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OBJECTIVE
To disseminate multidisciplinary scientific unpublished articles, elaborated under the parameters of the research methodology, written with academic rigor and based on the teaching practice.

TOPICS
The topics covered are the theoretical bases of the Education Sciences in its different specialties and levels of the educational system.

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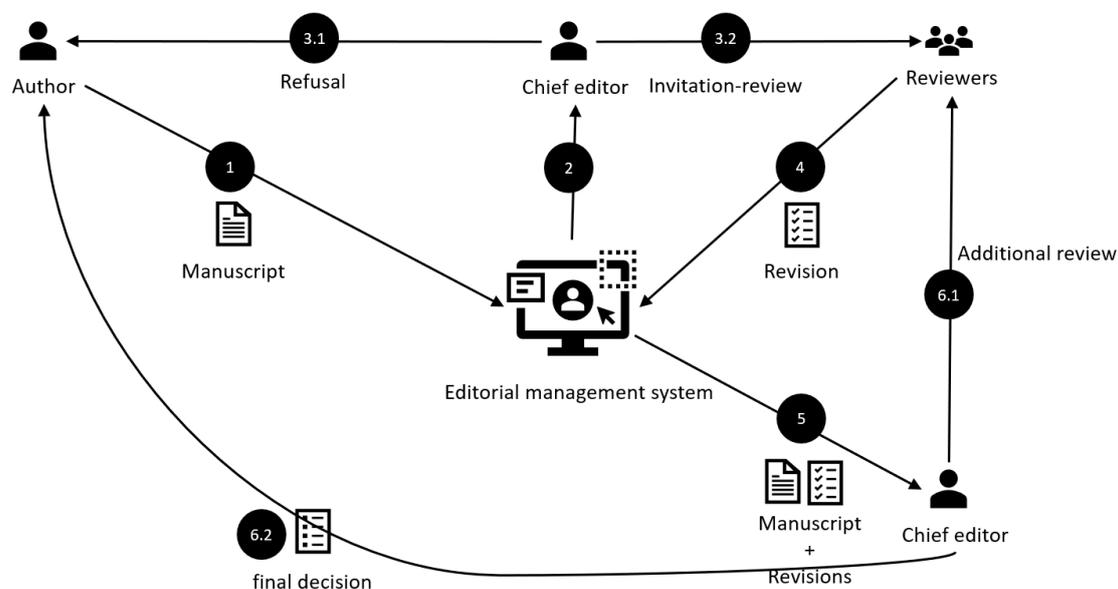
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EDITORIAL

Within the framework of Educational Sciences, the Revista Cátedra presents to its selected readers the digital version of the sixth volume, number one. In this opportunity, new approaches are presented around technological tools for pedagogical performance, inclusive methods for students with functional diversity, considerations on the pedagogy of solidarity, cultural identity, and vocational orientation. Particularly noteworthy in this opportunity are important socio-educational reflections in the university context. Each of the published research papers reflects the authors' commitment to the Social Sciences and teaching performance in order to address a series of concerns both in the context of national education and in international cultural scenarios.

In this sense, the first of the articles, entitled Impact of virtual classrooms in the training of human talent in health at the General Teaching Hospital of Calderón-Ecuador, whose authors are: Luis Olmedo-Pérez, Patricia Benavides-Vera and Fernando Durán-Lucio, addresses the impact of teaching through the virtual classroom platform as a result of the covid-19 pandemic. This is quantitative research aimed at teachers and undergraduate and rotating internship students of Medicine, Obstetrics and Nursing of the cohorts of the Faculty of Medical Sciences of the Central University of Ecuador and who fulfill their assistance and academic activities in the General Teaching Hospital of Calderón. The results of the research also aspire to contribute to the didactic process of other Higher Education Institutions in order to improve the training of aspiring health professionals who are currently under this new modality of virtual studies.

Similarly, oriented to the study of new information technologies, the second article analyzes the behavior of Web 2.0 as a tool for university teaching in times of the covid-19 pandemic. The study, by authors Jorge Revelo-Rosero, Ana Yaguana-Campos, Verónica Cadena-Heredia and Clara Andrade-Erazo, aims to determine the use of digital resources for the development of curricular contents in Higher Education. Both the perceptions of teachers towards the application of teacher training programs regarding the use of ICT and the implications that could have an institutional policy that enhances such teacher training in the use and application of ICT in university classrooms, are aspects that seek to improve the quality of higher education adapted to the impact caused by the pandemic covid-19, to develop autonomous and collaborative work in their students.

As a third article, the author Olga Delgado-Zambrano presents her study Implementation of parental control applications in the use of the Internet as technological support tools for academic performance, whose objective was to diagnose the parental control that the representatives of the "Tarqui" Fiscal Educational Unit, in the city of Manta, province of Manabí - Ecuador, carry out on the content that minors handle on the Internet. The authors emphasize that despite the precautions or actions taken by the representatives to monitor the Internet activities of minors, there is a need for an adequate tool through the use of computer programs or mobile applications to carry out this activity in real time, taking into

account that parental interaction to ensure a good use of the Internet can support the academic performance of students and therefore positively influence their performance.

The fourth article, called Vocational and professional orientation as an alternative in the choice of university careers, belonging to the authors: Francisco Dillon-Pérez, David Rojas- Londoño, Elizabeth Lara-Ramos and Irina Freire-Muñoz, talks about the lack of professional orientation and the construction of vocational tasks that consolidate the choice of career of students in the third year of high school who aspire to enter the Higher Education system. The approach used was quantitative of explanatory and correlational type, supported by a qualitative analysis process of interpretative hermeneutic type. The results of the study could help students in their third year of high school, from different public and private institutions in Ecuador, to choose through a conscious decision their professional career aligned to their particular life project and aptitudinal potential.

In this same framework of the Epistemological contributions offered by higher education, Pedagogies of solidarity: service-learning model for social transformation. A view from the university corresponds to the fifth article included in the current issue of our journal. Its authors: César Perdomo-Guerrero, Ana Pirela-Hernández and Belkis Rodríguez-Villasmil, emphasize the need to analyze the pedagogy of solidarity in the face of what they call the expiration of conventional educational paradigms in today's society; which would influence the design of better models of educational intervention that promote the formation of values and principles. This implies the protagonism of several actors: teachers, students, governments and society in general, in order to understand that this learning in solidarity involves assuming a position regarding the commitment to the society we wish to build.

Article number six, entitled Evaluation of the managerial process in the interaction of students with functional diversity in the university environment, by the authors Víctor Zapata-Achig, Milagro Yustiz-Ramos and Paulina Meneses-Vásconez, aims to strengthen and consolidate creative actions to increase knowledge in the search for technological advances in educational management, capable of attracting a greater number of students with functional diversity to insert them into the occupational world. In addition, this research observed practices characterized by rejection, segregation and exclusion of students with functional diversity, in a constant search for themselves and their families to find an educational space where they are recognized and accepted.

As the seventh article, we present the study Inclusive methods for reading ability: the case of students with moderate intellectual disabilities, authored by Celinda Pisco- Sánchez and Lubis Zambrano-Montes. This research corroborates that inclusive methods are educational strategies aimed at the attention of diversity and, as such, present specificities directed to the development of adequate pedagogical practices implemented with the support of an adequate educational policy. The research allowed defining the characteristics of the work techniques applied to students with moderate intellectual disabilities, highlighting among them the

flexibility in the management of tactics for the personalization of the diverse learning experiences in their reading comprehension processes.

The eighth article is entitled La Chakana as an intercultural methodological instrument for strengthening reading comprehension. Leslie Núñez-Zurita, in this study, indicates how the great variety of methodologies aimed at improving the teaching-learning process has usually been centered on the traditional methodology of knowledge transmission. However, recent times have revealed a new way of interacting with knowledge with alternative proposals. In this sense, the Andean Chakana is an alternative didactic resource that can improve critical thinking in 5th grade students of the "Cardenal Spínola Fe y Alegría" educational unit. The teacher argues that, in the face of the evidenced shortcomings and according to the benefits offered by this alternative methodology under the Andean cosmovision, the Chakana forges spaces for a comprehensive education that involves harmonizing knowledge through reading comprehension focused on the student's contact with the nature that surrounds him/her.

Finally, the ninth article entitled The culture for the recognition of the identity: case of the fang culture of Equatorial Guinea, by Bonifacio Nguema Obiang-Mikue, closes this edition of our journal. This work, from philosophical and anthropological perspectives, addresses the concern for the decadence and decline of the culture of the Fang ethnic group of Equatorial Guinea. Since this is a research that addresses a sociocultural issue, its author has thought it convenient to adopt a qualitative methodology to examine the impact of culture as a recognition of the Fang identity; with this argument, according to Obiang Mikue, the identity of the black African Bantu, in general, and of the Fang in particular, is externalized in its different cultural manifestations such as dance, art, religion, among others.

We hope, as has always been our interest to consolidate our position as an organ for the dissemination of socio-educational research, that this issue will continue to be useful to the critical eye of our readers, whom we thank for their confidence in maintaining us as a reference in the academic debate in the Educational Sciences.

Luis Cuéllar

Managing Editor

Impact of virtual classrooms in the training of human talent in health at the General Teaching Hospital of Calderón-Ecuador

Impacto de aulas virtuales en la formación de talento humano en salud en el Hospital General Docente de Calderón-Ecuador

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Abstract

An analysis is presented of the impact caused by the new study modality through virtual classrooms in the training of health professionals, who because of the covid-19 pandemic

suspended their face-to-face academic activity, starting classes through a virtual classroom platform. The period corresponds from March 2020 to June 2021, with the aim of identifying the impact on health training and whether this modality is appropriate in their careers. For this purpose, quantitative research was conducted with the application of an anonymized survey directed to teachers and undergraduate and rotating internship students of Medicine, Obstetrics and Nursing of the cohorts of May 2020-April 2021 and September 2020-August 2021 of the Faculty of Medical Sciences of the Central University of Ecuador and who fulfill their assistance and academic activities in the General Teaching Hospital of Calderón (HGDC). The total population of teachers and students in the reference period was 365 participants and an effective sample of 175 participants was selected. The research provides a series of conclusions and suggestions that can be adopted by Higher Education Institutions (HEI) to improve the training of aspiring health professionals who are currently under this new virtual study modality.

Keywords

Impact, Virtual Classroom, education, research, pandemic, technology

Resumen

Se presenta un análisis del impacto causado por la nueva modalidad de estudio a través de aulas virtuales en la formación de profesionales de la salud, que a raíz de la pandemia por covid-19 suspendieron su actividad académica presencial, iniciando clases a través de una plataforma de aula virtual. El periodo corresponde de marzo 2020 a junio 2021, con el objetivo de identificar el impacto en la formación en salud y si esta modalidad es la adecuada en sus carreras. Para esto se realizó una investigación cuantitativa con la aplicación de una encuesta anonimizada dirigida a docentes y estudiantes de grado y de internado rotativo de Medicina, Obstetricia y Enfermería de las cohortes de mayo 2020- abril 2021 y septiembre 2020-agosto 2021 de la Facultad de Ciencias Médicas de la Universidad Central del Ecuador y que cumplen sus actividades asistenciales y académicas en el Hospital General Docente de Calderón (HGDC). La población total de docentes y estudiantes en el periodo de referencia fue de 365 participantes y se seleccionó una muestra efectiva de 175 participantes. La investigación aporta una serie de conclusiones y sugerencias que pueden ser adoptadas por las Instituciones de Educación Superior (IES) a fin de mejorar la formación de los aspirantes a profesionales de la salud que actualmente se encuentran bajo esta nueva modalidad de estudios virtuales.

Palabras clave

Impacto, Aulas virtuales, educación, investigación, pandemia, tecnología.

1. Introduction

Under the new way of life caused by the worldwide pandemic, the Teaching and Research Unit of the HGDC promotes strategies to improve the teaching activity of the new health professionals. By virtue of this, and considering this new dynamic of virtual education, the question arises as to what has been the transforming impact of Information and Communication Technologies (ICT) in higher education, and with greater emphasis on the training of health professionals who were affected in their theoretical-practical training with the change of study modality (face-to-face to virtual).

On the other hand, the Pan American Health Organization clearly points out that:

> The epidemic of COVID-19 was declared by WHO a public health emergency of international concern on January 30, 2020; which represents a great threat to health systems, especially in countries with medium and low economic resources, since to face this health crisis it is necessary of great economic support and human resources, therefore it was necessary the implementation of prophylactic measures, in order not to saturate health systems such as: the closure of places of agglomeration of people, measures of social isolation and the promotion of social distancing, actions that changed the dynamics of life of the entire population worldwide (Pan American Health Organization-PAHO, 2020, para. 2).

These measures had a direct impact on the entire higher education system, which had to adapt to new study modalities, mainly oriented towards distance education. In this context, virtual learning environments and the incorporation of technologies in education gained more space. As quoted by Bustos (2010), "it is important to reflect on the use of ICTs in the creation of new teaching-learning environments, as well as on their potential capacity to transform training processes in formal education environments" (Bustos and Coll, 2010, p. 14). Those who have chosen distance education are familiar with the entire learning environment through the Internet and virtual platforms as classrooms; the challenge has been for students and faculty who have traditionally carried out their academic activities in person, especially in careers such as Medicine, Obstetrics and Nursing whose direct student-teacher-patient interaction for both theoretical classes and clinical-surgical practical activities are fundamental in the training of future health professionals.

Considering the above background, the General Teaching Hospital of Calderón, being a health center where new professionals are trained, proposed, through the Teaching and Research Unit, to carry out transversal descriptive research, of a quantitative type, supported by the application of a web-based questionnaire of its own elaboration addressed to teachers and undergraduate and graduate students of the Faculty of Medical Sciences. The main objective was to measure the degree of impact of virtual classrooms in the training of human talent in health at the General Teaching Hospital of Calderón in the period March 2020 to June 2021; as well as to identify the percentage of teachers and students who consider that the current process of training through virtual classrooms is adequate.

The study has been proposed in conjunction with our strategic ally, the Faculty of Medical Sciences of the Central University of Ecuador. The results are translated into strategies that are expected to be implemented in order to improve the training of students in the careers of medicine, obstetrics and nursing. The information gathering was carried out from July 1 to 12, 2021 and the final report was presented in August 2021.

The article consists of the following parts: an introduction with a brief description of the research problem, the justification on which the research is based, a description of the methods and materials used where the methodology, scope, sample determination and tools for data collection are described. The results and discussion reflect relevant interpretations of the quantitative cross-sectional descriptive study carried out. Finally, the conclusions are presented as a synthesis of the most significant findings of the study.

1.1 Rationale

Since the beginning of the year 2020, the world has been facing a global pandemic called covid-19, which forced the vast majority of countries to temporarily close their educational

institutions at all levels. This closure affected approximately 91% of students worldwide, and by April 2020, about 1.6 billion children and young people were out of their educational institutions (UN and SDG4, 2020, para. 2).

Centralizing the problem in Ecuador and particularly in higher education, according to figures from the Secretariat of Higher Education, Science, Technology, and Innovation (SENESCYT), "the country as of October 2020 registered a gross enrollment rate of 733,000 third and fourth level students" (UN for Education, Science and Technology-Senescyt, 2020, p. 3), of which 57% receive public provision of the service, while the remaining 43% attend a private higher education entity. On the other hand, 84% of students attend a university or Polytechnic School-UEP and 16% attend a Technical or Technological Institute (ITT).

The pandemic forced HEIs to change the modality in the provision of education services, making them virtual. This change had direct implications on the quality of the provision of this right, considering that the national education system is in its initial stages of preparation to provide a virtual offer. As cited by UN Education:

> Although the health crisis accelerated the migration to the virtual modality, this change was made abruptly, without the possibility of adapting curricular content, adopting appropriate pedagogies, training teachers, and sometimes not even having sufficient technological resources to maintain quality in the provision of the service (ONU para la Educación, Ciencia y Tecnología-Senescyt, 2020, p. 5).

The main impact that the present pandemic had on the national provision of higher education was: "The implementation of technological platforms (IES) for virtual education and access to technological equipment (students)" (ONU para la Educación, Ciencia y Tecnología-Senescyt, 2020, p. 5). The change in the modality of higher education implied access restrictions to a significant proportion of the demand, especially to the population with greater economic vulnerabilities within it. According to figures reported by SENESCYT, it is estimated that 20% of ITT students and 9.37% of students in Production Educational Units (UEP) were restricted in their access because they did not have the minimum technological resources (computers and internet connectivity) to access virtual classes. This implies that around 81,200 students, representing 11.07% of the total number of students enrolled in the higher education system, had to interrupt their studies. "So also, the dropout rate is even higher in rural areas, and affects the female gender more" (ONU para la Educación, Ciencia y Tecnología-Senescyt, 2020, p. 5-6).

Finally, the effects and impacts identified by the health emergency refer to the access and use of technologies, both by students and educational institutions and the substantive processes of the governing body itself. Not to mention that this new virtual education system directly affected the students and faculty who carried out their academic activities in person and who did not have enough time to master and understand the functioning of virtual teaching-learning environments, as well as the academic tools and resources of this type of studies. In a world in constant change and evolution, the incorporation of ICTs in higher education marks the path towards the new "learning society" or "digital society", which transforms or modifies formal education environments and has become a key factor for the emergence of new educational scenarios associated with virtual or online environments.

2. Methods and materials

The study is a cross-sectional descriptive quantitative study based on primary data collected through the application of a web-based questionnaire of our own elaboration directed to teachers and undergraduate and graduate students of the Faculty of Medical Sciences of the Universidad Central del Ecuador who perform their academic activities in the General Teaching Hospital of Calderón in the period March 2020 to June 2021. To determine the population and details of the sample size calculation, the total population of teachers and students in the reference period was 365 participants (UDI-HGDC, 2020-2021). The sample calculation was based on the simple random probability sampling method and the finite population sampling formula, with a confidence level of 95% and an error level of 5% (Malhotra, 2004, p. 344-348), which determined an effective sample of 175 participants. For data collection, an anonymized web survey form was designed, and the link was sent to the e-mails registered in the databases of teachers and students of the period in question, in the custody of the Teaching and Research Unit of the HGDC.

