

Estilos de enseñanza: un estudio descriptivo desde la práctica docente

Teaching styles: a descriptive study from teaching practice

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Resumen

En las instituciones educativas participan personas que cumplen distintos roles: autoridades, docentes, estudiantes y padres de familia. Los docentes en su ejercicio profesional desarrollan un estilo que les distingue por la manera cómo enseñan y cómo evalúan buscando consolidar los aprendizajes de sus estudiantes. Conocer cuáles son los estilos de enseñanza de los docentes de una institución permite caracterizarla y desarrollar estrategias para alcanzar los fines académicos. Esta investigación tuvo como objetivo identificar los estilos de enseñanza que se encuentran presentes entre los docentes de la Facultad de Filosofía, Letras y Ciencias de la Educación de la Universidad Central del



Ecuador. Tuvo un enfoque cuantitativo y un nivel descriptivo, siendo un estudio de tipo trasversal. Las conclusiones señalan que, los docentes en su mayoría tienen como estilo de enseñanza definido el dinámico. Al hacer una integración de resultados entre el estilo analítico y el sistemático se halló que la mayoría de docentes tienen características de estilos más bien tradicionales. También se encontró que en la práctica docente se observan estilos combinados como el analítico-sistemático y el dinámico-práctico. Entre los docentes investigados las mujeres presentan prevalencia en el estilo de enseñanza dinámico, mientras que los hombres en su mayoría cuentan con un estilo de enseñanza analítico. Parece ser que el semestre en donde se imparte cátedra también determina el estilo utilizado, pues se ha encontrado diferencias entre los niveles de educación superiores y los inferiores.

Palabras clave

Docentes, estilo-enseñanza, estudio descriptivo, prácticas didácticas.

Abstract

The educational institutions involve people in different roles: authorities, teachers, students and parents. The teachers in their professional practice develop a style that distinguishes them by the way they teach and how they evaluate, seeking to consolidate the learning of their students. Knowing the teaching styles of the teachers in an institution allows us to characterize it and develop strategies to achieve academic goals. The objective of this research was to identify the teaching styles that are present among the teachers of the Faculty of Philosophy, Literature and Educational Sciences of the Central University of Ecuador. It had a quantitative approach and a descriptive level, being a transversal study. The conclusions point out that the majority of the teachers have a defined dynamic teaching style. When integrating the results between the analytical and systematic styles, it was found that the majority of teachers have characteristics of rather traditional styles. It was also found that in teaching practice, combined styles such as the analytical-systematic and the dynamic-practical are observed. Among the teachers researched, women show prevalence in the dynamic teaching style, while men mostly have an analytical teaching style. It seems that the semester in which a professorship is given also determines the style used, since differences have been found between higher and lower levels of education.

Keywords

Descriptive study, style-teaching, teachers, teaching practices.

1. Introduction

The process of teaching and learning is nuanced by various factors that participate in the development of activities and the achievement of the goals of education. This process must be studied in a holistic manner, avoiding reducing it to isolated moments or stages. In this complex dynamic, the importance of carrying out profound analyses of the participating variables and the relationships among them is noted. One of these variables is "the teacher" and the set of actions he or she undertakes with the purpose of contributing to the learning of his or her students.

According to what Ventura points out, the investigation of these variables at a higher level has led to the realization of political and curricular efforts that have as a purpose to reach the so longed for quality in education. In addition, the importance of didactic practices is highlighted, but the difficulties in transferring theory into practice are also evident. The



importance of deepening the study of the fundamental elements of the teaching and learning process is also emphasized (Ventura, 2011, pp. 143-144).

One of the fundamental elements of study is the set of didactic practices that characterize a teacher, which is known as teaching style. Chiang et al. (2013) mention that the definition of teaching style "implies establishing criteria to categorize teaching behaviors: that the teacher shows them habitually and continuously; that they are based on or have their origin in personal attitudes that are inherent to them; and that they come from other behaviors abstracted from their academic and professional experience" (p. 63).

The objective of this research is to identify the teaching styles present among teachers in the School of Philosophy, Letters and Educational Sciences at the Central University of Ecuador. The study considers the careers to which they belong, their gender, and the training units in which they teach.

