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Teaching strategies and learning styles in an educational institution at the initial level in the city of Chiclayo

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Abstract: In the current context, strategy has become a fundamental pillar for improving teaching processes and learning styles in different areas of the educational process at both international and Latin American levels. This scientific study was associated with Sustainable Development Goal 4, Quality Education. The objective was to determine the relationship between teaching strategies and learning styles in an educational institution at the initial level in the city of Chiclayo. The methodology used was basic, employing a quantitative approach and a non-experimental correlational design. The population consisted of 21 students at the initial level, and two checklists were used as instruments. Regarding data analysis, descriptive statistics were implemented, which facilitated the determination of the levels of each variable under analysis. Additionally, inferential statistics were used to discover the correlations between the variables and dimensions. The overall result indicated that there is no association between teaching strategies and learning styles in the institution under study, as a result of obtaining a bilateral significance greater than 0.005 and an r = -0.107.

Keywords: *Active strategies, Autonomous learning, Educational strategies, Expository strategies, Learning style.*

1. Introduction

In the current context, strategies have become a fundamental pillar for improving teaching processes and learning styles in various areas of the educational process. In Colombia, according to Loor and Alarcón [1] the diversity in students' learning methods demands the implementation of creative methodological strategies that adapt to the unique needs of each student. This need arises because traditional strategies fail to effectively address the heterogeneity in learning styles, limiting the reach of meaningful learning. Therefore, teachers must adapt their practices to create a more inclusive and dynamic educational environment that allows all their students to achieve the established objectives.

In Venezuela, according to Escobar, et al. [2] the appreciation of the variety of student profiles is fundamental in the educational field, as each studentlearns differently. Consequently, the teacher has the responsibility to implement multiple learning and teaching strategies to create a more dynamic and engagingeducational environment, which fosters active participation.

However, the application of these techniques today is limited by various factors, such as the lack of adequate training to implement teaching strategies

effectively, the workload that limits available time, the scarcity of material resources, the lack of motivation among teachers, and resistance to change— obstacles that hinder the implementation of innovative pedagogical practices. This situation has negative consequences on students' academic performance and motivation; the lack of adequate teaching strategies can create a less stimulating learning environment, leading to low academic achievement.

In the national context, Chunga [3] pointed out that the educational sector today faces several factors that are improving educational quality. To achieve this change, it is essential to strengthen teacher training by fostering research skills to adapt different learning styles to students at their own

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pace. These challenges require a transformation in teaching and learning processes, forming an evolution towards a knowledge society. Therefore, it is extremely important that pedagogy includes strategies that facilitate the construction of knowledge and motivate students to develop skills for autonomous learning.

In light of the above, the following research question was formulated: What is the relationship between teaching strategies and learning styles in an educational institution at the initial level in the city of Chiclayo? The research is based on the work of Marsiglia-Fuentes, et al. [4] who highlights the essential variables of the study. Its practical importance lies in obtaining results that will serve as a basis for future research on the topic. Methodologically, the research relies on theuse of checklists to achieve the established objectives.

To answer the aforementioned question, the following general objective was established: To determine the relationship between teaching strategies and learning styles in an educational institution at the initial level in the city of Chiclayo. As a specific objective, to identify learning strategies that stand out in an initial level institution in the city of Chiclayo. The second objective is to identify the learning styles in an educational institution at the initial level in the city of Chiclayo. To relate the dimensions of teaching strategies and learning styles in an educational institution at the initial level in the city of Chiclayo.

2. Literature Review

Lopez and Artuch-Garde [5] aimed to identify the relationship between character traits, tactics, and learning styles, as well as their influence on academicperformance in an educational center in Spain. A BFQ-NA, CHAEA, and ACRA questionnaire was used. The study included 47 students aged 13 to 14 years. We concluded that there is a relationship between the variables, with a greater connection observed between the dimension of responsibility, the reflectivelearning style, and acquisition tactics.