Due to the scope of the study and the database in the custody of the Teaching Unit of the HGDC, it was considered that the methodology that best fits the analysis requirements is quantitative, the same that seeks to establish the degree of causality between the virtual training action and its impacts on students; this methodology has allowed a more rigorous and accurate statistical analysis (Billorou, et al., 2011, p. 41-42). The study inclusion criteria were for faculty and undergraduate and rotating internship students of Medicine, Obstetrics and Nursing from the cohorts of May 2020- April 2021 and September 2020 to August 2021 who are taking an academic semester at the UCE School of Medicine and who are rotating at the HGDC, during the period of March 2020 to June 2021 (UDI-HGDC, 2020-2021). In the exclusion criteria are undergraduate and rotating internship students who are not part of the March 2020 to June 2021 rotation period at HGDC.

The collected data were anonymized and treated with strict confidentiality and for research purposes only. All the data were measured, and the results made it possible to determine the degree of impact of the virtual classrooms on the training of human talent in health of the sample mentioned above (175 participants).

In order to guarantee the results, for the validation of the reliability or reliability of the test used for the research, it was performed through the Cronbach's Alpha coefficient (α), which allows identifying the absence of measurement errors in a test, or as the precision of its measurement (Ruiz, 2019, para. 2). Instruments with questions that have more than two answers can be evaluated with this test. The Cronbach's α score is a number between 0 and 1. An acceptable reliability score is one that is equal to or greater than 0.7 (QuestionPro, 2019, para. 17).

The reliability for the validation of the measurement instrument designed for the impact assessment of virtual classrooms in the training of human talent in health was performed under the internal consistency reliability method. The reliability results obtained through the SPSS statistical program were as follows.:

Alfa of Cronbach	N of elements
0.770	30

Table 1. Reliability statistics

Cronbach's Alpha presents a high or acceptable reliability score of 77%, 30 items of the applied research test were analyzed. This result shows that the method, the instrument, and the research sample selected were reliable and the results obtained are guaranteed.

The tabulation and analysis of data was done by using the statistical program SPSS.25 and Excel 2016. Before analyzing the results, it is necessary to identify some key concepts:

Virtual classrooms. - It is the digital environment in which the exchange of knowledge that makes learning possibly takes place. That is, a space where teachers and students share content in real time, and where queries, doubts and evaluations of the participants are addressed (EvolMind, 2022, para. 9-10).

Human talent in health. - The Pan American Health Organization-PAHO clearly states: "They are all the people who carry out actions whose fundamental purpose is to improve health. They are people with different professions and occupations who are trained and work in health, and who belong to various categories of training, work environment and employment status" (PAHO AND WHO, 2017, para. 9).

ICT in education. - ICT in education refers to the set of hardware and software technologies that contribute to educational information processing. According to the definition of César Coll, PhD in Psychology, in his book Psychology of virtual education, ICTs "are instruments used to think, learn, know, represent and transmit to other people and other generations the knowledge and learning acquired" (Santander, 2021, para. 4).

3. Presentation of results

3.1 Analysis by levels

Of the sample under study, 10.29% of the participants were teachers (18), 39.43% were rotating internship students (69) and 50.29% were undergraduate students (88).

3.1.1 Knowledge and use of virtual classrooms

Table 2 shows the results on the level of knowledge and management of virtual classrooms. 64.00% of the participants express that they have a medium level of knowledge in the management of virtual classrooms, 18.29% have a high level of knowledge, 16.57% have a low level of knowledge and 1.14% have no knowledge at all. This variable has a high impact on the training of the future health professional due to the lack of experience in the management of virtual platforms of teachers and students, and their limited interaction with the tutor in clinical-practical situations. When asked if information on the regulations, norms and objectives was given before starting the virtual academic activities, 52.27% considered that it was not enough and was not very clear.

Axis	Criterio	Resultado
Knowledge and management of virtual classrooms	a. High knowledge	18.29%
	b. medium knowledge	64.00%
	c. low knowledge	16.57%
	d. None	1.14%
Total axis 1		100.00%
Information on regulations and standards for virtual activities	a. Sufficient and clear	34.86%
	b. Not enough and not very clear	52.57%
	c. Did not contribute anything	8.00%

	d. No information was provided	4.57%
	Total axis 2	100.00%

Table 2. Knowledge and management of virtual classrooms, UDI-HGD

3.1.2 Formative evaluations

Table 3 shows the results of the formative evaluations. The sample under study considers that 45.14% of the evaluations carried out by the teacher during the semester were permanent and 47.43% consider that it was more of an evaluation per unit or module. The most frequent formative evaluations were virtual questionnaires, formative tests, research papers, bibliographic reviews, and case studies.

Axis	Criteria	Result
Timing of the formative evaluation	a. Permanent (individual and group)	45.14%
	b. Per unit or module	47.43%
	c. Only evaluated at the end	6.86%
	d. Not evaluated	0.57%
	Total axis1	100.00%
Most commonly used types of formative evaluations	a. Case studies	14.86%
	b. Portfolios	6.51%
	c. Forums	7.51%
	d. Bibliographic reviews	16.19%
	e. Research papers	17.36%
	f. Formative tests	17.36%
	g. Virtual questionnaires	20.20%
	Total axis 2	100.00%

Table 3. Formative evaluations, UDI-HGDC

3.1.3 Virtual classrooms and teaching-learning tools

Table 4 presents the results of the virtual classes and the most used teaching-learning tools. Regarding the virtual media system as an alternative to continue with the teaching-learning process, 48.57% of the participants consider that it is a moderately effective strategy and 29.14% that it is not very effective, which reflects that there is a challenge for the Central University in relation to the strategies that have been implemented for teaching-learning activities through virtual classrooms. When asked about the most used tools for the fulfillment of the scheduled synchronous hours, 33.20% responded that they were carried out through video calls, 28.74% instant messaging and 16.60% through the use of social networks. In reference to the tools used for virtual meetings between teachers and students, the most used as a resource for teaching-learning activities was Microsoft Teams with 50.94% and Zoom with 45.91%. For the item of access to study material as part of the virtual classroom 26.61% accessed through Teams, 25.72% via WhatsApp, 23.06% through the same platform and 16.41% by email. It is evident that the official virtual platform is not being used adequately.

Axis	Criteria	Result
Virtual teaching alternative	a. Effective	14.29%
	b. Moderately effective	48.57%

	c. Not very effective	29.14%
	d. Deficient	8.00%
Total axis 1		100.00%
Most used tools for synchronous classes	a. Telephone tutoring	7.69%
	b. Video calls	33.20%
	c. Instant messaging	28.74%
	d. Social networks	16.60%
	e. None	13.77%
Total axis 2		100.00%
Most used tools for virtual meetings	a. Zoom	45.91%
	b. Microsoft Teams	50.94%
	c. Skype	0.63%
	d. WebEx	0.31%
	e. Google HangOuts	1.89%
	f. Uberconference	0.31%
Total axis 3		100.00%
Means of access to study material	a. Electronic mail	16.41%
	b. WhatsApp	25.72%
	c. Chats	4.88%
	d. Social networks	3.33%
	e. Teams	26.61%
	f. Same virtual platform	23.06%
Total axis 4		100.00%

Table 4. Virtual classrooms and teaching-learning tools, UDI-HGDC

3.1.4 Schedule, attendance and class times

We inquired about the chronogram, attendance and class schedules, as shown in Table 5. In reference to virtual classes during the semester, for 58.29% of the respondents, 75.00% of the classes have been completed and only 26.29% considered that the schedule was completed 100%. This indicates that the schedule of virtual classes should be strategically planned in order to avoid learning gaps in the students. In the analysis of attendance to virtual classes, 53.71% of those surveyed indicated that attendance should not be considered as a parameter for the final grade, since there are connectivity problems to the synchronous classes scheduled by the teacher. Regarding compliance with the virtual class schedules uploaded to the system, 50.86% of those surveyed consider that compliance was moderately satisfactory, 25.71% that it was satisfactorily complied with and 15.43% that compliance was deficient.

Axis	Criteria	Result
Schedule of classes	a. At 100 percent	26.29%
	b. At 75 percent	58.29%

	c. At 50 percent	13.71%
	d. At 25 percent	1.71%
	Total axis 1	100.00%
Class attendance	a. Attendance should not be considered	53.71%
	b. A minimum of 25% attendance should be considered	14.86%
	c. A minimum of 50% attendance should be considered	18.86%
	d. A minimum of 75% attendance should be considered	12.57%
	Total axis 2	100.00%
Class schedules	a. Satisfactorily	25.71%
	b. Moderately satisfactory	50.86%
	c. Deficiently	15.43%
	d. Never fulfilled	8.00%
	Total axis 3	100.00%

Table 5. Schedule, attendance and class times, UDI-HGDC

3.1.5 Motivation, knowledge assimilation and discussions

The results on motivation, knowledge assimilation and debates generated in the virtual classes are presented in Table 6. From the results, 37.71% of the participants consider that the planning of the virtual activities designed by the teacher motivated them to perform analysis and synthesis, for 34.29% the activities motivated them to search for information, as the most relevant data. An interesting and at the same time worrying fact is that this new virtual experience for 56.00% of the respondents has not allowed the students a better personal development, they have participated with fear in the classes and have presented an inadequate assimilation of knowledge. Regarding the frequency of debates generated through virtual classes on a specific topic, 58.86% considered that they were infrequent, 22.29% stated that they rarely occurred and for 18.29% the debates were frequent. A relevant fact determined by the study is that 56.00% of those surveyed consider that virtual learning sessions, being expository, almost always generate fatigue in students.

Axis	Criteria	Result
Virtual lesson planning that motivates the student to search for:	a. Information	34.29%
	b. Analysis y synthesis	37.71%
	c. Evaluation and decision making	12.00%

	d. Reflection from their own experience	8.57%
	e. None	7.43%
	Total axis 1	100.00%
New virtual experience has enhanced their personal development	a. True	16.00%
	b. False	56.00%
	c. Indifferent	28.00%
	Total axis 2	100.00%
Frequency of discussions in virtual classes	a. Frequent	18.29%
	b. Infrequent	58.86%
	c. Rarely occur	22.29%
	d. Never occur	0.57%
	Total axis 3	100.00%

Table 6. Motivation, knowledge assimilation and discussions, UDI-HGDC

3.1.6   General Criteria

Figure 1 shows that more than 50.00% of the respondents have a high degree of lack of knowledge not solved in a virtual way regarding: clinical practices, patient observation, doctor-patient relationship, and performance of procedures.
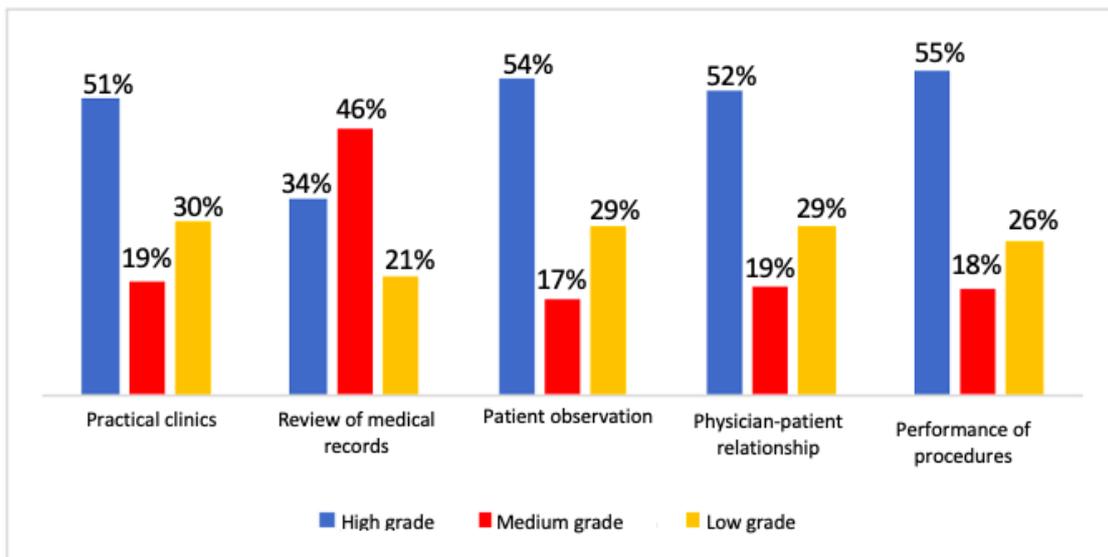
Figure 1. Degree of ignorance not solved in a virtual way, UDI-HGDC

In the training of students through virtual classrooms, more than 53.00% consider the following to be threats to a medium degree: technical problems due to connection, equipment and/or programs, the study environment, group socialization processes and teacher-student communication, as shown in Figure 2.
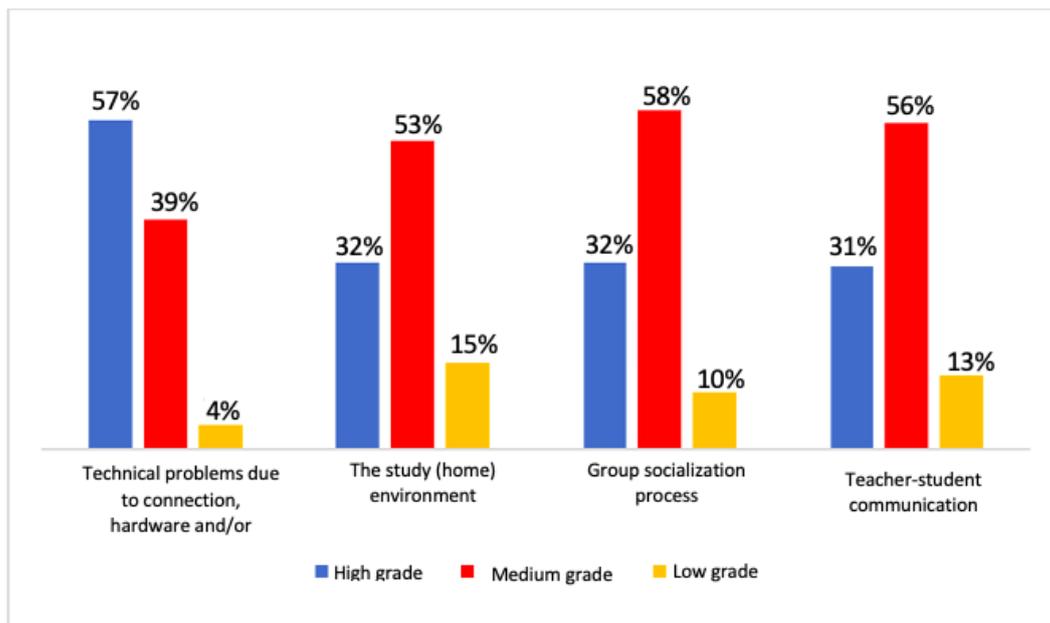
Figure. 2. Degree of threats in the training of students by virtual means, UDI-HGDC

Figure 3 shows that an average of 56.00% of the respondents consider that virtual classrooms have allowed them to a medium degree: to encourage reading, greater access to information, access to updated academic resources and new evaluation techniques.
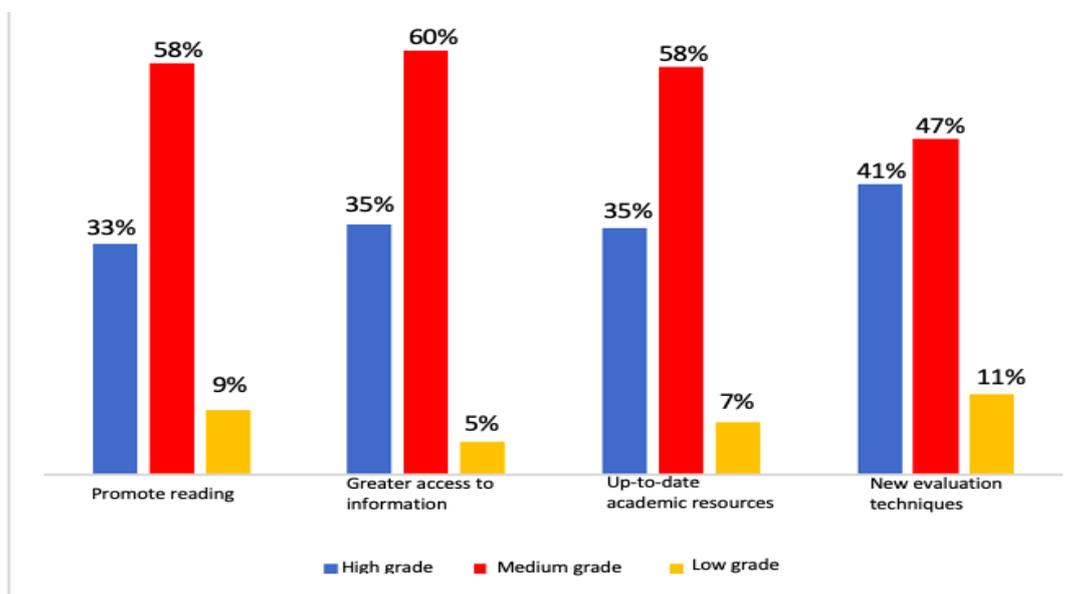
Figure 3. Degree to which virtual classrooms have enabled new learning, UDI-HGDC

3.2 Bivariate Analysis

3.2.1 Continuity of studies through the virtual system

Four levels have been identified for the continuity of studies through virtuality: (1) 16.67% of women and 22.39% of men surveyed considered that the University should manage free access to virtual platforms; (2) 3.7% of women and 2.99% of men stated that the hours of virtual classes and meetings should be increased; (3) 17.59% of women and 10.44% of men considered that the current system should be maintained until the health emergency has been overcome; and (4) 62.04% of women and 64.18% of men considered that the current system should be maintained until the health emergency has been overcome. 59% of women and 10.44% of men considered that the current system should be maintained until the health emergency has been overcome; and (4) 62.04% of women and 64.18% of men stated that it should be sought, under programming and biosecurity norms, to integrate the student to hospital internships (Ref. Figure 4).

