0	95.0	100.0

Source: Systematization of data on functional teaching style

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Although the functional style has obtained 95.0%, it is after the structured manner regarding teaching style preferences. The available style gives more weight to procedural and practical facts than theoretical ones (Zabala & Arnau, 2009). It may be the case in which students do not present a predominant learning style in their training (Oviedo et al., 2010). It may be the case in which students do not present a predominant learning style in their training Marsiglia et al., (2020) who show that the functional teaching style is the one most preferred by students.

Level of academic performance

Table 6 shows that 29.6% of students are at an excellent performance level (18-20) regarding academic performance. 68.7% of students are at an excellent academic performance level (14-17). Only 1.7% of students are located in the regular level (11-13), and no student is registered in the deficient level.

Table 6

Level of academic performance

Levels	Interval	Frequency	Percentage
Muy bueno	[18-20]	69	29.6
Bueno	[14-17]	160	68.7
Regular	[11-13]	4	1.7
Deficiente	[00-10]	0	0.0
Total		233	100

Source: Systematization of data on the level of performance of the students

The results show that 68.7% of the students are at good performance, and 29.6% are excellent. Consequently, the application of teaching styles such as structured (96.3%), functional (95.0%), and formal (93.8%), as well as the open type (68.8%), generate a positive impact on student performance levels. However, these results differ from those obtained by Malacaria (2009) who points out that the teacher's teaching style does not necessarily influence students' academic performance and that regardless of the teaching style, students could present a good level of academic performance (Yomiugci, 2019).

So, teaching styles are a primary nucleus for the teaching-learning process. That is why the teacher must reflect on their pedagogical action (Laudadío & Da, 2014), and the teaching styles that are intrinsically related to the students' learning styles (Aponte et al., 2020).

4. DISCUSSION

The research results allow us to sustain that between the application of teaching styles and academic performance, there is a moderate positive correlation of a direct type supported by the coefficient of r = * 0.452. This means that the higher the appropriate level of applicability of the teaching styles, the higher and the better the level of academic performance of the students. As well as the less the excellent bearing of the teaching styles is developed, the less or poorly the academic performance in higher education students will be evidenced. Likewise, the correlation that exists between the variables studied occurs in more than 45.2% of cases.

Results show the need to address the challenges of current education being increasingly complex and require appropriate significant configurations in the interaction between teaching and learning dynamics (Ruiz, 2020). The influence of the teaching style on learning styles represents this dynamism (Chiang et al., 2013; Rendón, 2013). The relationship of the types depends on the interaction between teacher and student (Gómez et al.,

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2019). However, the results obtained by Martínez (2002) indicate that teachers have not yet become familiar with learning styles in their pedagogical work. Therefore, a quality of learning is not guaranteed (Yana et al., 2019), research results that coincide with those found.

Likewise, it coincides with the results published by Hervás (2003) the teaching style is related to the express disposition of teachers to adopt specific strategies when they face a set of activities or the solution of a problem because they are modes, forms, adoptions, or particular ways of assuming the teaching-learning process, presentation of information, teaching methods, direction, conduction and control of the teaching-learning process, task management and evaluation (Rendón, 2010).

In this sense, the interaction between learning styles and teaching styles in higher education continues in construction and contrast. The adaptive line of instruction grouped as unidirectional proposes the reconciliation of the teaching style to the cognitive preferences of the students (Ventura, 2013). Hence the need to use and expand the diversity of teaching strategies to improve the performance and construction of students' knowledge (Jiménez et al., 2019).

Finally, it is necessary to highlight those other factors intervene and interfere in determining the teaching style university students identify with. From a collaborative and participatory work that contributes to the continuous training of teachers in professional training to the need to include in the study plans courses that allow them to consolidate and consolidate their professional training.

5. CONCLUSIONS

The teaching styles and the students' academic performance are related in a coefficient of r = 0.452, from which it is inferred that the greater the applicability of the different teaching styles, the better the level of academic performance will be achieved. In addition, it was evidenced that the four types are related and complement each other.

Structured (96.3%), functional (95.0%), and formal (93.8%) teaching styles prevail in the pedagogical practice of the teachers of the professional school of initial education. In other words, the teaching of integrated content is emphasized while developing a functional style to promote practical learning activities focusing on the viability, functionality, and realization of learning adjusted to planning that does not tolerate improvisation.

The development of different teaching styles is due to the diversity of learning techniques in students. As a result of this practice has influenced learning performance levels, highlighting the excellent level (68.7%) and the very good level (29.6%), with a correlation between teaching styles and learning styles causing good performance levels.

Conflicto de intereses / Competing interests:
Los autores declaran que no incurren en conflictos de intereses.

Rol de los autores / Authors Roles:

Nancy Yana; Héctor Adco; Guillermo Puño; Marisol Yana; Rebeca Alanoca; Ronny Lagos

Nancy Yana: conceptualización, curación de datos, análisis formal, adquisición de fondos, investigación, metodología, administración del proyecto, recursos, software, supervisión, validación, visualización, escritura - preparación del borrador original, escritura - revisar & amp; edición.

Héctor Adco: conceptualización, análisis formal, investigación, metodología, administración del proyecto, recursos, software, supervisión, validación, visualización, escritura - preparación del borrador original, escritura - revisar & amp; edición.

Guillermo Puño: conceptualización, investigación, metodología, administración del proyecto, recursos, software, supervisión, validación, visualización, escritura - preparación del borrador original, escritura - revisar & amp; edición.

Marisol Yana: conceptualización, investigación, metodología, administración del proyecto, recursos, software, supervisión, validación, visualización, escritura - preparación del borrador original, escritura - revisar & amp; edición.

Rebeca Alanoca: conceptualización, investigación, metodología, administración del proyecto, recursos, software, supervisión, validación, visualización, escritura - preparación del borrador original, escritura - revisar & amp; edición.

Ronny Lagos: conceptualización, investigación, metodología, administración del proyecto, recursos, software, supervisión, validación, visualización, escritura - preparación del borrador original, escritura - revisar & amp; edición.

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