Villavicencio [6] conducted a study in a school in Guayaquil, Ecuador, in 2020, investigating the relationship between students' learning styles and their use of information and communication technologies (ICT). The study included 59 students and revealed that nearly half of them, 49.15%, had a pragmatic learning style, while the medium category in ICT usage represented 42.37% of thestudents.

Chunga [3] aimed to determine the relationship between teaching methods and learning styles among students in a public school in Piura. A quantitative methodology was used with a correlational level. The study consisted of 264 students from different professional backgrounds, with a sample including 158 students. It was concluded that there is a relationship between the two variables, according to the Spearman Rho correlation coefficient.

Barreto [7] primarily aimed to identify strategies and learning styles among students of a public pedagogical school in Bagua Amazonas. Therefore, a basic, non-experimental, cross-sectional, and correlational methodological approach was employed. The class consisted of sixty students in fifth and seventhgrades. The study concluded that 75% of the participating students possess a highlevel of learning strategies, but no relationship was found between these variables.

Gonzales [8] focused on a quantitative approach, a descriptive level, anda non-experimental design, with a sample composed of 89 students from the mentioned faculty. The CHAEA Honey-Alonso tool, adapted in Peru, was appliedwith the sole purpose of determining the dominant influence of a particular learning style in the university population. The author concludes that it is necessary to study the possibility of expanding the learning characteristics of other styles to enhance learning skills in different environments, as the situationin the country anticipates and demands, generating entrepreneurial and innovative professionals.

Tarazona, et al. [9] demonstrated the more appropriate use of different learning styles to improve students' learning outcomes at the Universidad Mayorde San Marcos. This tool indicates that students learn in different ways; each person develops their own "learning style," highlighting the need to teach according to individual characteristics.

On the other hand, based on the criteria of Marsiglia-Fuentes, et al. [4] it is conceptualized as the

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way the teacher conducts the class, referring to how the course plan is organized and created. The study will examine how the approach is employed and how it relates to the students.

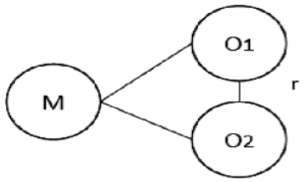
Marsiglia-Fuentes, et al. [4] state that learning styles are the starting point for a teacher, as they allow for the adaptation of teaching strategies according to the individual needs and preferences of each student.

Finally, the main hypothesis was: There is a relationship between teaching strategies and learning styles in an educational institution at the initial level in the city of Chiclayo.

3. Research Methodology

Our research topic is basic in nature because it seeks to expand knowledge about our two research variables, analyzing and contributing to a deeper understandingof these concepts in the educational field. Additionally, this research utilized a quantitative method as it helps us collect and analyze data numerically, allowing us to measure the variables accurately. Regarding the research design, it is classified as non-experimental, which allows for no alteration of the variables.

Where:
M: Students
O1: Teaching strategies
O2: Learning styles



In this research, a quantitative measurement of the variable teaching strategies was conducted. According to Flores [10] learning strategies are general pedagogical tools applied in various areas to achieve educational objectives. For this variable, three dimensions were employed: the first was active strategies, which had three indicators: use of playful activities, active student participation in problem-solving, and promotion of teamwork.

Additionally, for the dimension of expository strategies, three indicators were executed: clear and understandable explanation of topics, maintaining student attention during explanations, and using concrete examples to facilitate comprehension. Therefore, in the dimension of autonomous learning strategies, three indicators were used: clear schedule and goals for learning activities, learning in an organized environment, and a logical sequence in the learning process. This variable was measured using a Likert scale.