In view of the current system of teaching and learning for a longer period of time, it would be appropriate to

a. Manage free access to virtual platforms. 22.39% / 16.67%

b. Increase the hours of virtual classes and meetings. 2.99% / 3.70%

c. Maintain the current system until the health emergency has been overcome. 10.44% / 17.59%

d. Seek to integrate the student to the hospital practices under the program and biosafety norms. 64.18% / 62.04%

Figure 4. Continuity of studies through the virtual system for a longer period of time., UDI-HGDC

3.2.2 Alternative studies through the virtual system

In reference to the alternative of studying through the virtual system, Figure 5 shows that 11.11% of women and 19.40% of men surveyed consider that the virtual media system as an alternative to continue the teaching-learning process is an effective strategy; 50. 00% of women and 46.27% of men stated that it is a moderately effective strategy; 30.56% of women and 26.87% of men consider it to be a not very effective strategy; and 8.33% of women and 7.46% of men stated that it is a deficient strategy. These results indicate that there is no real attachment to the consideration of continuing with the teaching-learning process through the virtual media system, especially when careers such as medicine, nursing and obstetrics are learned in practice and face-to-face.
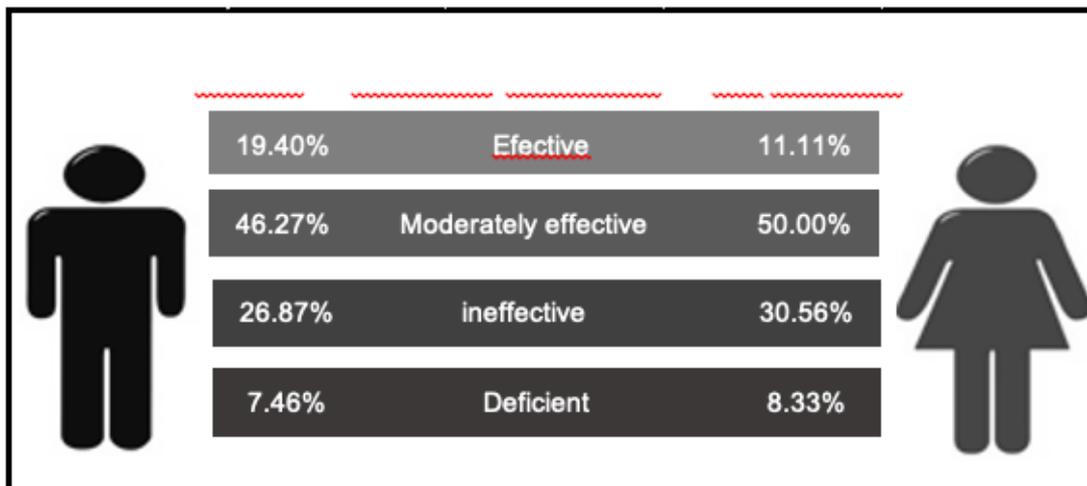
Figure 5. Virtual media system as a strategy and alternative to continue with the teaching-learning process., UDI-HGDC

3.2.3 Grading of virtual classes during the academic term

In Figure 6 on the rating of virtual classes in the academic period, 3.70% of women and 5.97% of men surveyed rated the development of virtual classes in the academic period as excellent; 26.85% of women and 19.40% of men rated them as very good; 57.41% of women and 64.18% of men rated them as good; and 12.04% of women and 10.45% of men rated them as bad. These results indicate that the development of virtual classes was not as well received by both students and teachers and emphasize once again that health careers are learned in practice and in a face-to-face setting.
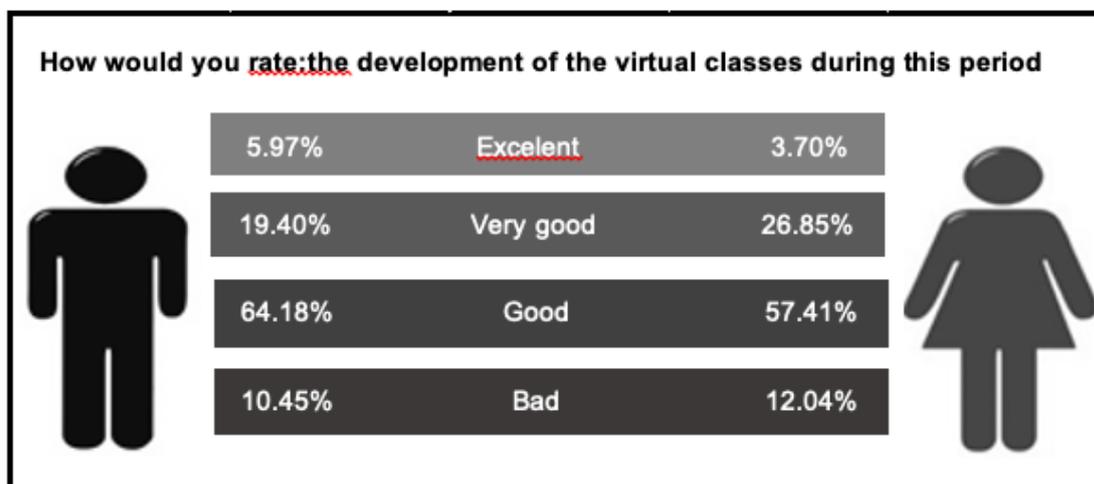
Figura 6. Calificación del desarrollo de las clases virtuales en el periodo académico, UDI-HGDC

4. Discussion

Teaching presents a challenge when it comes to finding new dynamics and ways of transmitting knowledge to others, especially in times when information is almost immediate and the dynamics of socialization have changed (CGFGlobal, 2016, para. 1). A large part of university students, despite their relative normality, have difficulties in their

academic preparation on a regular basis. "Difficulties are expressed in demotivation for certain subjects or study programs; also due to inadequate school-family environments or spaces, disorganization of autonomous schedules, weakness in handling study techniques, among others" (Barreno-Freire et al., 2022, p. 75-97).

Virtual education is one of the new teaching methods today and uses technology to educate remotely, eliminating the barriers of distance and, why not, time. Virtual education, also known as online teaching, refers to the development of the teaching-learning dynamic that is carried out virtually. That is, there is an educational format where teachers and students can interact differently from the face-to-face space and is supported by ICTs, as it makes use of the tools offered by the Internet and other technologies to provide appropriate and high-quality educational environments (CGFGlobal, 2016, para. 4-5).

As cited by Gómez (2021) in his article on Virtual Education in Pandemic Times, educational subjects, in times of pandemic, are not in equal conditions to access virtual education: geographic location, economic and technological resources, training and experience in the use of information and communication technology, among others.

> The results show that virtual education is increasing educational and digital inequalities, endangering equal educational opportunities; it is also established that virtual education becomes a privilege of those who have favorable social, technological and economic conditions, to the detriment of those groups that do not have technological access (p. 21).

For Francesc, director of UNESCO's International Institute for Higher Education in Latin America and the Caribbean, expresses that in the entire education sector the impact is yet to be evaluated, but in Higher Education the transition to emergency distance education has been accompanied by other manifestations no less important for the different actors, although probably not very visible and documented. Other impacts occur in the pedagogical, socioemotional, financial, labor, academic mobility, among others (Francesc, 2020).

In the Ecuadorian environment, the declaration of the health emergency by covid-19, made the governing body of Higher Education-SENESCYT have to take a series of measures to ensure access and permanence of students, including the immediate closure of face-to-face, the notification that all students, faculty and administrative staff had to study and work from home, the expansion of the internet bandwidth of public higher education institutions and implement virtual platforms for teaching. "Regarding the access processes, they were suspended because it could not be guaranteed that all applicants would have equal conditions in the use of technological means required for that process" (ONU para la Educación, Ciencia y Tecnología-Senescyt, 2020, p. 5-6).

It is also important to mention that:

> The effects of COVID-19 on higher education are not exclusively manifested in the immediate term. The quantification of these effects a posteriori is not a complex exercise; however, the nature of an unprecedented crisis at world level makes it difficult to predict them prior to their occurrence. In the Ecuadorian context, it is observed that issues such as unemployment and inadequate employment, and the decrease in the provision of complementary services may have an impact on a decrease in access and permanence in a HEI, as well as increase gaps in terms of gender and urban/rural population that were already observed prior to the pandemic; in particular with those linked

to access to technology (UN Education, Science and Technology-Senescyt, 2020, p. 7).

In terms of methodology and applicability of the research, it is important to consider the limitation for the collection of information; in many cases, web surveys are not accepted due to the boom of information received by e-mail and social networks. Since this is internal research of the General Teaching Hospital of Calderón, a presentation of the study was made to teachers and students in order to encourage their participation. It is urged that higher education institutions (academia) in conjunction with SENESCYT conduct studies and research to strengthen virtual education and that access to this form of education is not limited by technology.

Finally, it is important to reconsider whether in cases of health emergencies such as a pandemic, how convenient it is that health careers should take virtual classrooms as an alternative, especially considering and as the study has shown that students of health careers are not familiar with these virtual study environments and for HEIs the challenge has been how to solve the practical part that is a component of learning purely face-to-face and the raison d'être of these careers.

5. Conclusions

In terms of knowledge and management of virtual classrooms, it is essential for the University to provide teachers and students with guidelines for their use and management before the beginning of the academic period. It is important to mention that all university students handle administrative virtual environments (online enrollment, subject selection, grade verification, digital certificates and the like), but not virtual teaching-learning environments (MOOCs and Web 3.0 tools), which is the domain of those who have opted for distance or online education. University students in the modern digital era have greater access to social, educational, virtual and related networks; and therefore, to more information and knowledge; however, there are still low digital competencies to know how to use technological tools for teaching-learning, virtual environments and information discrimination.

One aspect to take into account is that teachers are responsible for developing technological competencies in students and being the managers of knowledge; however, the results showed that teachers of the School of Medicine who perform their academic activities in the General Teaching Hospital of Calderon lack greater interaction with technological devices and there is a strong generational transition and adaptation to new digital educational environments (traditional teacher to digital teacher).

At the level of knowledge assimilation and debates, it became evident that this teaching-learning strategy should be reinforced, and students and teachers should be motivated to debates with more argumentation. It is important then, together with the teachers, to design new strategies so that synchronous classes are more dynamic and participatory; and that digital educational tools and resources are used as reinforcement of the face-to-face classes given to medical, obstetrics and nursing students who, by regulation, cannot be accredited under the distance or online modality.

It is important that teachers and students are constantly trained in the use of virtual teaching-learning platforms and tools in both public and private higher education institutions. In addition, it is necessary to provide facilities to teachers so that they have technological equipment with connectivity and are those who promulgate the use of these

digital tools, all this in order to strengthen the higher education system that in health careers cannot be solved only through virtuality.

The different studies carried out regarding the use of Information and Communication Technologies in education indicate that the fundamental characteristic is not to place information and knowledge within everyone's reach, but to provide interactive, multimedia and communicational educational environments for the student, in order to achieve the learning of a certain subject (Rodriguez and Avella, 2012). These virtual environments must be socialized with students and teachers, especially when contingencies, such as the one caused by the pandemic, forced the students of medicine, obstetrics and nursing of the Universidad Central del Ecuador to face a new teaching-learning model through virtuality.

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Web 2.0 as a tool for university teaching in times of pandemic covid-19

La web 2.0 como herramienta para la docencia universitaria en tiempos de pandemia covid-19

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Abstract

The purpose of this article is to determine the use of Web 2.0 as a technological tool for university teaching in the teaching-learning process, as a consequence of virtual education,

which had to be implemented by the educational systems of all countries in the world due to the covid-19 pandemic. Therefore, teachers have been forced to incorporate in their teaching-learning activities, the use of digital resources for the development of the contents of the course. The analysis of the information was carried out with a quantitative, non-experimental descriptive approach. The technique used is the survey, through the design of a questionnaire that was applied to 120 university teachers from Quito, Guayaquil and Cuenca, which allowed analyzing the level of training and knowledge on the use of Web 2.0 as a technological tool in teaching in higher education. Among the results, it is highlighted that the influence of teacher training on the use of web 2.0 as a tool related to the teaching-learning process is medium. Most of the teachers surveyed use Web 2.0 as a tool for university teaching that allows them to innovate their educational practice mediated by virtual learning environments that show the development of their own digital competence. Finally, it is important to highlight that on the Web there are a large number of Web 2.0 digital tools and resources that can be used to improve the teaching-learning process inside and outside the classroom.

Key words

Covid-19, teacher training, , university education, virtual education, Web 2.0

Resumen

El presente artículo tiene como objetivo determinar el uso de la web 2.0 como herramienta tecnológica para la docencia universitaria en el proceso de enseñanza–aprendizaje, como consecuencia de la educación virtual, tuvieron que implementar los sistemas educativos de todos los países del mundo motivado por la pandemia COVID-19. Por tanto, los docentes se han visto forzados a incorporar en sus actividades de enseñanza– aprendizaje, el uso de recursos digitales para el desarrollo de los contenidos de la cátedra. El análisis de la información se realizó con un enfoque cuantitativo, no experimental descriptivo. La técnica utilizada es la encuesta, mediante el diseño de un cuestionario que se aplicó a 120 docentes universitarios de Quito, Guayaquil y Cuenca que permitió analizar el nivel de formación y conocimientos sobre el uso de la web 2.0 como herramienta tecnológica en la enseñanza en la educación superior. Entre los resultados se destaca que la influencia de la formación docente en el uso de la web 2.0 como herramienta relacionada con el proceso de enseñanza– aprendizaje, es medio. La mayoría del profesorado encuestado usa la web 2.0 como herramienta para la docencia universitaria que le permite innovar su práctica educativa mediada por entornos virtuales de aprendizaje que evidencien el desarrollo de su propia competencia digital. Finalmente, es importante resaltar que en la Web existen una gran cantidad de herramientas y recursos digitales de la web 2.0 que pueden ser utilizados para mejorar el proceso de enseñanza–aprendizaje dentro y fuera de las aulas de clase.

Palabras claves

Covid-19, educación virtual, enseñanza universitaria, formación docente, Web 2.0

1. Introduction

The purpose of this article is to determine the use of web 2.0 as a tool for university teaching in the teaching-learning process, due to the change that, as a consequence of the virtuality in teaching and learning that had to be implemented by educational institutions of all levels

in the world, motivated by the COVID-19 pandemic. Consequently, educational systems in all countries of the world found it necessary to access virtual education in a synchronous and asynchronous manner in their teaching-learning processes, using virtual environments as alternatives to continue offering educational services at all levels.

Thanks to the advance of information and communication technologies (ICT), the world has been forced to adopt technological changes in different fields, such as business, health, economics and education. In this regard, Bugawa and Mirzal (2018) express that "web 2.0 technologies provide platforms for users to create, navigate, communicate, share, and collaborate, providing them with new learning experiences and opportunities" (p. 2). Today, educational institutions, in the context of the pandemic, evidenced certain shortcomings, especially in relation to technological infrastructure and teacher training in terms of knowledge and application of technological resources in virtual (non-face-to-face) education modalities (Alcántara Santuario, 2020).

In this sense, higher education centers, despite the lack of human, material and technological resources, had to adapt their teaching-learning processes to the use of ICTs in a synchronous and asynchronous manner. Therefore, it is essential for universities today to train their teachers in digital competencies that allow them to acquire skills to use Web 2.0 as a virtual tool for the teaching-learning process in order to transmit, apply and create new knowledge in a critical way (Sales et al., 2020).

Web 2.0 is a set of more specialized dynamic applications that are constantly evolving on the Internet, thus allowing users to share, create, interact and collaborate with other users (Castells, 2008), so it has become a necessary didactic resource to be considered within the teaching-learning process as an educational innovation to such an extent that it has shaped what is called the information and knowledge society in a complex and ever-changing universe.

Bennett, Bishop, Dalgarno, Waycott and Kennedy (2012), state that "the value of using web 2.0 technologies for teaching-learning has important implications in the design of appropriate tasks for learning" (p. 524). Therefore, this makes it possible for students and teachers to interact, communicate and collaborate with each other, in short, to encourage individual, collaborative and cooperative work of the participants.

Digital technologies are present in most of the activities of human beings and education should not be the exception in this process. Nowadays, the use of academic management platforms such as Moodle, Zoom, Microsoft Teams, Canvas, Google Meet, Google Classroom, among others, is widespread. In this regard, Revelo-Rosero (2017) states that "Web 2.0 is of great importance in education, since it is more dynamic, participatory, collaborative for the different agents of the educational process, since they interact by sharing knowledge, content, opinions, relating, participating and creating knowledge through the network (p. 34).

In this sense, the use of digital platforms becomes a facilitating agent of an educational paradigm shift that allows fostering creation, autonomous work, interaction and collaboration among students, supervised by teachers, who are the facilitators of the teaching-learning process, supported by web 2.0 tools.

For Revelo-Rosero and Carrillo-Puga (2018), "this process involves, the continuous and permanent training of teachers in digital competencies, key factors such as web 2.0 integration for teaching and learning in university teaching. Therefore, the new role of the

teacher plays a leading role in teaching to achieve meaningful learning in their students" (p. 72).

This research work is structured in such a way that, first, a review of the literature related to concepts and definitions that have to do with Web 2.0 is made. Next, the methodology used for the research design is presented, which was of a descriptive non-experimental type with a quantitative approach and applied the reception of information through the survey technique, followed by the results; and, finally, the conclusions obtained are presented. The objective of this research is to determine the use of web 2.0 as a tool in the development of university teaching and its impact on the teaching-learning process, due to the change generated as a result of virtuality motivated by the COVID-19 pandemic, in addition to being at the forefront of technology.

2. Literature review

The use of web 2.0 is increasing in the teaching-learning process, starting in the year 2020, due to the impact change caused by the COVID-19 pandemic, to which universities had to adapt their teaching-learning process to the use of ICT in a synchronous and asynchronous way. By its nature web 2.0 is fundamentally characterized by being more interactive, dynamic, participatory, and collaborative among users, therefore, it is considered key to success in traditional classrooms (Bugawa and Mirzal, 2018).

The evolution of Web 2.0 has not only changed the Web technologies available, but has also provided people with ways to communicate and relate to each other (Torres-Kompen et al., 2019), as well as places to create knowledge networks, interact with each other, share content, collaborate, and improve communication channels. On the other hand, according to some authors, Web 2.0 is the new generation that contains a wide range of more interactive digital applications, including: online education (e-learning), podcast, videoblogs, interactive maps, sharing of photos, files, videos, etc., on-line games; which are mainly anchored in technological tools, such as learning management platforms (LMS), Moodle, Zoom, Microsoft Teams, Canvas, Google Meet, Google Classroom, among others; to create virtual learning environments, whose means of interaction is the Internet. On the other hand, Pérez-López et al. (2021) affirms that "teachers have adopted an asynchronous model accompanied by teacher-discussant interaction based on communication through e-mail, forums or chat" (p. 339).