In relation to the relevance of the study, it is worth noting what Isaza and Henao (2012) point out: "the teaching style created and used by the teacher determines his or her entire educational act, and therefore the achievement of high academic performance" (p. 140). Therefore, having information on teaching styles at the individual level offers elements for further reflection in the search to harmonize student learning styles and academic results. Knowing which is the predominant teaching style at the collective level facilitates the identification of the characteristics that shade a particular collegiate body, and guides training processes. This allows professionals to enhance their particular style and integrate their own methodological elements, thus enriching their professional work.

The validity and pertinence of the results of this research process is based on the fact that they allow a deeper analysis of the reality of education careers, increasing knowledge about the pedagogical practices of their teachers. As Laudadío and Da-Dalt (2014) point out, "the analysis of teaching practices necessarily involves the search for effective practices" (p. 486). This contributes to the decision-making necessary for the continuous improvement of such practices in the search for quality training for future teaching professionals. This work is unprecedented, since no previous research has been done on this variable in the aforementioned population. The findings presented based on evidence strengthen the theoretical and scientific framework around the role of university teachers. This study is just a first step that will guide future efforts to analyze the influence that university teachers' teaching practices can have on the professional practice of future high school teachers.

The present article is structured as follows, in section 2, the review of the literature; that is, the contents related to teaching styles. Section 3 refers to the methods and materials used in the present research; in addition, it was contrasted with research carried out by other authors. Section 4 details the findings found after the application of the respective instrument. Section 5 details the discussion of results and section 6 describes the relevant conclusions

2. Literature Review

2.1 Teaching

Teaching was defined as the action of instructing, indoctrinating or training with norms; in fact, from the Socratic vision it was considered as a procedure and a methodology of giving education. "It would be an action whose purpose would be to systematically present a reality" (Renés and Martínez, 2016, p. 227). Teaching can also be defined as "presenting and making students acquire knowledge that they do not possess" (Cousine, 1962, p. 6). In this



regard, Fortoul points out that the term teaching has been understood as "transmission of knowledge", a concept that is even shared by an important segment of teachers and student teachers. This vision shares the leading role of the teacher and the passive role of the student, with clearly differentiated roles. The complexity of dimensions that participate in learning is left aside, perceiving learning as the result of the teacher's work (Fortoul, 2008, pp. 81-82). Certainly, these definitions show an action concentrated in the teacher or who takes this role. Over time, the conceptualization of teaching has been revised, seeking to overcome the passive role of the subject who learns and to make visible the intentional meaning on the part of the teacher.

"Teaching goes beyond the merely technical application in the classroom of a set of strategies designed by others" (Fortoul, 2008, p. 79) in order to achieve learning. It also includes the intention, attitudes, and personality characteristics of the teacher. "One cannot speak with singularity of teaching if the fact of teaching does not imply intentionality and reflexive perception" (Chiang, et al. 2013, p. 63). The intentionality of the one who teaches and the reflective perception of the one who learns, is what precisely frames the study of teaching styles, seeking to enrich the debate on the characteristics of the student and teacher relationship in the classroom. The ultimate purpose is the highest achievement of learning results in students.

Within the university context, La Ciudadío and Da-Dalt consider that, in the formation of professionals, teachers cannot be mere transmitters of disciplinary knowledge, but can become true vocational mentors. Teachers impact their students in the development of attitudes and skills proper to their profession (Laudadío and Da-Dalt, 2014, pp. 488-489). It is important that university teachers not only have the knowledge of the professorship they teach, but also a series of pedagogical and didactic skills, and that they know which teaching features characterize them.

In the study of the pedagogical styles of the university teachers Callejas and Corredor recommend to consider the four knowledges that structure and guide their practices. Initially, the knowledge, understood as the set of theories and conceptions that guide their actions. Know-how, as the application of the theories in the interpretation of reality. Knowing how to communicate, which implies dynamic interaction with others in a space of permanent dialogue. And finally, knowing how to be, which is evidenced in the commitment of the teacher in the development of his or her students (Callejas y Corredor, 2002, pp. 64-66). "Understanding styles allows teachers to understand the choices they make and the results they obtain, the relationships with the institution and with people" (Callejas and Corredor, 2002, p. 66).

2.2 Teaching style

In relation to the conceptualization of teaching style Laudadío and Da-Dalt (2014)

We find two positions: on the one hand, those who consider teaching styles as mere dichotomous decisions between strategies and dimensions that are taken in isolation; on the other hand, those who discuss teaching styles in terms of a relatively more complex profile of the simple use of strategies (p. 495).

For the purposes of this research and closer to the second posture, they are defined as the set of behavioral traits that teachers express in their interaction with students, guiding their



teaching practices. It is characterized by being constant over time and is presented in the learning scenario.