A quantitative measurement of the variable learning styles was also conducted. According to Ortega, et al. [11] this refers to the inclination of the students' learning approach, encompassing a set of steps they follow to perceive, collect, and process information in order to acquire new knowledge. For the variable learning styles, three dimensions were employed: the first was the open style, which had three indicators: ideas and approaches without following rules, working on creative and flexible projects, and experimentation and exploration. Similarly, for the second dimension, formal style, three indicators were carried out: structured and organized study, formal academic readings and materials, and clear rules and procedures in the learning process. Furthermore, the third dimension, structured style, included three indicators: clear schedule and goals for learning activities, learning in an organized environment, and a logical sequence in the learning process. The study variable and the aforementioned dimensions were measured using a Likert scale.

The population of this research, as indicated by Marsiglia-Fuentes, et al. [4] is characterized by a group of individuals who meet specific characteristics relevant to the study. In this situation, the population consists of 21 students who were selected because they represent the specific group of interest for the study, which focuses on examining the connection between teaching techniques and learning preferences in initial education.

In this research, observation was implemented, and two checklists were used as instruments, which received confirmation from two specialists related tothe topic (teachers in the initial education program). Regarding data analysis, descriptive statistics were implemented, facilitating the determination of

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the levels of each analysis variable. Additionally, inferential statistics were used to discover the correlations between the variables and dimensions. All of this was carried out using Excel and SPSS version 26, respectively. Finally, during the execution of this study, several criteria of good ethical performance in university education were satisfactorily met. In terms of ethical principles, we valued truthfulness, fairness, and responsibility in the execution and dissemination of the findings of the scientific research. It is also important to ensure that all participants in this research receive fair treatment, without any exclusion, in order to guarantee quality execution. Furthermore, intellectual integrity is crucial to ensure the accuracy of the content and the reproducibility of the results, which increases confidence in the study. Secondly, transparency is emphasized by providing an accurate description of the methodology used, which helps other researchers understand the process and builds trust among both participants and the general public, thanks to the backing of the Code of Ethics by resolution RCUNo. 0340-2024-UCV.

4. Findings

Regarding the results, the research objectives were addressed based on theinstruments used.

Specific Objective 1: Identify learning strategies that stand out in an initial level institution in the city of Chiclayo.

Table 1.
Identifying Learning Styles.

		F	%
Válido	Expository Strategies	11	52.4%
	Autonomous Learning Strategies	10	47.6%
	Total	21	100.0%

In relation to the data from Table 1 of the first variable, the following results were obtained: the expository strategy is predominant among 52.4% of students, while 47.6% opt for autonomous learning strategies.

Specific Objective 2: Identify the learning styles that stand out in an educational institution at the initial level in the city of Chiclayo.

Table 2.
Identifying Learning Styles.

		F	%
Válido	Auditory Style	13	61.9%
	Kinesthetic Style	8	38.1%
	Total	21	100.0%

According to the results of the second variable in Table 2, it is observed that 61.9% of students prefer to use the auditory style, while 38.1% lean towards employing the kinesthetic style.

Specific Objective 3: Relate the dimensions of teaching strategies and learning styles in an educational institution at the initial level in the city of Chiclayo.

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Table 3.
Relationship between learning styles and active strategies with learning styles.

Correlations			
		Learning Styles	**Active Strategies**
Learning Styles	Pearson Correlations	1	0.017
	Sig. (bilateral)		0.942
	N	21	21
Active Strategies	Pearson Correlations	0.017	1
	Sig. (bilateral)	0.942	
	N	21	21

The table shows the correlation between learning styles and active strategies.For this, the Pearson coefficient, the level of significance (bilateral), and the sample size (N) were used. This indicates that there is a weak positive correlation between learning styles and active strategies, with a correlation coefficient of 0.017, and the level of significance is 0.942, indicating that there is no significantcorrelation between both variables in a sample of 21 participants.

Table 4.
Relationship between Expository Strategies and learning styles.