In this regard, this interaction of web 2.0 tools encompass the use and exchange of information between teachers and students digitally, through emails, forums, chats, repositories of digital tools and resources or platforms specially created for this purpose such as blogs, wikis, social networks (Facebook, Whatsapp, Instagram, Twitter, Edmodo, Google+...), multimedia contents (Podcast, YouTube, Prezi, Slideshare, etc.) (Revelo-Rosero et al., 2016a), storage tools (Dropbox, Google Drive, OneDrive), among others, that facilitate the processes of research, interaction, collaboration, creation and exchange of knowledge among users through the Web (Área-Moreira, 2010; Salinas, Benito, and Lizana, 2014; Del Moral and Villalustre, 2015; Marín, Sampedro, and Muñoz, 2015; Lorenzo and Buendía, 2016).

Thus, the use of web 2.0 as a tool in university teaching, allows the creation of virtual collaborative learning environments, where teachers and students can interact and regardless of distance, which generates a great impact on the teaching-learning process inside and outside the classroom (Revelo, 2017). In this sense, the ease of use offered by the web 2.0, opens new options for teachers to improve the way of teaching with ICT, create spaces of coexistence and communication that generate new challenges in university

teaching (De la Torre, 2006), such challenges constitute facilitating processes of collaborative work that make learning more meaningful for students (Del Moral and Villalustre, 2010).

The new pedagogical thinking is necessary to face the new challenges of current educational processes that, when gradually implemented in the university classroom, promote innovation in higher education. Educational innovation is defined as the realization of changes in teacher training and the way of teaching and in student learning and training that in turn produce improvements in learning outcomes. Authors such as Freire (2007) state that Web 2.0 has already entered universities in a silent way thanks to professors, researchers and students.

Currently, due to the impact caused as a consequence of the virtuality of teaching and learning motivated by the COVID-19 pandemic, at a global level, the interest in the quality of teaching in universities with the support of ICTs is growing and is somehow related to the incorporation of Web 2. 0 as a didactic resource that promotes a new vision of teaching related on the one hand with the role of the student and the protagonism that he/she acquires during the teaching-learning process, and on the other hand, with the new challenges for the teacher in his/her way of teaching inside and outside the university classrooms in the times of pandemic that has been faced (Molina and Iglesias, 2014; Revelo, 2017).

Precisely, one of these challenges is the ongoing training of university teachers in digital competencies (Revelo-Rosero, Revuelta-Domínguez and González-Pérez, 2018) that allow them to integrate web 2. 0 tools as an educational innovation in the classroom (Acosta-Bayas and Valencia-Núñez, 2022), improve their pedagogical practice, and develop a digital culture through the creation of virtual learning environments, these being understood as "spaces organized for the purpose of achieving learning and that for this to take place requires certain components already indicated: a pedagogical function (...), the appropriate technology (...) and organizational aspects (...)" (Salinas, 2004, p. 2).

Web 2.0 is nowadays considered an essential resource for improving the quality of higher education. In this sense, the role of teachers is one of the most important factors to involve students in their own learning (Figueiredo, Godejord, Rodrigues, & Gozález-Pérez, 2016). Therefore, it is essential that universities provide the facilities and access to web 2.0 tools to incorporate them into university educational practice, providing it with infrastructure and technological resources and internet connection; ongoing teacher training that allows leaving aside traditional teaching methodologies to generate innovative pedagogical dynamization in the classroom with ICT (Revelo-Rosero, 2017).

In this context of change, due to the impact caused as a consequence of the virtuality of teaching and learning motivated by the COVID-19 pandemic, the quality of university teaching constitutes a strategic priority for higher education institutions not only in Ecuador, but worldwide.

On the other hand, the challenges and demands to which higher education institutions must respond today determine the relevance of some factors, if quality education that addresses the complexity of today's society is to be achieved (González-Pérez and De Pablos, 2015). Consequently, "the increasing ubiquity of access to the Web, and the variety of devices that allow us to interact with it, have made it possible for students to choose the tools and services that best suit their needs, providing a means to personalize the learning experience" (Torres-Kompen et al., 2019, p. 194).

The relevance of this research lies in the fact that, in Ecuador there are no conclusive studies on digital training in relation to web 2.0 as a tool for the teaching-learning process in university teaching in times of COVID-19 pandemic. One of the limitations, and perhaps the greatest and most difficult to overcome, is that this research does not deal exclusively with the continuing education of teachers with respect to the use of web 2.0 as a tool for teaching in higher education. The main reason is perhaps due to the extensive and at the same time limited amount of existing information on this topic or the continuous evolution of ICT and its various educational uses..

3. Methods and materials

The research design is of a descriptive non-experimental type with a quantitative approach which, being a formal, objective and systematic process, allowed obtaining quantifiable information on a phenomenon investigated in numerical form, by using statistical tests it was possible to describe, explain and prove the questions raised in the research (Bisquerra-Alzina, 2004).

The surveyed population included 120 teachers from universities in Quito, Guayaquil and Cuenca: 77 (64.17%) belonged to universities in Quito, 30 (25.00%) in Guayaquil and 13 (10.83%) in Cuenca and answered questions about the use of Web 2.0 as a tool for the development of university teaching, due to the impact caused as a result of the virtuality of teaching and learning motivated by the COVID-19 pandemic. The teachers were selected by probability convenience sampling, therefore, no statistical formula was used to calculate the representative sample of the population. "Probability samples are essential in cross-sectional research designs, both descriptive and correlational-causal" (Hernández-Sampieri et al., 2010, p. 177). Given the characteristics of the research, all elements of the population have an equal probability of being chosen.

Table 1, which summarizes the total sample classified by city, frequency and percentage of male and female participants, is shown below.

		Frequency	Percentage	Valid percentage	Acumulated percentage
Valid	Quito	77	64.17	64.17	64.17
	Guayaquil	30	25.00	25.00	89.17
	Cuenca	13	10.83	10.83	100
	Total	120	100	100	

Table 1. Sample

In relation to the proposed objective, the following research questions were posed: Does the level of teacher training received on Web 2.0 as a tool for university teaching influence the teaching-learning process, due to the impact caused by the COVID-19 pandemic? and Does the level of teacher training and knowledge on the use of Web 2.0 as a tool for university teaching improve the teaching-learning process?

3.1 Instrument for data collection

For the collection of information, the survey technique was applied, with the application of a questionnaire of questions, duly validated and statistically verified, through the Cronbach's Alpha reliability coefficient of 0.862 (Alpha Std. = 0.864) by using the SPSS 22.0

statistical program, which is considered very high, according to the scale proposed by Ruiz-Bolívar (1998), (2002) to interpret the reliability coefficient. According to this scale, indices higher than 0.81 are considered as a very high level of reliability. Therefore, it can be affirmed that the questionnaire designed for the present research was valid and reliable to be applied to the population under study; it was addressed to 120 teachers from universities in Quito, Guayaquil and Cuenca.

For the data reception and analysis procedure, the questionnaire was elaborated in Google forms and the teachers were contacted through e-mails. Each teacher contacted responded online anonymously, freely and voluntarily, which guaranteed the results and conclusions generated from the information collected in this research.

For the statistical analysis and interpretation of the data collected through the questionnaire prepared for this purpose, the quantitative descriptive method of frequencies and percentages of each of the variables of this study was used. The analysis was complemented by means of the cross-table procedure, the use of the chi-square statistical test and the contingency coefficient with a confidence level of 95% to determine the statistical relationship that exists between the variables crossed. The SPSS statistical program for Windows, version 22.0, was used.

4. Results

The answer to the research question: Does the level of teacher training received on the use of web 20 as a tool for university teaching influence the teaching-learning process, due to the impact caused by the COVID-19 pandemic? presents a range of results among the participants.

The study sample is 120 university teachers from Quito, Guayaquil and Cuenca, of which two thirds (64.17%) belong to universities in Quito, followed by Guayaquil (25.00%) and Cuenca (10.83%).

The general profile of the respondents shows a male population with 58.34% (n = 70) versus 41.66% (n = 50). Regarding the level of academic training, it can be observed that 9.17% (n = 11) have a doctorate (PhD), 88.33% (n = 106) have a Master's degree and 2.5% (n = 3) have a diploma, which shows that the largest number of university teachers surveyed have a Master's degree and there are a small number of PhDs. In sum, it can be observed that university professors are interested in keeping themselves up to date, in accordance with Art. 6, paragraph h) of the LOES in force in Ecuador.

Regarding age, it can be highlighted that the surveyed population does not belong to the "Net Generation" (Tapscott, 2010) or digital natives (Prensky, 2001), terms used to label the generation born after 1980, those people whose "learning preferences tend towards teamwork, experiential activities, and the use of technology" (Cabra Torres and Marciales Vivas, 2009). In Table 2, it can be seen that 58.34% (n = 70) of the sample analyzed in this research is older than 40 years, compared to 41.66% (n = 50) who are younger than 40 years, which shows that most teachers are not digital natives and there is a significant number that could be considered as digital natives and, therefore, in some way the incursion into the web 2.0 for many of them is a great challenge" (Cabra-Torres and Marciales-Vivas, 2009). Researchers such as Wodzicki et al. (2012), Bennett et al. (2008) and De la Hoz, Acevedo and Torres (2015), infer that digital natives have developed skills and abilities that go hand in hand with the digital evolution of web 2.0 and the Internet. This makes that there are differences between other previous generations in the sense of facing other difficulties

when implementing changes in their ways of teaching and learning with the use of technology (Revelo-Rosero and Carrillo-Puga, 2018, p. 81).

Age	N	%
21 – 30	12	10.00
31 – 40	38	31.67
41 – 50	35	29.17
51 – 60	29	24.17
Mas de 60	6	5.00
Total	120	100

Table 2. Age range of the studied sample

Table 3 summarizes the items (9 questions) related to the level of training received on the use of web 2.0 as a tool for university teaching in the teaching-learning process, due to the impact caused by the COVID-19 pandemic, 3.3% (n = 4) consider it to be very high, 35.00% (n = 42) high, 55.00% (66) medium and 6.67% (n = 8) low. From the results obtained, 94.17% (n = 113) of the teachers surveyed consider that it is necessary to receive ongoing training on the use and application of web 2.0 tools as educational innovations and good teaching practices; 93.33% (n = 112) affirm that the use of web 2. 0 as a tool for university teaching generates changes and innovations in the teaching-learning process, compared to 64.17% (n = 77) who affirm that the level of teacher training on the use of web 2.0 as tools incorporated in their universities' platforms for university teaching does not generate major changes.

Consequently, the overall mean value of the level of teacher training received for the use of web 2.0 as a tool for university teaching is 2.34, which shows that, in general terms, the university teachers surveyed state that it is necessary to receive ongoing training on the use of web 2.0. This result is contrasted with the calculated Chi-square value of 62.379 with a confidence level of 95% and 3 degrees of freedom; and the value of p = 0.000 shows that the degree of influence of the teacher training received at their university on the use of Web 2.0 as a tool related to the teaching-learning process is medium.

Level	n	%	Media (IC 95%)	Desv. Stand.	Chi-square test (Significance)		
					Chi ^{2}	Gl	P
Low	8	6.67%					
Medium	66	55,00%					
High	42	35.00%	2.34	0.662	62.379	3	*0.000
Very High	4	3.33%					

* = Highly significant (p < 0,05)

Level of teacher training in the use of Web 2.0 as a tool for university teaching (n = 120).)

To establish whether there is a relationship between the variables age and teacher training in the use of Web 2.0 as a tool to innovate the teaching-learning process in university

teaching, as well as the results of the Chi-square tests and the contingency coefficient, Table 4 highlights that 50. 0% (n = 13) of the sample aged between 31 - 40 years consider that their training to innovate the teaching-learning process in university teaching with Web 2.0 tools is very high, followed by 47.06% (n = 16) of respondents aged between 51 - 60 years who state that their training to innovate in university teaching with Web 2.0 as tools to improve the teaching-learning process is low.

These results coincide with studies conducted by Morales, Trujillo, and Raso (2015); Suárez, Almerich, Gallardo, and Aliaga (2013); Vera, Torres, and Martínez (2014), who affirm that younger teachers perceive greater mastery of ICT to innovate in the teaching-learning process. On the contrary, they emphasize that the older the teachers' age, the lesser their use.

In addition, the results show "the need to pay special attention to the training of the group of teachers older than 50 years, to develop training programs designed exclusively for this teaching profile and thus make them feel motivated in their teaching-learning tasks considering that they are holders of valuable experience for the training of students within the institution" (Vera, Torres, & Martínez, 2014, p. 151).

On the other hand, it is observed that the calculated Chi-square value of 10.360 is lower than the tabulated Pearson's Chi-square value of 16.919 with a confidence level of 95% and 9 degrees of freedom; and, the value of $p = 0.322$, being $p > 0.05$. Therefore, it can be affirmed that the age of teachers is not an indication that teachers use Web 2.0 tools to innovate their teaching. When analyzing the value of the contingency coefficient, $C = 0.335$, it can be concluded that the relationship between the variables is good.

AGE	Low 28,0% (n=34)		Medium 23,2% (n=28)		High 26,0% (n=32)		Very high 22,0% (n=26)		Chi-square test (Significance)			
	n	%	N	%	n	%	N	%	Chi ^{2}	gl	p	Contingency Coefficient
21 – 40	1	2.9%	4	14,3%	6	18,8%	1	3,8%				
31 – 40	8	23.5%	9	32,1%	8	25,0%	13	50,0%				
41 – 50	7	20.6%	8	28,6%	11	34,4%	9	34,6%	10,36	9	0,322	*NS 0,335
51 – 60	16	47.1%	5	17,9%	6	18,8%	2	7,7%				
61 – 70	2	5.9%	2	7,1%	1	3,1%	1	3,8%				

* NS = Not significant (p > 0,05)

Table 4. Relationship between age and level of teacher training in the use of web 2.0 as a tool for university teaching (n = 120)

In relation to the item that states Have you received teacher training on the use of web 2.0 for university teaching in order to improve the teaching-learning process? the results agree with those of Área (2010), González-Pérez (2017), Revelo-Rosero (2017), among others, who state that teacher training for the integration and use of web 2.0 as a tool in higher education for educational purposes is still low, and educational practices at the university teaching level do not represent an advance, innovation or improvement with respect to traditional practices. Many teachers used web 2.0 as a tool to support existing methodologies without representing a substantive alteration of teaching principles and methods.

This should lead us to reflect on what mechanisms can help to dynamize pedagogical applications supported by Web 2.0 to make the teaching-learning process more successful. These statements coincide with the results of Sanabria (2006), and Rangel and Peñalosa (2013), (González-Pérez, 2017), Revelo-Rosero (2017), among others; who sustain the importance of integrating web 2.0 as a process of change and innovation in university teaching.

Table 5 shows that 65.00% (n = 78) of the sample claims to have received teacher training on the use of web 2.0 for university teaching to improve the teaching-learning process, compared to 35.00% (n = 42) who claim NO. Therefore, there is a high percentage that has teaching training on the use of web 2.0 as a tool related to teaching and learning in higher education, so that, it is a very significant majority for $p < 0.05$ (Chi = 12.294 at 95% confidence level; 2 gl, $p < 0.006$). From the value of the contingency coefficient, C = 0.352, it can be concluded that the relationship between the variables is very good.

Teacher Training	N	%	Chi-square test (Significance)			
			Chi 2	gl	P	Contingency Coefficient
YES	78	65.00%	12,294	2	0.006 * P < 0.05	0.352
NO	42	35.00%				

* = Highly significant (p < 0.05)

Table 5. Teacher training on the use of Web 2.0 (n = 120).)

Of the 65.00% (n = 78) of professors who claim to have received teacher training on the use of Web 2.0 for university teaching to improve the teaching-learning process, 56.41% (n = 44) have been trained in the use of Web 2.0 tools through training received at the university where they work. 0 tools through training received at the university where they work, followed by 50.0% (n = 39) who have been trained autonomously (self-taught) and 14.10% (n = 11) who have done so through courses offered by private institutions dedicated to this type of training. Table 6 shows that half of the teachers have received training on the use of Web 2.0 as tools for educational innovation to improve teaching at their university; the rest have been trained on their own, either autonomously (self-taught) or through private training courses. It is important to note that some teachers have been trained in more than one way.

Ítems	n	%
By university training	44	56.41
Autonomously (self-taught)	39	50.00
By private training courses	11	14.10
Other	0	0.0

Table 6. Teacher training received on the use of web 2.0 to improve the teaching-learning process (n = 78)

Finally, to answer the second research question: Does the level of teacher training and knowledge on the use of web 2.0 as a tool for university teaching improve the teaching-

learning process, the survey asked which of the following web 2.0 tools do you use most frequently in the teaching-learning process?

The results obtained show that the influence of the teacher training received on the use of web 2.0 as a tool for university teaching related to the teaching-learning process is not always a decisive factor in the teaching staff of the sample studied, since 65. 00% (78) who use it to some extent do so to create virtual learning environments enriched by ICT for the teaching-learning process inside and outside the classroom, compared to 35.00% (n=42) of teachers who say that they do know some of the Web 2.0 tools but are unaware of the pedagogical advantages of their use.

The results are consistent with studies by Arnao and Gamonal (2016), Basurto, (2015); Boza and Conde, (2016); Drulă, (2015); González, Lleixà and Espuny, (2016); Karasavvidis, (2010); Molina, Valencia and Suárez, (2016); Revelo-Rosero (2017); Zheng, Niiya and Warschauer, (2015), which show that the integration of web 2. 0 tools to the university educational process are positive for teaching and learning. Since, they are communicative factors that promote open and flexible formative processes, facilitate collaborative work, construction and development of knowledge within a learning community.

In this sense, the uses that can be made of web 2.0 tools are diverse, which facilitates a high degree of interdisciplinarity for education since they allow breaking traditional teaching-learning schemes inside and outside the university classroom (Revelo-Rosero, 2017). Web 2. 0 are tools of the new Web generation that contains a wide range of more interactive digital applications, which is mainly entrenched in learning management platforms (LMS), Moodle, Zoom, Microsoft Teams, Canvas, Google Meet, Google Classroom, among others; which offer great potential in the participation of teachers and students in virtual learning communities, social networks, social and collaborative tools to promote reflection, creation, empowerment and self-development, but also limitations, therefore, it is necessary to be aware of them to make an appropriate use in teaching and offer students meaningful learning processes.