The teaching styles cannot be catalogued as positive or negative in themselves, only different according to González-Peiteado, for which reason it is indispensable to respect the characteristics of each teacher in his or her educational work. The presence of one style or another is determined by an infinite number of variables such as: the sex of the teacher, the students' learning styles, the educational level, the students' evolutionary characteristics, and even the subject being taught (González-Peiteado, 2013, pp. 64-66).

Martínez-Geijo (2009) points out that "each teacher does not have pure Teaching Styles" (p. 5). That is, teachers do not have a defined teaching style, but rather present a combination profile where one or two are predominant depending on the frequency of their behavior. This justifies structuring combination styles as long as they are complementary and not antagonistic. In this regard, Laudadío and Mazzitelli (2015) recognize the existence of a variety of styles that imply a multiplicity of factors in the teaching and learning process. This diversity is related "to a perception of the educator's reality, the characteristics of teaching, the congruence between his behavior, his representations, and his teaching beliefs" (p.16). De León (2005) points out:

that the criteria used by different authors to define and classify the teaching styles are very varied, even so, making an effort of synthesis there is coincidence in the following general criteria: (a) Interaction between teacher and student; (b) Orientation towards learning achievement; (c) Role of the teacher; (d) Relationship with the context; (e) Teacher's conception of the training purpose; (f) Role of the student; (g) School management (pp. 86-87).

Alvarez (2004) presents a dichotomous classification of styles into verbal and non-verbal and points out that "it would be interesting, at this time, to examine whether verbal/non-verbal teaching styles and learning styles are related to each other and affect performance" (p. 29). In this regard, Aguilera refers that a relationship and even influence has been found between teaching styles and students' learning styles (Aguilera, 2012, p. 84). This relationship becomes more noticeable according to Chiang in students belonging to education careers (Chiang, et al, 2016, p. 19).

Renés and Martínez (2013) present a classification of teaching styles based on the learning styles of Alonso, et al. According to the authors, they consider the following classification:

Open: teachers work with content not necessarily present in the programming, promote teamwork and innovate in methodological strategies.

Formal: teachers are characterized by generating detailed planning of classroom activities, encouraging analysis and individual work by their students.

Structured: teachers stick to strict programs, prefer a controlled climate in the classroom and always based on rigorous theoretical content.

Functional: teachers emphasize procedural content including examples applicable to daily life (pp. 7-10).



The classification previously reviewed presents conceptual coincidences with each of the four teaching styles presented in the Portilho/Banas test by Perochena, et al. This questionnaire constituted by 40 items in Likert's scale classifies the styles in: dynamic, analytical, systematic and practical.

Dynamic: teachers tend to be more flexible, seeking to generate spaces for discussion and student participation, not strictly adhering to the curriculum or planning.

Analytical: teachers are oriented towards established programs, trying to comply with them in their entirety, giving space for reflection by students and ensuring the understanding of the contents.

Systematic: teachers promote debate, seeking to generate informed interventions in their students, they like planning and structures at work. Practical: teachers give space to experimentation, and through experiences they test the theoretical contents, transferring the knowledge to daily environments (p. 76).

Another classification to consider is that used by Rendon (2010) who presents three teaching styles:

Mastery: teachers are the center of the academic process and the student takes a passive role, with thematic teaching focused on content. Tutorial: teachers encourage the application of theoretical content in daily life, centered on the student and the development of skills. Mediational: teachers deepen and promote interpersonal relationships and collaborative work (pp. 9-10).

In the analysis of the various classifications, coincidences are observed in the set of features that characterize the styles. It is frequently found that despite the diversity, an exercise can be carried out to integrate some of the teaching styles with features that complement each other and others that are clearly antagonistic. Therefore, it is possible to relate these characteristics in two styles: "traditional and innovative" (Centeno et al, 2005, p. 5) or with the terms: "formal or liberal" (Bennet, 1979, p. 7).

3. Methods and Materials

This study was framed in a quantitative research approach, considering that the results obtained are expressed in numerical values and their processing was done through statistical analysis. Just as it was tried to explain a phenomenon of reality; the results taken from a sample are susceptible to be generalized to the population part of the study.