Correlations			
		Learning Styles	Expository Strategies
Learning Styles	Pearson Correlations	1	-0.302
	Sig. (bilateral)		0.183
	N	21	21
Expository Strategies	Pearson Correlations	-0.302	1
	Sig. (bilateral)	0.183	
	N	21	21

Table 4 shows the correlation between learning styles and expository strategies. For this, the Pearson correlation coefficient is used, which means that there is a weak negative correlation between learning styles and expository strategies, with a correlation coefficient of -0.302, and the level of significance is 0.183, indicating that thecorrelation is not statistically significant.

Table 5.
Relationship between Autonomous Learning Strategies and learning styles.

Correlations			
		Learning Styles	Autonomous Learning Strategies
Learning Styles	Pearson Correlations	1	0.077
	Sig. (bilateral)		0.739
	N	21	21
Autonomous Learning Strategies	Pearson Correlations	0.077	1
	Sig. (bilateral)	0.739	
	N	21	21

In Table 5, a Pearson correlation is observed between learning styles and autonomous learning strategies of r = .077, with a bilateral significance of .739 (N=21). This correlation is weak and not significant.

General Objective: To determine the relationship between teaching strategies andlearning styles in an educational institution at the initial level in the city of Chiclayo.

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Table 6.
Relationship between teaching strategies and learning styles.

Correlaciones			
		Teaching Strategies Based	**Learning Styles**
Teaching Strategies Based	Pearson Correlations	1	-0.107
	Sig. (bilateral)		0.645
	N	21	21
Learning Styles	Pearson Correlations	-0.107	1
	Sig. (bilateral)	0.645	
	N	21	21

In Table 6 it can be inferred that there is a negative and non-significant correlation ($r = -0.107$; $p > 0.05$) between teaching strategies and learning styles. Additionally, a positive and highly significant correlation ($r = 0.746$; $p < 0.005$) is observed among the learning styles.

5. Discussion

Regarding the first objective, which aimed to identify learning strategies that stand out in an initial education institution in the city of Chiclayo, the resultsindicate that expository strategies have a greater impact on students than autonomous learning strategies. In this regard, Gonzales [8] noted the need to study the possibility of expanding the learning characteristics of other styles toenhance learning skills in different environments, as the situation in the country anticipates and demands, generating entrepreneurial and innovative professionals.

As a second specific objective, we aimed to identify learning styles in an educational institution at the initial level in the city of Chiclayo. It was found thatthere is a majority of students who lean towards using an auditory style, while a minority prefers a kinesthetic style. We relate these results to the study by Ortega-Ruipérez, et al. [12] who referred to the inclination of students' learning approaches, encompassing a set of steps they follow to perceive, collect, and process information in order to acquire new knowledge.

On the other hand, as a third specific objective, it was concluded that there is a correlation between the dimensions of teaching strategies and learning styles. These findings show a relationship with the research by Chunga [3] where an association was found between the dimensions of the first variable and the second variable, indicating that students possess a high level of learning.

Regarding the general objective, it can be evidenced that there is no relationship between the variable Teaching Strategies and Learning Styles. The results relate to the research by Marsiglia-Fuentes, et al. [4] which states that learning styles are the starting point for a teacher, as they allow for the adaptation of teaching strategiesaccording to the individual needs and preferences of each student.

6. Conclusion

First of all, based on the general objective, it was found that there is no associationbetween teaching strategies and learning styles in the institution under study, as evidenced by a bilateral significance greater than 0.005 and an $r = -0.107$. This

suggests that the strategies being used by teachers are not truly connected with the different learning styles of their students. Therefore, it is recommended that teachers review and adjust their teaching methods to consider the diversity of learning styles in their classrooms.

Similarly, regarding specific objective 1, it was concluded that although theexpository strategy is predominant among 52.4% of students, there is a considerable group (47.6%) that feels more comfortable using autonomous learning. This indicates that it is necessary to expand the ways of teaching; thus, it is recommended that teachers at the educational institution incorporate more active and autonomous learning strategies into their classes. In this way, a more balanced approach could be achieved that aligns with the preferences of their students.