Table 7 shows data on the use of platforms to create virtual learning environments (virtual classrooms with synchronous and asynchronous resources), 79.2% (n = 95) of the sample uses the Moodle platform, 60.8% (n = 73) the LMS learning management platforms, compared to 30.0% (n = 36) who use Canvas and 26.7% (n = 32) Google Classroom. Regarding platforms with synchronous resources most used by university teachers, 70.8% (n = 85) use Zoom, 63.3% (n = 76) Microsoft Teams, compared to 23.3% (n = 28) who use Google Meet, among others; to create virtual learning environments, since these, by their nature, are characterized mainly by being more interactive, dynamic, participatory, allow the development of autonomous and collaborative work between teachers and students.

Use	Platforms (synchronous and asynchronous resources)				Platforms (synchronous resources)		
	LMS	Moodle	Canvas	Google Classroom	Zoom	Microsoft Teams	Google Meet
Yes	73	95	36	32	85	76	28
%	60.8%	79.2%	30.0%	26.7%	70.8%	63.3%	23.3%
No	47	25	84	88	35	44	92
%	39.2%	20.8%	70.0%	73.3%	29.2%	36.7%	76.7%

Table 7. Use of platforms to create virtual learning environments (n = 120)

Table 8 shows the web 2.0 tools most used by the teachers who participated in the survey, 90% (n = 108) use social networks such as Whatsapp and Facebook with 72.55% (n = 87), followed by blogs with 45.8% (n = 55); and, to a lesser extent Twitter (36.7%) followed by wikis (29.2%). This shows that there is a large majority of teachers who know or use blogs and social networks as educational innovation and good educational practices (Revelo, Revuelta and González-Pérez, 2016) in university teaching to improve the teaching-learning process.

Use	Blogs	Wikis	Social Networks			
			WhatsApp	Facebook	Instagram	Twitter
Si	55	35	108	87	81	44
%	45.8%	29.2%	90.0%	72.5%	67.5%	36.7%
No	65	85	12	33	39	76
%	54.2%	70.8%	10.0%	27.5%	32.5%	63.3%

Table 8. Use of Web 2.0 tools: blogs, wikis and social networks (n = 120)

Table 9 shows that, of the multimedia content tools, 81.7% (n = 98) of the sample use YouTube, followed by 63.3% (n = 76) Podcast and 40.8% (n = 30) PowToon and to a lesser extent Slideshare and Prezi. Almost all the teachers surveyed were unaware of the usefulness of social bookmarking in university teaching. As for collaborative web 2.0 tools, the most used are Google Drive (65.8%), Dropbox (56.7%) and to a lesser extent Microsoft's OneDrive (30.8%).

Multimedia Contents					Collaboration		
Podcast	YouTube	Slideshare	Prezi	PowToon	Google Drive	Dropbox	OneDrive
76	98	38	30	49	79	68	37
63.3%	81.7%	31.7%	25.0%	40.8%	65.8%	56.7%	30.8%
44	22	82	90	71	41	52	83
36.7%	18.3%	68.3%	75.0%	59.2%	34.2%	43.3%	69.2%

Table 9. Use of Web 2.0 tools: multimedia content and collaboration (n = 120)

5. Discussion and conclusions

The study shows that the teaching staff showed, in general, positive attitudes towards the use of Web 2.0 as a tool for university teaching in the teaching-learning process.

The level of teacher training received on the use of web 2.0 as a tool to innovate the teaching-learning process in university teaching is average, with the youngest teachers having positive attitudes towards change in order to innovate. On the other hand, it is essential to develop teacher training programs on the use of ICT and digital skills for older teachers who put resistance to active teaching methodologies supported by the use of technologies.

Therefore, the ongoing training of university teachers in the integration and use of ICT for educational purposes remains one of the limitations, and perhaps the greatest or most difficult to overcome for the moment. Therefore, it is important to emphasize the idea of promoting an institutional policy that promotes teacher training in the use and application

of ICT in university classrooms, with the aim of improving the quality of higher education through a robust technological training plan to adapt university teaching to the needs of a networked society.

It is true that this study has not identified strategies for the use of Web 2.0 for university teaching in the teaching-learning process. The professors who use web 2.0 tools for academic purposes have a low frequency of use, reasons that lead to suggest the need to implement institutional policies that allow the implementation of these tools to enhance the quality of teaching in their professorships. To date, there are few serious reflections on how to relate the use of Web 2.0 as an innovation tool for university teaching in the teaching-learning process. Nor is there a clear position on how to use these tools to improve the quality of higher education, in the sense of increasing relational capital, knowledge flows, and institutional identity.

In the study conducted, it is highlighted that the web 2.0 tools most used by university teachers are the learning management platforms (LMS), Moodle, Canvas, Google Classroom (virtual classrooms with synchronous and asynchronous resources); platforms such as Zoom, Microsoft Teams, Google Meet (with synchronic resources), among others; the same that have allowed them to create virtual learning environments due to the impact caused by the COVID-19 pandemic, to develop autonomous and collaborative work with their students.

Regarding the external web 2.0 tools most used by the teachers in the study sample, there are WhatsApp, YouTube, Facebook, Podcast, Dropbox, Google Drive and Blogs. However, the LMS platforms of some universities have implemented some web 2.0 tools such as videoconferencing system, virtual classrooms, forums, chats, e-mail, messaging, evaluation, among others, to develop their teaching work. However, some universities do not have a permanent plan for teacher training in the use of technological tools in the teaching-learning environment.

This leads us to propose some lines of action to improve the quality of education with the support of ICT as a didactic tool in the teaching-learning processes in accordance with those of other authors (Krumsvik, 2008 and (2014); (Pozos Perez, 2009); (Ala-Mutka, 2011); (Carrera Farrán and Coiduras Rodríguez, 2012); (Ferrari, 2013); (Pérez Escoda and Rodríguez Conde, 2014); (2016); (Cabero-Almenara and Osuna, 2015); (Pérez Díaz, 2016), which can be the object of study at present, in the specific field of HEIs in Ecuador.

- ✓ To take advantage of specific virtual didactic-pedagogical strategies for the use of web 2.0 as an educational innovation to create meaningful learning in students.
- ✓ Develop teacher training strategies for the practical use of web 2.0 as an innovation in university teaching.
- ✓ Generate positive attitudes, change mentality and meaningful learning.
- ✓ To study the educational applications of the Internet (creation and experimentation of virtual learning environments, virtual educational communities, etc.) in the teaching-learning process in university teaching and, specifically, in teacher training for the development of pedagogical and digital competencies that allow for innovation in higher education in HEIs in Ecuador.
- ✓ To analyze the level or degree of development, integration and satisfaction that teachers and students show to the new contexts of training, use and innovation of digital competences in university teaching.

To conclude, Fainholc, Nervi, Romero, and Halal (2015); Rosario and Vásquez (2012); Sancho, Ornellas, Sánchez, and Bosco (2008); Vera, Torres, and Martínez (2014), Revelo (2017), among other authors, highlight in their studies that the challenges of the knowledge society make it necessary to incorporate the use of ICT in teacher training for the exercise of new digital competencies such as technological, communicative, informational, and learning competencies whose application in the educational environment facilitate three central actions such as communication, construction, and research. According to these authors, these competencies imply ongoing teacher training on the use of web 2.0 as a tool to innovate the teaching-learning process in university teaching, "based on a critical understanding that allows teachers to integrate them into a didactic sequence aimed at achieving pedagogical objectives" (Vera, Torres, & Martínez, 2014, p. 151).

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Implementation of parental control applications for Internet use as technological tools to support academic performance

Implementación de aplicativos de control parental en el uso de internet como herramientas tecnológicas de apoyo para el desempeño académico

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Abstract

The objective of this study was to diagnose the parental control that the representatives of the Unidad Educativa Fiscal (UEF) "Tarqui" of the city of Manta, province of Manabí in Ecuador perform on the content that minors handle on the Internet. In addition, the feasibility of implementing a technological tool to facilitate this control was studied. The methodology applied had a qualitative-quantitative, exploratory and descriptive approach; it was applied to a population of 140 representatives and 140 students, and 40 teachers of the General Unified High School level were also considered. The results obtained allowed us to identify that despite the precautions or actions that the representatives carry out for the monitoring of internet activities by the minors, there is a need for an adequate tool through the use of computer programs or mobile applications that allow carrying out this activity in real time, responding to the time in which we live where every day it is more common for minors to access a device with connectivity; taking into account that parental interaction to ensure a good use of the internet may be of support in the academic performance of students and therefore positively influence their performance.

Keywords

Parental control, students, tools, Internet, technology, technology

Resumen

El presente estudio tuvo como objetivo diagnosticar el control parental que los representantes de la Unidad Educativa Fiscal (UEF) "Tarqui" de la ciudad de Manta, provincia de Manabí en Ecuador realizan sobre el contenido que los menores manejan en Internet. Además, se estudió la viabilidad de implementar una herramienta tecnológica para facilitar este control. La metodología aplicada tuvo un enfoque cualicuantitativo, de tipo exploratoria y descriptiva; ésta se aplicó a una población de 140 representantes y 140 estudiantes, también se consideró a 40 docentes del nivel de Bachillerato General Unificado. Los resultados obtenidos permitieron identificar que a pesar de las precauciones o acciones que los representantes realizan para el monitoreo de las actividades en internet por parte de los menores, existe la necesidad de una herramienta adecuada a través del uso de programas informáticos o aplicaciones móviles que permita llevar a cabo esta actividad en tiempo real, respondiendo al tiempo en que vivimos donde cada día es más común que los menores accedan a un dispositivo con conectividad; tomando en cuenta que, la interacción parental para procurar un buen uso del internet podrá ser de apoyo en el desempeño académico de los estudiantes y por ende influir positivamente en su rendimiento.

Palabras clave

Control parental, estudiantes, herramientas, Internet, tecnología

1. Introduction

For some time now, the use of the Internet has become an active part of the training process of students, especially in the current scenario where the pandemic caused by the COVID-19 disease has forced education to take place in virtual environments where the Internet has practically become the indispensable tool to be able to continue the educational process in some way. In this context, Internet content has become a concern for adults in charge of adolescents, because it is so diverse, and inevitably contains malicious information, even implying a degree of danger that can negatively influence the education of our young people. Regarding this reflection González-González and Hernández-Hernández (2017) indicate:

> The Internet is a very useful tool when it comes to communicating and obtaining information quickly. It offers us countless resources to establish social relationships, through e-mails, chats, social networks, etc., but it also has negative aspects derived from a bad use that must be taken into account.

> Children grow up in a globalized world in which with a single click they can access a multitude of spaces, pages, contents, etc. and, therefore, they can be exposed to these negative aspects if they misuse the Internet and social networks (p. 2).

The deficient capacity of adolescents to discern between information, the lack of knowledge of adults of the content preferred by young people, web pages or sites that have no ethics in the dissemination of malicious content; the economic interest of individuals or organizations (social networks, online games, various entertainment pages) interested in the large flow of information that can be handled rather than in the content of the same,

have made the Internet a major obstacle that directly interferes in the formative process, teaching-learning and values in young people of this era.

Another drawback detected in the handling of the Internet by minors is the use that adults make of the information and the different tools on the network, as they often become an example to follow or a point of reference for young people. In this regard, Sanchez-Valle et al. (2017) point out that:

> it seems to be demonstrated that parental style influences children's use of the Internet. Valcket, Bonte, Wever and Rots (2010) distinguished different parental styles according to the control exercised by parents. They found that the way in which children approach technology is related to parental Internet use, attitude and Internet experience, and defined parental style, parental Internet behavior and educational level as the variables most predictive of children's Internet use at home (p. 3).

The problems described above reach the educational level in the form of low quality homework, with copied content and irrelevant or unrelated information, cyber bullying and situations of violation of rights among peers, influence of customs, behaviors, cultural and psychological manifestations detrimental to the intellectual development of students. In fact, this greatly hinders the academic task, a problem to which the UEF Tarqui in the city of Manta is no stranger.

This research sought through the analysis of the problem that currently involves the use of the Internet in students, to consolidate the necessary information to establish the bases that allow from an active proposal to determine the relevance of implementing technological tools for parental control provided by technology today to address an obvious problem and from the academy to collaborate jointly with the role of parents or representatives; considering that these are key players to successfully carry out the teaching and learning process.

The article is structured as follows: literature review, methodology, discussion and results, conclusion and bibliography.

2. Literature review

Internet content has become a concern for adults in charge of the education of children and adolescents; faced with this problem, the need to bring parental control to the technological field appears, which implies the emergence of different ways of exercising this control ranging from domestic rules at home (not having passwords on devices, handing over devices at a certain time, surprise review of devices, etc.) to different technological tools that seek to help with this new situation in the upbringing and development of children and young people.

Sanchez-Valle et al. (2017) in a study entitled "The influence of parents in the acquisition of critical skills on the Internet", where from a representative sample of 765 families from the Community of Madrid selected according to the level of education, typology of the center and income level of the district distinguished different parental styles depending on the control exercised by parents. This study concluded, among other things, that:

> Parental control style is crucial in the empowerment of minors in the acquisition of critical skills, coinciding with previous works that had highlighted the importance of parental mediation in the adoption of the

Internet (Valcket & al., 2010; Ihmeideh & Shawareb, 2014; Nikken & Schols, 2015). The range of styles associated with the use of the interactive medium highlights the importance of providing opportunities for minors to grow and acquire skills in the medium (p. 9).

On the other hand, it is also evident that the use that young people give to the Internet is more oriented to social than academic activities, Rodriguez et al. (2019) in their final report submitted as a requirement to qualify for the title of Specialist in Administrative Law at the University of Santo Tomas in Colombia, entitled "Parental cybercontrol: a suitable mechanism to safeguard the best interests of the child, against online risks" states:

According to the parents surveyed, the most common social networking sites in which they think their children participate include: Facebook 80%, YouTube 46%, WhatsApp 40%, Instagram 34%, Twitter 30%, Skype 29% and Snapchat 19% (...) As can be seen from the above survey, the fact that minors have an interaction with social networks such as Facebook of up to 80%, highlights the exposed that in many cases can be seen, being vulnerable to countless computer risks on the web." (p. 16).

Coronel-Rojas (2018) at the Colegio Fundación Liceo Internacional in the city of Quito, conducted a descriptive study with a quantitative approach. The sample consisted of 20 parents of students to whom a survey-type instrument was applied, with which technological knowledge and knowledge about parental control tools were diagnosed. The results of the diagnosis showed that at the beginning most of the parents had no idea about the risks that their children run with the use of the Internet. After a training session conducted by the author, 70% considered that it represents a high risk and 100% expressed interest in learning about parental control tools.

2.1 Internet and education

Undoubtedly the field of education has been one of the fields influenced by the Internet, with the result that at the present time the teaching-learning process cannot be conceived without the presence of this universal tool, despite the fact that not everyone has access to it. With the large number of applications and uses given to the Internet, ranging from the reading of different texts to specialized programs on countless topics, it can be said that it has become a resource for education in the 21st century. In this regard, Selwyn (2013) textually states that:

For many analysts, the Internet has always been an intrinsically educational tool. In fact, many would argue that the main characteristics of the Internet largely coincide with the central concerns of education. For example, both the Internet and education are about information exchange, communication, and knowledge creation (p. 197).

It is important in this section to make a special mention of the role of the Internet in education during the health emergency that the world is currently experiencing due to the COVID-19 pandemic; since thanks to this tool, it was possible to a greater or lesser extent to continue with the teaching and learning processes. In relation to this statement, de Santiago (2020) in the Cepal - Unesco report on education in times of the COVID-19 pandemic states:

given that most countries have opted for the continuity of the educational process through online resources, the use of the Internet offers a unique opportunity: the amount of pedagogical and knowledge resources available, as well as the different communication tools provide privileged

platforms to bring the school and educational processes closer to homes and students in conditions of confinement (p. 5).

2.2 Students and internet

Considering the direct influence of the Internet in education, it is inherent that those influenced to a greater degree are the students, who not only make use of this tool for their learning process, but for them it has become an almost essential input for the development of many of their activities, especially socializing. In this regard, Carrazco et al. (2018) indicate: "young people seem to be developing new ways of communicating, interacting, learning and searching for information... the Internet has come to occupy a central place in the lives of adolescents as a means of information and communication accessible at all times..." (p. 4).

There are several research regarding the impact of the Internet on students' academic performance. Despite the great advances of this tool, many authors point to the negative effect of its use on the teaching-learning process.

Reinforcing this statement Balteiro (2015) in a study made from a group of 41 students indicates the following.:

> A total of 85.36% (35 subjects) confirmed our hypothesis about computers and other tools with Internet access as distracting elements in the teaching-learning process by stating that they concentrate less on the teacher's explanations and tasks to be performed and, therefore, are more distracted. However, only 7.31% (3 subjects) indicated that their level of concentration is not affected by the use or not of technologies, and 7.31% (3 subjects) did not answer (p. 10).

The same author concludes:

> As we have just seen, there are not all advantages when introducing ICTs in the classroom, as teachers often face problems of attention and dispersion on the part of the students at certain moments of the teaching-learning process.... In fact, as we have already pointed out, while academic results are higher in the traditional group where computer use is not allowed, since they focus more on instruction, students with access to technological tools are more distracted, concentrate less and learn less or worse than the former... (pp. 12-13).

Another impact that some researchers consider negative of the Internet in education is the use and abuse of social networks. Some authors agree that the excessive use of social networks takes up too much of their time, affecting the time they should devote to education. Many young people even replace or do not perform any physical activity because they are aware of the information circulating on these networks (Arab, 2015) and (Plaza, 2016).

2.3 Parental control

Parental control is a term coined by authors since the 1960s and in general terms refers to the measures that parents have for their children in different contexts. In the technological field, the term has been adapted to the monitoring that adults carry out on the content that minors handle on the Internet.

According to Carles (2014) "a parental control system is a tool that allows parents to control and/or limit the content that minors can use on the computer and can access the internet." (p.12).

Additional Blasco (2018) indicates.:

> Parental involvement and academic performance, measured simultaneously, are positively and significantly correlated. This means that the higher the parental involvement, the higher the child's performance at school. The evidence for this association is strong and is based on a large and consistent body of academic literature: all meta-analyses on parental involvement agree in estimating a positive and statistically significant association... (p. 6).