The level of this research corresponded to the descriptive one, since it characterizes a pedagogic facet of the teaching body through statistical analysis. The findings presented the distribution of teaching styles through frequencies and percentages, which have been enriched with an argument based on the theoretical and scientific framework. It was contrasted with results of other researches, trying to raise conclusions based on evidence. The study is of a transverse type considering that it was carried out to a certain population in a specific moment. The application of the instrument was carried out between April and June 2020.



The study population corresponds to 145 full-time teachers. After applying the corresponding statistical formula with a 5% error and 95% reliability, a sample of 110 participants was obtained by carrying out the operations indicated in equation 1. In this way, all elements of the population were given the opportunity to participate, and the possible intervening variables were distributed equally to maintain the internal validity of the study. Finally, we worked with a participating sample of 85 teachers who agreed to give the corresponding informed assent after data cleaning.

$$\frac{k^2 \cdot p \cdot q \cdot N}{\left(e^2(N-1)\right) + k^2 \cdot p \cdot q}$$

Where:

K: Corresponds to the 95% confidence level, 1.96

p: is the proportion of individuals in the population that possess the study characteristic, 0.5

q: s the proportion of individuals who do not possess that characteristic, i.e., it is 1-p, 0.5 e: the acceptable error 5%.

N: is the size of the population or universe, 145

The main technique used was the survey with the use of the Portilho/Banas questionnaire, which consists of 40 items divided into 4 groups of 10 items. Grouped in such a way that four teaching styles can be determined: dynamic, practical, systematic, and analytical. This instrument has works of international validity and was submitted to a process of reliability through a pilot study applied to 17 teachers, exceeding 10% of the total population under study. It was obtained a Cronbach's alpha of 0.90 indicating a high level of reliability.

The questionnaire was transcribed and applied virtually through the Google forms tool. The same tool that allows online surveys, obtaining a link, the same that was sent by institutional emails to teachers for their participation. This mechanism of application responded to the limitations and social distance in view of the health emergency that the world is experiencing due to the effects of Covid-19.

The information was organized by means of tabulation, then the original base underwent a process of codification and validation of the data obtained from the instrument, using an Excel spreadsheet. It was necessary to carry out a categorization analysis of the variables. The frequency distribution was established, obtaining the relative and absolute frequency. The results were presented in tables with their respective interpretation, at the faculty level, by careers, by gender and by training unit.

When it was found that a part of the sample of participants present two predominant complementary teaching styles with equal scores, the combined styles were generated; analytical-systematic and dynamic-practical. In order to enrich the interpretation of the results, they were grouped in two of the antagonistic categories; traditional styles relating to the analytical, systematic and combined analytical-systematic styles. In addition, the innovative styles were related to the dynamic, practical and the combined dynamic-practical styles.



4. Results

In table 1 it can be seen that the most important percentage of participants present majority features in the dynamic style, which is characterized by using novel strategies, they are not established in the planning and develop their class through spontaneity; they prefer to support students in the search for solutions close to reality. It is followed by the analytical style where teachers use previously planned strategies, avoid improvisation and prioritize the achievement of objectives presented in class. The systematic style is not so different and is identified with activities, with specific planned objectives and likes to strengthen the students' use of reflected arguments for problem solving. The less predominant style is the practical one with teachers who exemplify the contents for a better understanding, giving more importance to practical activities and learning experiences. As for the results of combined styles, it is found that 8.24% correspond to the analytical-systematic style. 2.35% to the dynamic-practical style

Defined teaching style	Absolute frequency	Relative frequency		
	(fi)	(hi)		
Dynamic	28	32.94%		
Analytical	22	25.88%		
Systematic	17	20.00%		
Practical	9	10.59%		
Combined teaching style				
Analytical-Systematic	7	8.24%		
Dynamic-Practical	2	2.35%		
TOTAL	85	100%		

Table 1. Teaching Styles - Teaching Styles Questionnaire Portilho/Banas

In table 2 it is established that the majority of surveyed female teachers possess the Dynamic Teaching Style oriented to build discussion spaces to encourage collaborative work and allow the student to experiment with content and its subsequent application in the resolution of daily life problems. On the other hand, a lower percentage of them have the analytical teaching style characterized by a greater structuring of the content and teaching strategies that allow them to motivate the investigation and argumentation of the students on the contents treated.