In the same manner, in relation to specific objective 2, it was determined that students at the initial

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education institution in the city of Chiclayo tend to employan auditory style (61.9%), while a minority prefers to use a kinesthetic style (38.1%). In summary, the majority of students opt for an auditory style. Therefore, it is recommended that students gather, collect, and process information in order to acquire new knowledge.

Finally, with respect to specific objective 3, it was determined that there is no relationship between learning styles and active strategies, as evidenced by a correlation coefficient of 0.017 and a significance level of 0.942, indicating that there is no significant correlation between the two variables in a sample of 21 participants. Therefore, it is recommended that teachers conduct a more detailed evaluation of their pedagogical methods and consider implementing more diversified and personalized approaches, including training on different learningstyles and teaching strategies that align with the specific needs of their students.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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References

[1] K. K. Loor and B. L. A. Alarcón, "Creative methodological strategies to enhance learning styles," *Revista San Gregorio*, vol. 1, no. 48, pp. 1-14, 2021.

[2] B. Escobar, H. Salazar, H. Samekash, and R. Medina, "Learning styles and academic performance in the area of communication with a systems approach," *Journal of Social Sciences*, vol. 28, no. 5, pp. 48–62, 2022. https://doi.org/10.31876/rcs.v28i.38144

[3] C. L. I. Chunga, "Teaching methods and learning styles in students of the public music school of Piura, 2022," Master's Thesis, César Vallejo University]. Repositorio Institucional UCV, 2022.

[4] R. M. Marsiglia-Fuentes, J. Llamas-Chávez, and E. Torregroza-Fuentes, "Teaching strategies and learning styles an approach to the case of the degree in education of the university of Cartagena (Colombia)," *Formacion Universitaria*, vol. 13, no. 1, pp. 27-34, 2020. https://doi.org/10.4067/S0718-50062020000100027

[5] D. R. N. M. Lopez and R. Artuch-Garde, "Relationship between personality traits, styles and learning strategies and academic performance in adolescents Spanish students," *Estudios Pedagógicos (Valdivia)*, vol. 48, no. 1, pp. 273–289, 2022. https://doi.org/10.4067/S0718-07052022000100273

[6] O. Villavicencio, Y. E., "Learning styles and the use of ICT in students of a basic school in Guayaquil, 2020," Thesis to Obtain the Academic Degree of: Master in University Teaching, César Vallejo University, 2020.

[7] J. Barreto, "Strategies and learning styles in students of a public pedagogical school in Bagua, Amazonas," *Latin American Journal of Inclusive Education*, vol. 15, no. 2, pp. 89–104, 2021. https://doi.org/10.16967/rlei.v15i2.129

[8] B. S. G. Gonzales, "Learning styles in students of the faculty of mechanical and energy engineering at a public university in Callao, 2020," Thesis to Obtain the Academic Degree of: Master in University Teaching, César Vallejo University, 2020.

[9] M. V. H. Tarazona, G. O. G. Huamán, C. C. A. Angulo, and H. M. L. Mendoza, "Learning styles and academic performance: A case study of the fluid mechanics school at the Universidad Nacional Mayor de San Marcos," *Revista Cubana de Educación Superior*, vol. 17, no. 79, pp. 293–308, 2021.

[10] T. A. M. Flores, "Learning strategies in the development of autonomous learning in fourth-grade secondary students," Thesis to Obtain the Academic Degree: Doctor in Education, César Vallejo University, 2021.

[11] E. Ortega, I. Casanova, Í. Paredes, and L. Canquiz, "Learning styles: Teaching strategies in light," *Telos*, vol. 21, no. 3, pp. 710-730, 2019. https://doi.org/10.36390/telos213.11

[12] B. Ortega-Ruipérez, M. Lázaro, and A. Pereles, "The power of metacognitive strategies to enhance critical thinking in online learning," *Journal of Technology and Science Education*, vol. 14, no. 3, pp. 831–843, 2024. https://doi.org/10.3926/jotse.2721