Based on the above, it is acceptable to indicate that the use of a parental control tool on Internet content is a strategy that allows representatives to show what their children are doing on the network and therefore direct them towards the proper use of this resource in favor of their academic performance.

3. Methodology

This study is a research with a qualitative-quantitative approach, since, starting from the diagnosis of the problem posed, the implementation of an active tool that responds to the needs detected is analyzed, considering the environment and our reality. The type of research is exploratory, taking into account that the topic to be investigated has been little approached at the local level and descriptive due to the use of instruments that allowed the collection of information and the deepening of the proposed problem.

The main population consisted of 140 family representatives corresponding to the first year of BGU of the U.E. "Tarqui". Additionally, we considered applying questionnaires to the teachers and students of the institution to obtain information about the topic to be investigated from these actors of the educational community; considering that, in the case of teachers, they could be indirect beneficiaries of the implementation of this project, while the students will be directly involved in it. For the survey of teachers, a population of 40 teachers was considered; in relation to students, the same number of representatives was considered, i.e., 140 students.

The research method is analytical and deductive; starting from the analysis of general or globalized data, information will be selected to justify the feasibility of implementing technological tools for parental control in the local context. For data collection, bibliographic techniques will be applied with the purpose of locating us from a documented perspective in time and space on the convenience of the tool that can be implemented; likewise, data collection techniques were applied with interviews and questionnaires to actors of the educational community, using different virtual or digital platforms (zoom, Teams, Google forms) to investigate the degree of knowledge they have about this type of tools and the advantage of their use to guide students in the responsible management of Internet content. The information was processed by means of statistical techniques that allowed the presentation of the analysis carried out and the discussion of results in the light of the scientific information presented.

4. Discussion and results

4.1 Interviews

With the purpose of knowing from an open criterion the opinion about Internet contents and parental control over them, an interview was conducted with different actors of the educational community: directors, teachers, and representatives. The table below presents the results and their discussion:

Questions	Interviewee's opinion
1. What is your role within the educational community of UE "Tarqui"?	Vice-rector of the Baccalaureate level and chemistry teacher in the third year of BGU.
	Teacher with permanent appointment in the first year of high school in the afternoon.
	Representative (parent) of the first year of high school, parallel "B" of the morning session.
2. What is your opinion regarding the use of the Internet for the development of academic activities by our students?	Vice Chancellor: - Important, positive and good tool, depending on the use students make of it; since if used inappropriately it becomes a distracting element and therefore brings inconveniences. Teacher: - Valuable and important tool. - Not all students have access to the Internet - Those who have access, not all use it for academic activities. Representative: - It's fine for things students need to know.
3. From your role, can you refer to any situation with children (students or children) in which the use of the Internet and its various applications have negatively influenced their academic performance?	Vice Chancellor: - Specifically I have not evidenced any negative situation; however, it indicates that there are indeed students who misuse it. Teacher: - Yes, young people who only spend time on social networks, on their mobile devices they do have them and even in the classroom labs. Representative: - She has 2 children, with the older one there have been no inconveniences. With the youngest son, there have been some problems due to the excessive time he spends on Internet games, which she is concerned about and dislikes.

4. If a parental control tool could be implemented at UE "Tarqui" to control the contents that children use on the Internet: Do you think it would be useful? Why?	**Vice Chancellor:** - Agrees 100% so that, in case of any anomaly in the use of the Internet, with proper control to be able to act in time. **Teacher:** - Yes, because it would be the beginning of applying technology in favor of parents. **Representative:** - Yes they would be helpful and I would be willing to use it.

Table 1. Results of interviews with stakeholders in the educational community

The opinions expressed show that there is a general consensus among managers, teachers and representatives on the importance of the Internet in academic activities.

> Given the high degree of integration of the Internet in family life, in some families parents went from an initial stage of ignorance, alertness and caution, to a stage in which the Internet is recognized as a necessary element for daily activities. In general, parents classify the Internet as a useful and necessary tool in their children's lives, which encourages children to access its sites more easily, integrating it more and more into their lives. (Barreras, 2013, pp. 141-142).

The responses also highlighted the fact that some minors make inappropriate use of the Internet and there was clear support for the implementation of a parental control tool that allows interaction with the content that minors handle on the Internet to affect the protective role of adults as responsible more effectively for the activities carried out by minors; regarding this Tordi (2019) indicates.:

> ICTs have arrived to transform the social, family, legal and public reality. Children and adolescents develop in a digital world that may be unknown to adults, a situation that does not serve as an excuse for not assuming the duties that emanate from their parental responsibility... (pg. 14).

4.2 Questionnaires

Questionnaires were sent to representatives, teachers, and students, through which an exploratory study was carried out to determine the degree of information on parental control technological tools available to these actors in the educational community of the UEF "Tarqui" of Manta.

4.2.1 Questionnaire to representatives

The questionnaire was applied to 140 representatives, through 11 questions. It was designed in the Google Forms application. The table below shows the results obtained and their discussion.:

Questions	Response options	Frequency	Percentage
1. 1. Do you believe that in the teaching-learning process it is	Agree	94	67.10 %

necessary to use ICT to interact with students, considering that they are natives of the digital world??	Partially Agree	35	25.00 %
	Disagree	11	7.90 %
	Total	140	100.00 %
2. 2. Do you consider that students make responsible use of the Internet when applying it in their academic training?	Agree	84	60.00 %
	Partially Agree	45	32.10 %
	Disagree	11	7.90 %
	Total	140	100.00 %
3. 3. In which of the following options do you think students spend most of their time on the Internet??	Academic activities	71	50.70 %
	Social Networking	35	25.00 %
	Watch videos	11	7.90 %
	Online games	12	8.60 %
	Entrepreneurship and product promotion activities	13	2.10 %
	Other	8	5.70 %
	Total	140	100.00 %
4. From your role within the educational community, have you been able to evidence that the inappropriate use of the Internet by children has affected their academic performance?	Always	18	12.86 %
	Sometimes	75	53.57 %
	Rarely	29	20.71 %
	Never	18	12.86 %
	Totales	140	100.00 %

5. From your role within the educational community, have you been able to evidence that the inappropriate use of the Internet by children has affected their behavior?	Always		16	11.43 %
	Sometimes		66	47.15 %
	Rarely		36	25.71 %
	Never		22	15.71 %
		Total	140	100.00 %
6. Do you consider that adults are an example for children to follow in their use of the Internet?	Agree		95	67.86 %
	Partially Agree		40	28.57 %
	Disagree		5	3.57 %
		Totales	140	100.00 %
7. Do you consider that responsible adults exercise adequate control over the content that the best ones handle on the Internet?	Agree		105	75.00 %
	Partially Agree		30	21.40 %
	Disagree		5	3.60 %
		Total	140	100.00 %
8. Have you ever used a parental control technology tool?	Yes		69	49.30 %
	No		71	50.70 %
		Total	140	100.00 %
9. 1. Do you believe that the implementation of a parental control tool on the contents that children handle on the Internet can influence a better academic performance of students?	Agree		90	64.30 %
	Partially Agree		33	24.60 %
	Disagree		17	12.10 %
		Total	140	100.00 %

10. 10. Would you be willing to use a parental control tool that allows you to interact with the content that minors handle on the Internet?	Yes	117	83.60 %
	No	23	16.40 %
	Total	140	100.00 %
11. 11. If you are willing to use a parental control monitoring tool: What kind of reports would you like this tool to provide?	Report of pages browsed	39	27.86 %
	Browsing time	31	22.14 %
	Location	2	1.43 %
	All of the above	68	48.57 %
	Total	140	100.00 %

Table 2. Results of questionnaire applied to representatives

In question 1 of the questionnaire applied to representatives, the results reflect that for most of the respondents the use of ICT is necessary in the teaching and learning process. It can be inferred that the representatives assume the need to involve technology in the educational process as part of the training of their children, to provide them with tools that allow them to interact in this digital era, of which they are natives.

> Most parents know instinctively that the 21st century is different; they see the changes everywhere. What they really want is to be sure that their children are preparing well for their future lives and jobs. (Prensky, 2011, p. 45)

The results of question 2 show that 60% of the representatives trust the responsible use of the Internet by the students in their academic formation. However, the results of those who partially agree and those who do not agree add up to 40%, which can be considered as an important percentage of the uncertainty that parents or representatives have about the use of the Internet by minors. Considering that this survey was applied to representatives of first-year high school students ranging in age from 14 to 17 years old, it can be theorized that with increasing age it is more uncertain for the representatives to be sure about the responsible use of the Internet by students in their academic training; regarding this inference, Jiménez-Iglesias et al. (2015) indicate.:

> Children are aware of the importance of their parents as agents that regulate access to certain content on the Internet, particularly in the phases in which they start surfing. However, as they grow up, the role of parental figures becomes less relevant... (p. 64).

Regarding question 3, the results are like those of the previous question, 47.20% of representatives are aware that children use the Internet for non-academic purposes. It is reasonable to interpret these results as an indicator that there are resources or content on

the Internet that become distracting elements for students in their academic performance. Conde Miranda (2018) in his research on the use of information and communication technology among adolescents concludes:

> With respect to the activities carried out by adolescents on the Internet and cell phones, those related to communication, mostly with people they know, and entertainment (watching videos on YouTube, following youtubers, downloading series and movies, watching and posting on social networks, ...) stand out (p. 20)..

Questions 4 and 5 of the questionnaire to representatives were oriented to know if the inappropriate use of the Internet has affected the academic performance and behavior of the students. Based on the answers obtained, it can be observed that the inappropriate use of the Internet by students may pose some risk; the results were conclusive since adding the answers of always and sometimes, 66.43% of the representatives indicated that the inappropriate use of the Internet has affected the academic performance of minors, while 58.58% indicated that it has affected their behavior.

> The Internet is a very useful tool for communicating and obtaining information quickly. It offers us countless resources to establish social relationships, through mails, chats, social networks, etc., but it also presents negative aspects derived from a bad use that should be considered (Gozález-González and Hernández-Hernández, 2017, p, 2).

The results of question 6 show that the representatives are aware of the example they set for the use that minors make of the Internet. In this regard Sanchez-Valle et al. (2017) indicate that "it seems demonstrated that parental style influences children's use of the Internet" (p. 3).

This aspect is relevant as an indicator of the awareness that representatives have about the importance of a good use and management of Internet content.

The results of question 7 in relation to adequate parental control over the content that minors handle on the Internet differ from the results of questions 4 and 5, since while the results of these questions show effects on the academic performance and behavior of students due to inappropriate use of the Internet, in this question 75% of them assure that they exercise adequate control over the content that minors handle on the Internet. From the point of view of the researcher, it is inferred that there is no clear concept on the part of the representatives about parental control on the Internet and what this entails, or that despite the strategies, minors manage to bypass these controls, coinciding with what Barreras (2013) states "... in some cases, while parents' strategies to control the use that their children give to the Internet emerge, the children's tactics to evade and resist them also emerge." (p. 141).

In question 8, the results indicate that 49.30% of the representatives say they have ever used a parental control tool while 50.70% say they have not. These almost equal results strengthen the researcher's point in the previous question about the idea that there is no clear concept on the part of the representatives about parental control on the Internet.

The results of questions 9 and 10 support the relevance of the present study. While in question 9, 88.90% of the representatives agree and partially agree with the implementation of a parental control tool, in question 10, 83.60% would be willing to use it.

> The different generations that make up the family have interpreted the role of TDs in our culture differently. The younger ones have seen in TDs a window that opens the possibility of other ways of socialization, which is no longer restricted to a physical space or time, they can now have the world at a click or a "touch on the screen". In contrast, parents are experiencing a growing sense that TDs oppose traditional family values, hinder interpersonal encounters, and create unhealthy habits in minors (Montoya et al., 2018, p.6).

The results of question 11 demonstrate the parents' uncertainty about their children's interaction with Internet content. It is striking that a percentage of less than 50% indicate that they would like the technological control tool to give them a report of all the options presented, which again strengthens the researcher's idea of the incipient idea of parental control of Internet content that the representatives have.

4.2.1   Teacher questionnaires

El cuestionario se aplicó a 40 docentes a través de 9 preguntas; su diseño y aplicación fue a través de Formularios de Google. A continuación, se muestra el cuadro con los resultados obtenidos, los mismos que fueron contrastados con las respuestas obtenidas de los representantes.

Questions	Response options		Frequency	Percentage
1. Do you believe that in the teaching-learning process it is necessary to use ICTs to interact with students, considering that they are natives of the digital world?	Agree		37	92.50 %
	Partially agree		3	7.50 %
	Disagree		0	0.00 %
		Total	40	100.00 %
2. Do you consider that students make responsible use of the Internet when applying it in their academic training?	Agree		3	7.50 %
	Partially agree		27	67.50 %
	Disagree		10	25.00 %
		Total	40	100.00 %
3. In which of the following options do you consider that students spend most of their time on the Internet?	Academic activities		1	2.50 %
	Social Networking		24	60.00 %
	Watch videos		2	5.00 %
	Online games		11	27.50 %
	Entrepreneurship and product promotion activities		1	2.50 %
	Other		1	2.50 %
		Total	40	100.00 %

4. From your role within the educational community, have you been able to evidence that the inappropriate use of the Internet by children has affected their academic performance?	Always	10	25.00 %
	Sometimes	25	62.50 %
	Rarely	3	7.50 %
	Never	2	5.00 %
	Total	40	100.00 %
5. From your role within the educational community, have you been able to evidence that the inappropriate use of the Internet by children has affected their behavior?	Always	4	10.00 %
	Sometimes	33	82.50 %
	Rarely	2	5.00 %
	Never	1	2.50 %
	Total	40	100.00 %
6. Do you consider that adults set an example for children to follow in their use of the Internet?	Agree	24	60.00 %
	Partially agree	13	32.50 %
	Disagree	3	7.50 %
	Total	40	100.00 %
7. Do you consider that responsible adults exercise adequate control over the content that the best ones handle on the Internet?	Agree	21	52.50 %
	Partially agree	14	35.00 %
	Disagree	5	12.50 %
	Total	40	100.00 %
8. Do you believe that the implementation of a parental control tool on the contents that children handle on the Internet can influence a better academic performance of students?	Agree	34	85.00 %
	Partially agree	6	15.00 %
	Disagree	0	0.00 %
	Total	40	100.00 %
9. What kind of reports would you recommend a parental control tool to provide to representatives?	Report of pages browsed	7	17.50 %
	Browsing time	3	7.50 %
	Location	0	0.00 %
	All of the above	30	75.00 %
	Total	40	100.00 %

Table 3. Results of the questionnaire applied to teachers

The results of question 1 of the questionnaire applied to the teachers show a conclusive result of the teachers' criteria on the need for the use of ICT in the teaching-learning process, coinciding with what was stated by the representatives.

The results of questions 2 and 3 show that the teachers' opinions differed from those of the representatives regarding the responsible use that children make of the Internet and the activities in which they spend their time when using this resource. While the representatives agreed that students use the Internet responsibly and most of the time they use it for academic activities, the teachers differed, since in question 2 they expressed 67.50% partial agreement on the responsible use of the Internet by students and in question 3 only 2.50% said they believed that students use the Internet for academic activities. This information is relevant, considering that teachers are direct beneficiaries of the responsible use of the Internet for academic purposes by students.

In the results of questions 4 and 5, the teachers coincide with the answers given by the representatives to the same question, stating in a majority percentage of 87.50% in question 4 and 92.50% in question 5 (between the options of always and sometimes) that they have been able to demonstrate effects on academic performance and behavior due to the inappropriate use of the Internet by the children.

Similarly, in question 6, with a majority percentage of 60%, teachers and representatives agreed that adults are an example for the use that children may make of the Internet.

In question 7, teachers also agree with the representatives in agreeing that adults exercise adequate control over the content that minors handle on the Internet, which differs (as well as with the representatives) with what was expressed in questions 2 and 3 regarding the responsible use of the Internet by students for academic activities. This strengthens the researcher's notion that it is still not clear among the different actors of the educational community what parental control over Internet content means.

The results of question 8, again coincide with those of the representatives; with a result of 85%, the teachers state that the implementation of a parental control tool can influence a better academic performance of the students.

The teachers' answers to question 9 show that the majority of teachers, 75%, recommend that the parental control tool should provide a report with all the options mentioned above.

4.2.2 4.2.2 Student Questionnaire

The questionnaire was applied to 140 students, through 5 questions; the Google Forms application was used. The table below shows the results obtained, which were contrasted with the answers obtained from the representatives and teachers.

Questions	Response options	Frequency	Porcentaje
1. Do you use the resources available on the Internet responsibly when applying them in your academic training?	Always	73	52.14 %
	Sometimes	60	42.86 %
	Rarely	7	5.00 %
	Never	0	0.00 %
	Total	140	100.00 %
	Actividades académicas	80	57.10 %

2. Which of the following do you spend most of your time on the Internet?	Social Networking		26	18.60 %
	Watch videos		8	5.70 %
	Online games		11	7.90 %
	Entrepreneurship and product promotion activities		1	0.70 %
	Other		14	10.00 %
		Total	140	100.00 %
3. Do you think that the adults in your environment are an example of the use that can be made of the Internet?	Agree		86	61.40 %
	Partially agree		43	30.70 %
	Disagree		11	7.90 %
		Total	140	100.00 %
4. In your household, are the responsible adults fully aware of the content you handle on the Internet?	Agree		92	65.70 %
	Partially agree		37	26.40 %
	Disagree		11	7.90 %
		Total	140	100.00 %
5. Do you believe that, with proper guidance from responsible adults about your use of the Internet, you can positively influence your academic performance?	Agree		98	70.00 %
	Partially agree		40	28.60 %
	Disagree		2	1.40 %
		Total	140	100.00 %

Table 4. Results of the questionnaire applied to teachers

The results of questions 1 and 2 in the questionnaire applied to the students reveal the students' perception of responsible use of the Internet and the fact that they spend most of their time on academic activities. In question 1, 52.14% expressed that they always make responsible use of the Internet and in question 2 they stated that 57.10% of their time on the Internet is dedicated to academic activities; however, the fact that 47.86% stated that they sometimes or rarely make responsible use of the Internet in question 1 and 42.90% indicated that they use most of their time in activities other than academic ones shows that a good percentage of the students are aware of the non-responsible use of the Internet in their academic training. It is important to emphasize that the results of these questions coincide with what the representatives indicate and differ with the opinion of the teachers.