Teaching style	fi	hi
Dynamic	12	41%
Analytical	3	10%
Systematic	6	21%
Practical	3	10%
Combined teaching style		
Dynamic-Practical	1	3%
Analytical-Systematic	4	14%
TOTAL	29	100%

Table 2. Teaching styles (women). Teaching styles questionnaire Portilho/ Banas

Table 3 shows the results obtained among the participants by sex, particularly those found in male teachers. The highest percentage present the analytical teaching style, characterized by promoting research and reflection on content in a more organized way. With less student participation and a more leading role for the teacher. While a lower percentage of male



teachers, reflect the style of practical teaching oriented to collaborative work, through the construction of spaces for discussion and experimentation seeking its application in solving problems of reality.

The results by defined styles are corroborated when grouping the data of the analytical and systematic styles that show traditional features of teaching among the majority of teachers. In the same way, when integrating the data of the dynamic and practical styles, a lower percentage of teachers with innovative characteristics in their didactic practices is found.

Teaching style	fi	hi
Dynamic	16	29%
Analytical	19	34%
Systematic	11	20%
Practical	6	11%
Combined teaching style		
Dynamic-Practical	1	2%
Analytical-Systematic	3	5%
TOTAL	56	100%

Table 3. Teaching styles (men). Teaching styles questionnaire Portilho/ Banas

Table 4 presents the distribution of the results of the teaching styles that characterize teachers by career. In the careers of Commerce and Administration, Plurilingualism, Educational Psychology and Orientation, most teachers share the Dynamic, Practical and Combined Dynamic-Practical Styles, which induce students to generate ideas without any formal limitations, with activities that consist of learning techniques that can be applied in diverse situations. These careers are in the process of extinction with students only in higher semesters of training.

On the other hand, the findings allow us to determine that a significant number of teachers in the careers of Pedagogy of History and Social Sciences, Early Education, Pedagogy of Language and Literature, Pedagogy of Experimental Mathematical and Physical Sciences; identify with the analytical, systematic and combined analytical-systematic teaching styles. These styles are characterized because the contents are taught in a precise, planned and coherent way, prioritizing the adequate time for the student to reflect on the information. Research is also used to encourage debate and the construction of meaningful knowledge.

Finally, in the careers of Pedagogy of the Foreign Language, Pedagogy of Experimental Sciences Computer Science, Psychopedagogy, Pedagogy of Experimental Sciences Chemistry and Biology; the number of teachers is distributed equally in each of the teaching styles. The fact is that there is no predominance of one style over another.

Career	Dynamic	Analytical	Systematic	Practical	Dynamic	Analytic
					or	Systematic
					Practical	
	hi	hi	hi	Hi	hi	hi
Commerce and	100%	0%	0%	0%	0%	0%
administration						
Early Education	33.3%	16.6%	33.3%	0%	0%	16.6%



Pedagogy of the 50% 50% 0% 0% 0% 0% English foreign	
English foreign language Language and 37.5% 25% 37.5% 0% 0% Literature Pedagogy Pedagogy of 37.5% 25% 12.5% 12.5% 0% experimental sciences in computer science Pedagogy of the 7.1% 42.8% 21.4% 21.4% 0% experimental sciences	
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experimental sciences	
sciences	7.1%
mathematics	
and physics	
Pedagogy of the 37.5% 0% 37.5% 12.5% 12.5%	0%
experimental	
sciences	
chemistry and	
biology	
Multilingual 40% 40% 0% 0% 20%	0%
Educational 80% 0% 0% 0% 0%	20%
psychology and	
counseling	
Psychopedagog 18.2% 18.2% 27.2% 27.2% 0%	9%
у	

Table 4. Teaching styles by career. Teaching styles questionnaire Portilho/ Banas

Table 5 presents the results organized by training unit. The basic training unit in the curriculum corresponds to the first three semesters or academic cycles. 45.8% of the total number of teachers surveyed carry out their activities at these levels. The results corresponding to the unit of professional training, that is, fourth, fifth, sixth, seventh and eighth semesters are concentrated in 54.2% of the total participants.

Training Units		Fi	hi
Basic		39	45.8%
Professional		46	54.2%
	TOTAL	85	100%



Table 5. Distribution of teachers by Units of Curricular Training

Table 6 shows that the majority of professionals who teach in the Basic Training Unit, corresponding to the first semesters of their careers, use traditional strategies, in accordance with analytical and systematic styles. A smaller number of teachers show innovative characteristics in their didactic actions in the classroom, that is, they have practical and dynamic teaching styles.