In question 3, the results coincide with what was stated by representatives and teachers, regarding the fact that the surrounding adults are an example of the use that can be made of the Internet. With 61.40% of the students agreeing and 30.70% partially agreeing with the influence of adults in the use of the Internet, a majority percentage of 92.10% expressed this important opinion.

Regarding question 4, most students state that adults have full knowledge of the content they handle on the Internet. The results coincide with those expressed by representatives and teachers.

The results of question 5 also agree with the opinion of the representatives and teachers in that students believe that with proper guidance from responsible adults about their use of the Internet, they can positively influence their academic performance. The fact that 70% of the students agree is an endorsing resource for the relevance of the proposed study. It is important to emphasize that it is pleasantly striking that the children do not oppose guidance on the Internet, which shows that our children are always ready to support us in any activity.

5. Conclusion

The use of the Internet in educational processes is seen by representatives and teachers as an indispensable resource for students to carry out their academic activities; however, this resource brings with it other elements that at some point become distractions for minors. The representatives are aware of their role and exercise parental control in this regard from the possibilities that their environment allows.

The diagnosis carried out revealed the need to implement a technological tool for active parental control, which allows representatives to obtain detailed information in real time from the same virtual space in which the students develop, on what the minors do on the Internet.

Knowing what they do on the Internet and how much time they spend on it is of interest to representatives and even teachers, therefore the parental control tool to be implemented should provide this information.

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Vocational and professional guidance as an alternative in the choice of university careers

Orientación vocacional y profesional como alternativa en la elección de carreras universitarias

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Abstract

Vocational and professional orientation processes should allow high school students to select a university career oriented to their life project. However, many students drop out in the first semesters of college due to various factors (economic, emotional, psycho-pedagogical, among others). Among these is also the lack of professional orientation and the

construction of vocational and professional tasks that consolidate this career choice. The objective of this research work was to determine the influence of the professional orientation process on the choice of university careers in third year high school students. The approach used was quantitative of an explanatory and correlational type supported by a qualitative analysis process of an interpretative hermeneutic type. The study population was selected through a purposive sampling and consisted of 342 students in the third year of high school from various public and private educational institutions in Ecuador. A battery of tests of professional aptitudes and interests and a structured interview were used as research instruments. The results of the statistical study carried out have made it possible to identify the influence of professional orientation on the choice of a university career in the study population. It is therefore concluded that this process could help students in this context to choose a career aligned with their life project and aptitudinal potential.

Keywords

Student, evaluation, career guidance, social participation

Resumen

Los procesos de orientación vocacional y profesional deberían permitir al estudiante de bachillerato seleccionar una carrera universitaria orientada a su proyecto de vida. Sin embargo, son muchos los estudiantes que desertan en los primeros semestres de la universidad debido a diversos factores (económicos, emocionales, psicopedagógicos, entre otros). Entre estos se encuentra también la falta de orientación profesional y la construcción de tareas vocacionales y profesionales que consoliden esa elección de carrera. El objetivo del presente trabajo de investigación consistió en determinar la influencia del proceso de orientación profesional en la elección de carreras universitarias en estudiantes de tercero de bachillerato. El enfoque utilizado fue cuantitativo de tipo explicativo y correlacional apoyado en un proceso de análisis cualitativo de tipo hermenéutico interpretativo. La población de estudio fue seleccionada a través de un muestreo intencional y estuvo conformada por 342 estudiantes de tercero de bachillerato de diversas instituciones educativas públicas y particulares de Ecuador. Como instrumentos de investigación se utilizó una batería de prueba de aptitudes e intereses profesionales y una entrevista de base estructurada. Los resultados del estudio estadístico realizado han permitido identificar la influencia de la orientación profesional en la elección de una carrera universitaria en la población de estudio. Se concluye por consiguiente que, este proceso podría ayudar a los estudiantes de este contexto a elegir una carrera profesional alineada a su proyecto de vida y potencial aptitudinal.

Palabras clave

Estudiante, evaluación, orientación profesional, participación social.

1. Introduction

In Ecuador, and mainly at the high school level, there are many students who have difficulties when selecting a university career. Reading Viteri, one could reflect on whether this difficulty occurs as a result of a non-consensual and momentary personal reflection that could influence in the future and in a determining way in some cases in the personal, academic and professional life of the student who makes this decision (Viteri, 2018, p. 365). Faced with this, Rodríguez (2020) analyzes how the educational community at the baccalaureate level tries to solve this difficulty by providing students with a "greater

amount of information so that they can select a professional career oriented to their life project, their tastes and interests" (p. 49).

Considering the above, there are many professionals in the psychological and mainly psycho-pedagogical fields who offer their professional services with the purpose of contributing in a technical way to make this choice of professional career the right one. According to the criteria of Briones and Triviño (2018) "it can crystallize in a better way taking into account some aspects that empirically the student is unaware of" (p. 6) such as, for example, their academic potentialities, their personality characteristics, their learning style, their aptitudes, and professional interests.

Vocational orientation according to the perspective of the authors Verdesoto et al. (2018) is constituted as "a psycho-pedagogical process of counseling prior to the choice of a baccalaureate specialty where a comprehensive assessment of the student's skills, abilities and capacities is performed" (p. 14). This is in order to guide their vocation and identify the so-called vocational and professional tasks that are necessary to ensure academic success in that area. Due to the fact that currently very few professionals carry out this process and also because the current educational and curricular reform eliminated high school specialties such as: physical-mathematical, chemical-biological and social sciences; the development of specific skills and knowledge oriented to certain professional careers had to be rethought to compensate for this reality. This has somehow led students to select a science or technical baccalaureate that does not prepare them to integrate knowledge and improve their university entrance profile.

Precisely, according to the authors Ocampo et al. (2017) the construction of these vocational and professional tasks within the classroom "allow the student to determine much more effectively what their academic development profile is" (p. 341), in order to match their profile of competencies and aptitudes with the choice of baccalaureate to be selected. Once this choice is consolidated, choosing a professional career should only be a matter of time. However, students who make these decisions focus on socioemotional and economic aspects and not on those important determinants such as academic quality, the development of their potential and their vocation.

According to Mejía (2019), the concept of vocation refers to the "inclination of a person to dedicate his or her time and effort to a certain activity that generates a lot of satisfaction" (p. 383). Faced with this, the construction of the tasks associated with vocation should consolidate the tastes and interests that a person defines in a period of time to guide him/her professionally. However, the student's profile and the construction of these tasks that according to Ocampo et al. (2017) are the ones that "determine to a large extent what will happen with the so-called professional choice" (p. 341).

The authors Santana and Vigueras (2019) define career guidance as "also a psycho-pedagogical process that allows consolidating the choice of a professional career according to the vocational development profile and the construction of specific tasks" (p. 12), which according to Figueroa et al. (2021) "should be evaluated with a battery of psychometric tests and through qualitative-quantitative methods to provide validity to the definitive diagnosis of orientation" (p. 853) this, accompanied by the suggestion of university careers offered by the professional in charge of this process. However, according to Erazo and Rosero (2021) there are many psychology professionals who consider that "the partial evaluation of certain aspects can offer them in a very clear way a diagnosis that integrates all the components mentioned above" (p. 593).

A professional orientation process therefore according to Mejía et al. (2018) must "include a previous diagnosis of the motivations that led the student to select in the first instance, a baccalaureate specialty over the others" (p. 385), this because the academic components that form the university entrance profiles must match the student's vocational development profile to guarantee in something a possible academic success and, it is precisely at this moment where, due to lack of orientation or knowledge, students choose a university career without knowing any of these aspects.

According to the above, the general objective of this research work was to propose a correlational study to determine the influence of the vocational orientation process in the choice of university careers in third year high school students of public and private educational institutions in Ecuador; for this, the design of the article has the following structure: a brief introduction to the topic and problem of study, the methodological foundation that supports the research process and the application of instruments, a space where the main results obtained are analyzed and discussed, and a section where some conclusions of the work are made.

2. Method

The study population was selected through a non-probabilistic sample by convenience and consisted of 342 students (171 males and 171 females) in the third year of high school from public (122 students), private (95 students) and municipal (125 students) educational institutions in various Ecuadorian provinces. The research process counted with the informed consent of the entire study population for the data collection, information analysis and final interview where, once this phase was completed, the suggestion of professional careers adapted to the student's profile and life project would be made.

The techniques used in the research process were:

> Standardized test with its standardized test instrument. In this research process, a battery of five standardized and structured-based tests of differential aptitudes (abstract, verbal, numerical, mechanical, and spatial reasoning) known commercially as DAT in its "A" form was used.
> This form of the reagent was adapted to the Ecuadorian context by psycho-pedagogues from the Department of Professional Orientation of the Central University of Ecuador, who carried out the processes of criterion, content and construct validity in high school and university students, generating a scale that considers scores on a percentile scale (0-99 points) for its qualification.
> Due to its versatility and the context of the covid-19 pandemic, authorization was requested to this agency to carry out the virtual adaptation of this battery of reagents without this implying that they lose their criteria of validity and reliability in the diagnosis of the results.

- We proceeded in a similar way with the adaptation of the tests of professional interests (GEIST - test that measures 12 areas of interests and offers a diagnosis of dominant, average and non-significant benefits) and spatial intelligence (Raven General Scale. - test that offers a diagnosis of spatial intelligence and analysis by comparison).
- Interview with its instrument, the interview script (which met the criteria of validity of experts prior to its application) and served as a starting point to establish qualitatively through an interpretative hermeneutic analysis the consolidation of vocational and professional tasks in the students of the investigated context, which

are essential in the choice of a professional career adapted to their potential and life project.

In order to analyze the results obtained and subsequently offer a diagnosis of the career guidance process, a quantitative, descriptive, explanatory and correlational research approach was used, where all the tests applied were scored and the results obtained were transformed into percentile scores. With this it was possible to obtain the result of professional interests, aptitudes, and spatial intelligence, which is an integral part of the quantitative analysis of the orientation process. Subsequently, these results were grouped, and the professional profiles of each applicant were compared with the entrance profile to various university careers; this allowed us to suggest a career that was more adapted to the characteristics of the student evaluated, which could also be adjusted to his or her life project.

To complement this diagnosis, the results of the career guidance interview were compared with those obtained in the application of the tests applied following the research criteria of the authors Hernández-Sampieri et al. (2018) confirming in this way and for the second time that, the suggested diagnosis was adapted to the life project referred to in the final interview with the student. In order to delimit the scope of the results and establish significant differences within the study population, two working hypotheses were raised: the first one was if there is a significant difference between the development of professional interests, intelligence aptitudes that affect the professional decision of the investigated students; and the second hypothesis that had to do with the differentiated choice of a professional career defined the type of school, type of university (support) type of career (by broad and specific field of knowledge) and gender where statistically significant results were obtained; for this, four individual Pearson's chi-square tests were performed considering the study variables and hypotheses raised using the statistical software SPSS version 25 relating the variables mentioned above.

3. Results

The results obtained in the application of the psychometric test battery are divided into three parts: Aptitudes: in this area, five aptitude tests (DAT, form "A") were applied:

a) a) Abstract reasoning is the capacity to think and process information through the operations of analysis and synthesis. It allows the subject to induce, deduce, conclude, and formulate hypotheses. Ability to work or reason with symbols. That is, with non-verbal situations representative of subjective thinking.

b) b) Spatial reasoning is the ability to reason and handle objective structural concepts: shapes, sizes, distances, perspectives, among others. It establishes reasoning with volume, weight, texture, among others. It is the spatial relationship representative of objective or practical thinking. This type of reasoning requires mental manipulation of objects in three dimensions.

c) c) Verbal reasoning is the ability to understand and process concepts expressed through verbal symbols (words) and the essence of verbal and written messages in order to respond to those messages. Quality of abstracting, generalizing and constructive thinking (thought expression). It does not lie in simple verbal fluency or knowledge of vocabulary.

d) d) Numerical reasoning is the ability to understand numerical relationships and reason with quantitative material. Practice of knowledge and mastery of strictly mental computation. Minimizes the use of language to avoid interference from verbal factors. Most of these reasoning tests measure only computational skills.

They require the understanding of numerical relationships as a function of concepts; and,

e) e) Mechanical reasoning is the ability to understand and apply physical and mechanical principles. Handling of physical-mechanical problems that arise in ordinary life situations. It uses simple mechanisms, familiar to most of the subjects, which do not require specific scientific knowledge.

In the aptitude tests, the average percentile results obtained by type of school have identified a greater degree of development in numerical (61/99), abstract (49/99) and verbal (41/99) aptitudes, which would necessarily imply that these students have a greater development in the handling of basic mathematical operations, logical reasoning and an adequate knowledge of language, while the aptitudes that have been identified as less developed are those of the mechanical type (33/99) interrelated to the resolution of problems related to physics and chemistry, and spatial reasoning (15/99), which has to do with the management of structural and objective concepts (See Table 1).

Type of school	Abstract	Verbal	Spacial	Mechanic	Numerical
Fiscal	51	41	8	36	56
County	46	42	23	30	65
Private	50	41	15	33	64
Overall average	49	41	15	33	61

Table 1. Average percentile scores for aptitude by type of school

Professional interests. In this area, a test was applied that measures ten areas in male students and eleven areas in female students (GEIST differential aptitude test - male and female scale):

a) a) Professional interest of persuasive type are activities related to the communication of ideas, which involve action of convincing or influencing one person to another. Examples: law, social work, psychology, international business, foreign trade, marketing, social communication, sociology, and political science, among others.

b) b) Professional interest of administrative type are activities that involve systematization and organization in office work or management processes. Example: public administration engineering, business administration engineering, auditing, and accounting engineering, economics, statistical engineering, financial engineering, social communication, dental assistant, among others.

c) c) Professional interest of mechanical type are activities related to the handling of machines, tools, and instruments by means of micro and macro manual skills. Example: engineering, architecture, medical technology, dental technician, dental assistant, automotive mechanics, industrial mechanics, electromechanics, among others.

d) d) Professional interest of musical type are activities that refer to the appreciation, discrimination, composition, direction, execution of sounds, melodies, rhythms, and musical harmonies. Example: composition, voice-over, orchestra conducting, interpretation, sound engineering, multimedia design, radio, and television production, among others.

e) e) Professional interest of scientific type are activities aimed at the knowledge of the function, organization, structure, and use of the constituent elements of living

beings: human beings, animals and plants. Example: medicine, nursing, obstetrics, medical technologies, genetic engineering, agronomy, veterinary science, chemical sciences, dentistry, among others.

f) f) Professional interest in outdoor activities are activities related to the preservation, maintenance and sustainable production of nature and the environment, including physical and motor activity in open spaces. Example: military careers, physical education, agricultural engineering, geology, mining, oil, environmental, tourism, marine biology, among others.

g) g) Professional interest of literary type are activities concerning the analysis, discrimination, production, creation, and reproduction of thoughts, through written, oral or mimic language. Example: teaching, political science, sociology, public relations, social communication, psychology, social work, economics, among others.

h) h) Professional interest of numerical type are activities concerning the handling of dimensions, weights, volumes, lengths, proportions, and measures in general. That is to say, all the elements that represent quantitative, real and abstract relations. Example: engineering, topography, geomensura, economics, financial engineering, statistical engineering, accounting, and auditing engineering, commercial engineering, architecture, among others.

i) i) Artistic professional interest are activities related to the organization, appreciation, expression, recreation and execution of elements and instruments that involve the use of creative and aesthetic thinking. Example: architecture, arts: painting, sculpture, ceramics, and engraving. industrial design engineering, computer graphics, graphic design, bachelor's degree in design and drawing, sound engineering, multimedia engineering.

j) j) Professional interest in social service activities are activities aimed at the promotion and development of social and personal welfare of the community, through the implementation of policies aimed at achieving a harmonious coexistence, directed towards social transformation. Examples: law, psychology, medical sciences, dentistry, teaching, social work, sociology, public relations, political science, among others.

k) k) Professional interest of dramatic type are activities aimed at learning, execution, exhibition, and representation of roles, before a present or imaginary audience (theater hall, cameras, audio equipment, media, among others) Example: acting, script writing, interpreters, theater production, film, radio, television, marketing, flight attendants, stage management, among others.

l) l) Professional interest in personal service activities are activities that encompass the achievement of personal satisfaction for the proper use of leisure time, health, nutrition, beauty, and aesthetics. Example: flight assistance, medical emergencies, nursing assistant, cosmetology, gastronomy, hotel management, security guard, military branches, dental assistant, tourism, among others.

In relation to the results obtained in the tests of professional interests, it can be identified by type of school (See Table 2), that the highest degree of professional interests are centered in the following areas: 1) Musical, 2) Outdoor activities, 3) Dramatic, 4) Mechanical, 5) Artistic, and 6) Social Service. Considering what is observed in Table 2, it can be deduced that professional interests guide the choice of careers towards professions associated with the field of human sciences and health.

Type of school

Professional Interest	Fiscal	County	Private	General average
Administrative	48	46	46	47
Mechanical	52	52	51	52
Musical	65	53	59	59
Scientific	38	54	45	45
Outdoor Activities	59	51	57	56
Literary	43	48	45	46
Numerical	40	43	41	42
Artistic	50	51	50	50
Social Service	43	52	49	48
Dramatic	52	54	54	53
Personal Service	52	54	26	44

Table 2. Average professional interest scores by type of school

In relation to the analysis of professional interests from a gender perspective (See Table 3), it can be identified that the highest degree of professional interests is centered in the following areas: 1) Scientific, 2) Dramatic, 3) Personal service, 4) Musical, 5) Social service, and 6) Outdoor activities. Considering also what is observed in Table 3, it can be deduced that professional interests guide the choice of careers towards professions associated with the human and health sciences and in very few cases to professions associated with the basic and technological sciences.

Gender	Male	Female
Administrative	47	46
Mechanical	53	51
Musical	65	53
Scientific	37	54
Outdoor Activities	60	52
Literary	44	48
Numerical	40	43
Artistic	50	51
Social Service	44	52
Dramatic	52	54
Personal Service	----	54

Table 3. Average career interest scores by gender.