Teaching Style		Fi	hi
Dynamic		11	28%
Analytical		9	23%
Systematic		10	26%
Practical		3	8%
Combined teaching style			
Practical Dynamics		1	3%
Systematic Analysis		5	13%
	TOTAL	39	100%

Table 6. Teaching styles (Basic training unit). Teaching styles questionnaire Portilho/Banas

Table 7 shows that most of the teachers working in the professional training unit show a set of innovative teaching practices, corresponding to dynamic and practical teaching styles. They are characterized by promoting student participation, seeking to build knowledge from experimentation and without adhering rigorously to planning. While a smaller number of teachers are located in more conservative styles linked to theoretical, reflexive and structured processes, that is, analytical and systematic styles.

Teaching Style		fi	hi
Dynamic		18	39%
Analytical		12	26%
Systematic		7	15%
Practical		6	13%
Combined teaching style			
Practical Dynamics		1	2%
Systematic Analysis		2	4%
	TOTAL	46	100%

Table 7. Teaching styles (Professional Training Unit). Teaching styles questionnaire Portilho/ Banas

5. Discussion of results

According to the objective set in the research, it was found that among the participating teachers the teaching style with the highest prevalence is the dynamic style. This result coincides with Rendón's (2010) research on teaching styles at the University of Antioquia, who found that "teachers in the School of Education mostly have a high school teaching style" (p. 1). The same that, due to its characteristics, corresponds to the dynamic style. In the same study presented by Rendón (2010), "the responses of the teachers in the School of Education indicate that they are very mediational and not very masterful" (p. 13). This result contradicts the findings of the present work, where the analytical teaching style is the second in prevalence, considering that the analytical style corresponds in accordance with its characteristics to the magisterial style.



It was found that a part of the teachers do not define themselves in a unique style of teaching, presenting combined styles. This supports what was pointed out by Agudelo (2015) in his research titled Characterization of teaching styles in Higher Education", who concludes that the proposals of differentiating categories in the conception of teaching styles, is not absolute. According to this author, "it is not possible to talk radically about a predominant style in teachers, but it is necessary to talk about mixed styles, since teachers present features of all teaching styles" (p. 18).

Most of the teachers researched show traditional characteristics in their teaching practices corresponding to the styles (analytical, systematic and combined analytical-systematic). These findings contradict those presented by Diaz, et al. (2013) in the article Validation of the Teaching Styles Questionnaire (SQC), an instrument for the higher education teacher where "the results show that the 'high preference' is for the Open and Functional styles" (p. 10) which correspond to the dynamic and practical style of the present study. On the other hand, it was found that fewer teachers present innovative practices in their teaching corresponding to the styles (dynamic, practical and combined dynamic-practical). This does not coincide with what is reported by Chiang, et al. (2013) "while in the 'low preference' are located the structured and formal styles" (p. 9) corresponding conceptually with the analytical and systematic styles of this research.

In relation to teaching styles according to the gender of the teachers, the results explain that most of the female teachers identify with the dynamic teaching style. The highest percentage of male teachers present an analytical teaching style. These results contradict what Martinez-Geijo (2009) found in his research entitled Teaching styles: conceptualization and research (according to the learning styles of Alonso, Gallego and Honey) who points out that "women tend to prefer a formal teaching style over the open teaching style presented by men" (p. 14).

The present study points out that teachers of the Pedagogy of Experimental Mathematical and Physical Sciences career identify with the analytical teaching style. This shows agreement with the study carried out by Rendón, where it was found that "in the career of the degree in Mathematics and Physics, teachers present the Magisterial teaching style" (Rendón, 2010, p. 14) that conceptually corresponds to the analytical style. It was also found that the teachers of the History and Social Sciences Pedagogy Career show mainly traditional features of teaching corresponding to the styles (analytical, systematic and combined analytical-systematic). This coincides with the study carried out by Rendón, which indicates that "teachers of the Social Sciences Pedagogy career predominantly present the Magisterial teaching style" (Rendón, 2010, p. 14).

In this same sense, teachers of the career of Experimental Sciences Chemistry and Biology Pedagogy present predominantly innovative teaching characteristics, evidenced in the styles (dynamic, practical and combined dynamic-practical). Similar results are found (Rendón, 2010) "Tutorial Style: In this style the similar percentages seen in the degree in Natural Sciences should be exalted. Almost as many students think that their teacher has a tutorial style, as the teachers themselves do" (p. 14), which conceptually corresponds to the practical style.

In the Early Education Career, teachers present teaching practices mainly corresponding to traditional styles (analytical, systematic, and combined analytical-systematic). These results are in contrast to what Rendón has stated, who points out that "teachers in the Infant Education career mainly use the mediational style" (Rendón, 2010, p. 14), which conceptually corresponds to the dynamic style.



When reviewing other similar research on Teaching Styles, no work was found that included the analysis by training units corresponding to the initial and advanced semesters within different careers. This highlights the importance of continuing to deepen this field of research.

6. Conclusions

The teachers of the Faculty of Philosophy, Letters and Education Sciences of the Central University of Ecuador are distributed in the four teaching styles according to the questionnaire (Portilho/ Banas). The most prevalent teaching style is the dynamic style.

Upon finding that a percentage of participants presented an identical final score in predominance in two teaching styles, we proceeded to present results in combined styles, since the literature reviewed supports that teachers usually show a teaching profile that includes all styles. It was found that most teachers present characteristics in their teaching practices corresponding to the traditional styles (analytical, systematic and combined analytical-systematic). It is evident that teaching practices focused on programming, content, structure and teachers prevail. Among the teachers researched, women show prevalence in the dynamic teaching style. Male teachers mostly have an analytical teaching style.

It was found that the teachers who belong to the careers in process of extinction, Educational Psychology and Orientation, Commerce and Administration, and Plurilingual, present predominantly the innovative styles (dynamic, practical and combined dynamic-practical). This can be explained considering that the careers in process of extinction, only have the last semesters of formation where the subjects of professionalization are concentrated.

The teachers belonging to the careers of Pedagogy of History and Social Sciences, Initial Education, Pedagogy of Language and Literature, Pedagogy of Experimental Mathematical Sciences and Physics show didactic practices typical of the traditional styles (analytical, systematic and combined analytical-systematic). The results show that there is an equitable distribution among the four teaching styles present in the teachers of the careers of Pedagogy of Foreign Language, Pedagogy of Experimental Sciences Computer Science, Psychopedagogy, Pedagogy of Experimental Sciences Chemistry and Biology.

The teachers who carry out their teaching activities in the higher levels corresponding to the vocational training unit; that is, from four to eight semesters, mostly present the dynamic teaching style. This may be due to the fact that the subjects taught at these levels seek to apply knowledge through case studies related to professional practice.

When integrating the results, the teachers who participate in the first, second and third semesters of all the careers present predominantly the traditional styles (analytical, systematic and combined analytical-systematic). At this level of basic training, teachers provide the theoretical foundations necessary for the professional training of students in a systematic and planned manner.

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Bibliography

- Agudelo, C. (2015). Caracterización de la enseñanza en la Educación Superior. *Principia luris, 12*(23), 85 -103. https://doctrina.vlex.com.co/vid/caracterizacion-estilos-ensenanza-educacion-646176145
- Aguilera, E. (2012). Los estilos de enseñanza, una necesidad para la atención de los estilos de aprendizaje en la educación universitaria. *Journal of Learning Styles*, 10 (10), 79-87. https://dialnet.unirioja.es/servlet/articulo?codigo=4324205
- Alonso, C., Gallego, D. y Honey, P. (1994). Los Estilos de Aprendizaje. Procedimientos de diagnóstico y mejora. Ediciones Mensajero. Universidad de Deusto. https://www.academia.edu/28631359/Alonso Catalina M et al Los Estilos de Aprendizaje
- Álvarez, H. (2004). Influencias de la comunicación no verbal en los estilos de enseñanza y en los estilos de aprendizaje. *Revista de educación*, *334* (1), 21- 32. https://dialnet.unirioja.es/servlet/articulo?codigo=963457
- Callejas, M. y Corredor, M. (2002). La renovación de los estilos pedagógicos: colectivos para la investigación y la acción en la universidad. *Docencia Universitaria*, *3*(1), 61-96. https://www.researchgate.net/publication/301915580 La reflexion sobre los es tilos pedagogicos y la innovacion curricular en la universidad
- Centeno, A. y otros (2005). *Identificación de estilos de enseñanza en la universidad. Estudio en tres carreras universitarias: ciencias biomédicas, abogacía y comunicación social.*Presentado en el 5° coloquio de gestión universitaria en América del Sur. Argentina: Universidad Priada de la ciudad autónoma de Buenos Aires. http://repositorio.ufsc.br/xmlui/handle/123456789/35892
- Chiang, M., Díaz, C. y Arriagada, P. (2016). Estilos de enseñanza y aprendizaje: ¿cómo dialogan en la práctica? *Journal of Learning Styles*, 9 (17), 2-24. https://dialnet.unirioja.es/servlet/articulo?codigo=5467203
- Chiang, M., Díaz, C., y Rivas, A. (2013). Un cuestionario de estilos de enseñanza para el docente de Educación Superior. *Revista Lasallista de investigación, 10* (2), 62-68. http://www.scielo.org.co/scielo.php?script=sci abstract&pid=S1794-44492013000200008&lng=es
- Chiang, M., Díaz, C., Rivas, A., y Martínez, P. (2013). Validación del Cuestionario de estilos de enseñanza (CEE) un instrumento para el docente de educación superior. *Revista de Estilos de Aprendizaje*, 11(12), 1-16. https://dialnet.unirioja.es/servlet/articulo?codigo=4560116
- Cousine, R. (1962) Qué es enseñar. *Archivos de Ciencias de la Educación, 3*(3), 1-5. http://sedici.unlp.edu.ar/handle/10915/45152
- De León, I. (2005) Los estilos de enseñanza pedagógicos: Una propuesta de criterios para su determinación. *Revista de Investigación*, *57* (1), 69-97. https://dialnet.unirioja.es/descarga/articulo/2053492.pdf



- Fortoul, M. (2008). La concepción de la enseñanza según los estudiantes del último año de la licenciatura en Educación Primaria en México. *Horizontes*, *30* (119), 72-89. http://www.scielo.org.mx/scielo.php?script=sci arttext&pid=S0185
- González Peiteado, M. (2013). Los estilos de enseñanza y aprendizaje como soporte de la actividad docente. *Revista Estilos de Aprendizaje*, 11(6), 51-70. http://revistaestilosdeaprendizaje.com/article/download/971/1679
- Isaza, L. y Henao, G. (2012). Actitudes-Estilos de enseñanza: Su relación con el rendimiento académico. *International Journal of Psychological Research*, *5*(1), 133-141. https://dialnet.unirioja.es/descarga/articulo/5134678.pdf
- Laudadío, J y Da Dalt, E (2014). Estudio de los estilos de enseñanza y estilos de aprendizaje en la universidad. *Educación y Educadores*, 17 (3), 483-498. https://educacionyeducadores.unisabana.edu.co/index.php/ey
- Laudadío, J. y Mazzitelli, C. (2015). Estilos de enseñanza de los docentes de distintas carreras de nivel superior vinculadas con las ciencias naturales. *Educación y Educadores*, 14(46), 9 -25. http://revistas.pucp.edu.pe/index.php/educacion/article/view/12242
- Martínez-Geijo, P. (2009). Estilos de Enseñanza: Estilos de enseñanza: conceptualización e investigación (en función de los estilos de aprendizaje de Alonso, Gallego y Honey) Revista de Estilos de Aprendizaje, 1 (2), 3–19.

 http://revistaestilosdeaprendizaje.com/article/view/858/1546
- Perochena, P., Arteaga, B., Labatut, E., Martínez, F. (2017) Adaptación y validación del cuestionario estilos de enseñanza (portilho/banas) en el contexto educativo español. *Tendencias pedagógicas 30*(1), 71-90. https://dialnet.unirioja.es/servlet/articulo?codigo=6164817
- Rendón, M. (2010). Los estilos de enseñanza en la Universidad de Antioquia. *Unipluriverisidad*, 10(1), 1-18. https://www.researchgate.net/publication/266260034 Los estilos
- Renés, P. y Martínez, P. (2016). Una mirada a los estilos de enseñanza en función de los estilos de aprendizaje. *Journal of Learning Styles*, 9 (18), 224-243. https://dialnet.unirioja.es/servlet/articulo?codigo=5715949
- Renés, P., Echeverry, L., Chiang, M. T., Rangel, L. y Martínez, P. (2013). Estilos de enseñanza: un paso adelante en su conceptualización y diagnóstico. *Revista Estilos de Aprendizaje*. 11(6), 4–18. https://dialnet.unirioja.es/servlet/articulo?codigo=4324304
- Ventura, A (2011) Estilos de aprendizaje y prácticas de enseñanza en la universidad. Un binomio que sustenta la calidad educativa. *Perfiles Educativos*, 33(spe), 142-154. http://www.scielo.org.mx/scielo.php?script=sci abstract&pid=S0185-26982011000500013&lng=es&nrm=iso



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