Interview script: this instrument allowed the qualitative identification, through an interpretative hermeneutic and ethnographic analysis of action participation, of the students' individual criteria in terms of the construction of vocational and professional tasks, the perspective of the profile for entering a university career and the referential development of their professional aptitudes which, combined with their professional interests, were adapted to the choice of a possible career and a transcendent life project. For this, the professional in charge of the professional orientation process followed the following steps:

a) a) The results obtained in the aptitude tests were analyzed quantitatively and individually, verifying their final percentile score,

b) b) The results obtained in the professional interest's test were analyzed quantitatively and individually, where, according to the scores, the areas were divided into three subsets or triads (dominant areas with scores over 70, medium areas with scores between 30 and 69, and non-significant areas with scores below 30).

c) c) After this, the student's reference criteria obtained through the interview script were qualitatively analyzed and the quantitative analysis of the results obtained in the application of the tests was integrated, with the purpose of determining which professional careers would be more in line with their aptitudinal and interest development profile, which should match their perspective of construction of vocational and professional tasks and their life project.

To verify this premise, four individual Pearson's chi-square tests were performed on the following variables: type of school, type of university (support), type of career (by broad and specific field of knowledge and gender.):

Correlated variables	Pearson's Chi-Square	Df	Asymptotic Significance (bilateral)
Suggested career - type of school	45,915	3	0.001
Suggested career - type of university (public or private)	15,919	3	0,000
Suggested career - gender (male and female)	277,120	78	0,001
Suggested career - by broad and specific field of knowledge	327,442	156	0,000

Table 4. Chi-square tests

4. Discussion

In Ecuador, at the moment, it has not been effectively measured whether the curricular reform that left aside certain baccalaureate specialties has allowed students at this level of education to consolidate an adequate entry profile that would allow them to access higher education much better prepared. According to Figueroa et al. (2021) this change in the educational paradigm is considered "a mistake because there was no adequate articulation with higher education institutions" (p. 868) since the careers and programs offered did not modify their entrance requirements adapting them to the graduate profile differentiated by type of baccalaureate specialty. Reading Quishpe (2022), this would make a lot of sense since those students who have "better cognitive conditions would have an academic and aptitudinal advantage over the rest" to enter in better conditions to study a university career (p. 1172).

Due to the above, at the moment there are many students who select a university career with a general baccalaureate profile that does not differentiate their potentialities and that, in addition, does not allow them to adequately consolidate the construction of their vocational and professional tasks, this because the baccalaureate specialty that they have to study forces them to consolidate an academic profile that is not necessarily adapted to the development of their aptitudes, interests and knowledge.

In order to consciously access the choice of a university career, be it technical or professionalizing, the authors Andrade, et al. 2017 and Cancino 2018 suggest that the

student has access to a wealth of academic information on the career he/she intends to select, such as the entrance profiles and requirements and that, additionally, he/she knows and identifies the development of his/her knowledge, aptitudes and professional interests. This could allow him/her, complementarily with the realization of a professional orientation process, to analyze more in detail all these variables (Andrade, et al. 2017, p. 33, Cancino, 2018, p. 115).

Unfortunately, according to the observations made by Yépez et al. (2019) "career guidance processes are carried out empirically by many professionals in psychology and other branches" (p. 50) where a single test of professional interests is often used. This therefore implies that students make a decision that could affect the rest of their academic and professional life based on a single argument.

If we add to this premise the gender biases and power relations established as part of social learning in an academic environment, the biased choice of a university career would make much more sense. It is very common today to still hear comments from students who are close to choosing a university career such as: "do not study early education because it is a career for women"; or: "do not follow engineering because it is a career for men who know mathematics" where, according to the criteria of the authors De la Hernán et al. (2018) "the aptitudinal and cognitive potential of the student and their professional interests have no place and do not match with the consolidation of their life project due to the implication of these gender biases" (p. 158).

5. Conclusions

One of the main conclusions of the research process has made it possible to determine the influence of the professional orientation process in the choice of university careers in third year high school students from various public and private institutions in Ecuador. Additionally, the descriptive results and the correlational study carried out have made it possible to analyze that this choice is influenced by the type of school the students attend, the type of professional career they choose, their gender and the broad-specific field in which this career choice is ultimately consolidated.

Considering the aforementioned and according to the criteria of the authors García et al. (2020) "educational guidance processes must respond to multifactorial and pedagogical criteria" (p. 47) hence the present research process has put forward a new methodological proposal to carry out a process of professional advice and counseling that allows students in the third year of high school to make a conscious decision when selecting a university career matching their life project without gender stereotypes.

The authors Lucero et al. (2020) mention that "the vocational characteristics and social behavior of students today has changed significantly" (p. 28) due to sociocultural factors that affect decision-making regarding professional choice and how this is affected by external variables, leaving aside the individual's own capabilities or potentialities that do play a transcendental role in the choice of a university career.

Finally, according to Ramirez et al. (2019), "education in Ecuador still presents major problems and strong gender stereotypes" (p. 34) that affect in a transcendental way how teachers teach and direct students to consciously choose a particular university career and how students, with the tools available at the time, make a decision that could affect their academic, personal and professional future.

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Pedagogies of solidarity: service-learning model for social transformation. A view from the university

Pedagogías de la solidaridad: modelo de aprendizaje servicio para la transformación social. Una visión desde la universidad

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Abstract

The accelerated changes currently experienced by societies in general have significantly affected the educational field, causing the expiration of conventional educational paradigms, conceiving the rethinking of their theoretical and practical nature as an

imperative need in the educational system. Therefore, and as an alternative to face these new learning needs, the objective of this research was to analyze the usefulness of solidarity pedagogies from the perspective of the university as a model of service learning for social transformation. In order to respond to the stated objective, a qualitative type of research was used, with descriptive scope and documentary type design, based on primary documentary sources, the technique of review and analysis of the information collected was used to support the theoretical bases of this research. Among the most important findings, it can be mentioned that those pedagogies that are applied from the principle of solidarity contribute to form people more committed to make significant contributions to the society in which they develop. Finally, it was concluded that solidarity pedagogies are innovative forms of learning oriented to the service of society, originated from the need to achieve an alternative that promotes social growth and development; they are models of intervention that not only promote social progress, but also improve the quality of education and the formation of values and principles in those involved.

Keywords

Service learning, solidarity pedagogies, social transformation, Universidad Surcolombiana, Universidad Surcolombiana.

Resumen

Los acelerados cambios que en la actualidad viven las sociedades en general han afectado significativamente el ámbito educativo originando la caducidad de los paradigmas educativos convencionales, concibiendo el replantearlos en su naturaleza teórica y práctica como una necesidad imperante en el sistema educativo. Por lo anterior y como una alternativa para hacer frente a estas nuevas necesidades de aprendizaje se planteó como objetivo de esta investigación: analizar la utilidad de las pedagogías solidarias desde la perspectiva de la universidad como un modelo de aprendizaje del servicio para la transformación social. Para dar respuesta al objetivo planteado se empleó una investigación de tipo cualitativo, con alcance descriptivo y con diseño de tipo documental, basado en fuentes documentales primarias, se utilizó la técnica de revisión y análisis de la información recolectada para sustentar las bases teóricas de esta investigación. Entre los hallazgos más importantes se puede mencionar que aquellas pedagogías que son aplicadas desde el principio de la solidaridad contribuyen a formar personas más comprometidas en realizar aportes significativos a la sociedad en la que se desenvuelven. Para finalizar se concluyó que las pedagogías solidarias son formas innovadoras de aprendizaje orientadas al servicio de la sociedad, originadas de la necesidad de alcanzar una alternativa que promueva el crecimiento y desarrollo social, son modelos de intervención, que no solo promueven el avance social, sino que también, mejoran la calidad de la educación, formación de valores y principios en los implicados.

Palabras clave

Aprendizaje del servicio, pedagogías solidarias, transformación social, universidad Surcolombiana.

1. Introduction

In the last two decades there have been many changes at a general level that human beings have experienced in a globalized world where the emergence of new technologies makes these changes more and more accelerated and often without the opportunity to adapt to them, due to the speed with which they occur. In this sense, Montes et al. affirm that

education is an aspect that has been very important within these vertiginous events, the need to achieve quality education and better knowledge management forces the actors of the educational system to generate a teaching-learning environment, eloquently different (Montes et al., 2005, p. 1).

In this order of ideas it is stated that these "accelerated events originate the expiration of conventional educational paradigms, conceiving the rethinking of their theoretical and practical nature as an imperative need" (Abal de Hevia, 2016, p. 3). This is why it is considered preponderant to outline new ways and forms of teaching, thus attracting the listening and attention of students, and at the same time becoming "educators open to educational change and enablers of spaces that are not limited to the classroom" (Betancor and Cabrera 2006, p. 59). For his part, Cotán suggests that another important aspect to consider in the educational environment is the incorporation of resilience, since all change generates mechanisms and skills to overcome an adverse situation that arises, which also forces to establish innovation and vanguard in the processes (Cotán, 2019, p. 8).

Undoubtedly, generating processes of change in the forms of teaching-learning is a task of the educational system, however, they should be directed not only towards the population involved in the educational process, but also, as a contribution to the transformation and development of society, which in the words of Páez-Granja et al. (2019) "demands emerging and constant changes in education" (p. 87). For this reason, it is important to mention the opinion of Fernández and Martínez who highlight the importance of building an education for social development, which functions as a fundamental mechanism in the foundation of a citizenship that adopts these educational models by way of global culture (Fernández and Martínez, 2016, p. 1).

Thus, talking about the construction of an education for social transformation, leads to reflect and listen to the clamor of that society regarding its needs; that knowing how to listen, is what Flores (2014) calls the "principle of coexistence and solidarity" (p. 67), being solidarity a circumstance that according to Diaz (2020) "links the recognition of situations of injustice, with the active promotion and struggles for social justice" (p. 168), and that in turn opens a space to rethink that social justice from education.

The above, invites the use of pedagogies framed within this social justice and that are currently emerging very quickly and positioning themselves in the educational systems very successfully, and are called solidarity pedagogies, also called service learning. From the point of view of Imen (2021), solidarity pedagogies are built to achieve a benefit and development of changes in education, "contributing to the construction of a more just, egalitarian and diverse society" (p. 159). According to Tapia, it is important to make it clear that the pedagogies of solidarity do not seek to turn educational institutions into welfare centers, but rather to promote solidarity as a form of teaching that contributes to improving education (Tapia, 2006).

Gezuraga and Herrero (2017) argue that solidarity pedagogies are reaching great diffusion, boom and development in the field of higher education internationally, highlighting the high level of "institutionalization that this proposal is reaching, as well as the challenges that lie ahead" (p. 4). The authors also emphasize that the implementation of these pedagogies involves the protagonism of several actors, such as teachers, students and authorities, making present an articulation between them, aimed at generating university social responsibility, achieving sustainable human development.

However, in this regard, Guzmán et al. (2020) state that the protagonism in the teaching-learning process is and will be occupied by the student population, as:

> Manager of the construction of their knowledge, autonomous and responsible for satisfying their training needs, motivated to land their life project as a happy individual in constant improvement to transform their environment in harmonious environments that allow them to achieve their goals and personal and collective well-being (p. 133).

Despite the divergence of these two opinions, what is a fact is that solidarity pedagogies or service learning are undoubtedly booming, it is "a proposal that is not only very current, but also expanding" (Zarzuela and García, 2020, p. 1). Therefore, the Universidad Surcolombiana, an institution that as a result of the health emergency caused by covid-19, became present and implemented the use of solidarity pedagogies as an alternative to face so many vicissitudes that this pandemic brought with it, promoting solidarity in its community. So, are solidarity pedagogies necessary as a learning model for social transformation? The aforementioned allows us to establish as the objective of this research: to analyze the usefulness of solidarity pedagogies from the perspective of the university, as a model of service learning for social transformation.

This work is divided into five sections; in the first, the approach to solidarity pedagogies from the university perspective is addressed; then, the variables are theoretically based on previous studies by other researchers; in the third section, the materials and methods used are detailed; then the most important findings are presented, discussing the aspects and factors involved in the service-learning process; and finally, the corresponding conclusions are presented.

2. Literature review
2.1 Solidarity pedagogies (service learning)
2.1.1. Pedagogy and solidarity

To speak or establish a specific concept of pedagogy would be to do it out of reality, since, according to Zambrano (2022) it must be approached according to the critical and social moment in which it is written, perhaps it would be more convenient, according to the author "to speak of pedagogical thought, since pedagogy is not the same in all times. It develops at critical moments in the history of society" (p. 7).

On the other hand, pedagogy is located as a space in which two fundamental currents converge: "anti-pedagogues versus hyper-pedagogues". The first, harbors limiting thoughts, where conventional forms of teaching-learning predominate, and the second, welcomes thoughts of freedom; new currents and paradigms are accepted and put into practice. Thus, the author puts forward his perspective by expressing that pedagogy should be far away from:

> The immobile and unilateral approaches of scientism that forgets the difference between the truth of knowledge and the truth of human actions. Human actions are subject to a value orientation that comes from the ends, not only from science. A pedagogy exclusively focused on technology or on the future development of neurosciences contributes decisively to pedagogical amnesia (Meirieu, 2022, pp. 73-74).

Thus, the author concludes by saying that pedagogy is always the union of these three elements: purposes, knowledge and instruments. With regard to solidarity, it can be said, in the words of Haker (2014):

> It is the practice of accepting those who have been shamed, the inclusion of those who are socially excluded, and the political and legal defense of those who lack advocates. Justice requires these practices of solidarity to identify practices in which diversity is supported by injustice; the expression injustice, through the victim narrative, is a necessary part of the process of negotiation between different interests, but solidarity also requires the standpoint of justice, to transcend the necessarily partial standpoint of identity politics on which solidarity is often based (p. 25).

The above seems to affirm that there is a close relationship between the principle of justice and solidarity, which coincides with the opinion of Diaz (2020) who proposes to analyze this relationship as "dimensions that are present and form the normative core of liberating education" (p. 176) in turn, the author comments that this linkage emerges as an indication to rethink pedagogies from a vision that allows achieving social transformation.

In this sense of the search for social transformation, solidarity pedagogies emerge in the panorama, catalogued by Fernandez as pedagogies of difference, and this refers to sowing in the culture of students the idea of conceiving education as an instrument of collaboration and contribution to the improvement and development of the society in which they live and leaving behind the ways of thinking education only as a method of acquiring knowledge to obtain a professional degree, to later join the labor markets (Fernandez, 2005, p. 33). For Tapia and Perigalli, these pedagogies are an instrument that allows to say present in times of need (Tapia and Perigalli, 2020, p. 59).

2.1.2. Solidarity pedagogies for social transformation

Solidarity pedagogies, seen as learning oriented to the service of society, arise from the need to achieve an alternative that promotes social growth and development through the commitment of citizens to collaborate and contribute to this process. In this way, Tapia and Perigalli point out that these pedagogies test educational systems, governments, institutions and organizations, their capacity to learn and continue innovating in times of deep crisis (Tapia and Perigalli, 2020, p. 53), especially because societies are currently going through complex processes in constant change.

This argument of service and solidarity learning ratifies what Abal de Hevia points out, which states that these forms of learning constitute an educational innovation, supported by the principle of solidarity whose application originates the rescue or reinforcement of the social sense in people, ensuring the transformation and progress of society, and in turn, would be creating more equitable and just educational and social environments (Abal de Hevia, 2016, p. 5). The author also states that these pedagogies are intervention models, which not only promote social progress, but also improve the quality of education, as well as the formation of values as universal ethical principles in those involved in the application of these pedagogies. In this sense, Tapia (2000) proposes three important aspects to ensure success in the application of solidarity service learning:

a) designed to meet real and felt needs of the community in a limited and effective way; b) actively led by the students from planning to evaluation; c) intentionally articulated with the learning contents, that is, involving curricular contents, reflection on practice, development of competencies for citizenship and work, and research linked to solidarity practice (pp. 26-27).

On the other hand, Flores adds that the actors involved in solidarity learning must understand that this learning involves taking a position in terms of responsibility, commitment and awareness of the society they wish to build (Flores, 2014, p. 73). In turn, authors such as Rojas, propose the idea of carrying out a diagnosis to determine the needs of the communities and thus, plan and link the programmatic contents with these needs and achieve more and better results (Lamas, 2016, p. 66). Parallel to the above, Tapia (2012) distinguishes that:

This solidarity action in real contexts allows them to learn new knowledge and develop skills for life, work and citizen participation. This type of experience makes it possible to make a concrete and measurable contribution to the life of a community, and also to improve the quality and inclusion of formal and non-formal educational offerings (p. 24).

2.2. Solidarity teaching intervention

In this regard, Fernández (2005) maintains that "the principle of pedagogy is the ability of teachers to make teaching possible, through their participation or intervention" (pp. 33-34). Thus, he proposes to define supportive teaching intervention as the ability to place oneself in the place of the other, in this case the student, in the same way the author indicates that "teaching implies taking an active place in the learning of the other and assuming this responsibility" (Fernández, 2005, pp. 33-34), it is to offer the support required in any situation that arises in the process of educating; it is to make the other's need one's own and apply the most convenient strategies of action. Teaching intervention "operates as a discursive practice, that is, a set of rules that establish how to act, what to say and what not to say" (Fernández, 2005, pp. 33-34), in specific situations, aimed at finding a new meaning to teaching practice.

The educational accompaniment as so catalogued by García and Mendía (2015) should be a way to achieve not only academic learning, but also become "a fundamental dimension in the processes of growth and development" (p. 42), of the learners. The authors argue "is to educate through the care of relationships, climate and educational style, the attitude of the accompanying person makes it possible to grant the pedagogical protagonism of each experience to the learner. Moreover, this leadership cannot occur without the participation of all the agents involved" (García and Mendía, 2015, p. 42). Opinions such as that of Rodríguez, exposes that teachers have the task, in addition to teaching the contents that refer to a specific subject; to fight to defend and apply pedagogies based on solidarity by and for society, stimulating the student body to mobilization and leave aside stillness, and incite them to "be part of a full citizenship" and instill the participation of a continuous struggle in favor of society (Rodríguez, 2019, p. 124).

For his part, Rodriguez (2019) believes that the teaching intervention implies accepting that this type of learning cannot be pigeonholed in old pedagogies limited to a classroom "marked by a numerical order from one to ten, nor by an a, b, c, much less by introductions

and conclusions" (p. 125), on the contrary, they must be instilled as teachings that allow acquiring a wisdom that lasts over time, becoming part of the being and for the benefit of the society they make up. Finally, Tapia (2012) proposes:

> A mode of pedagogical linkage in which educator and learner learn together from reality and engage together in its transformation. It implies active and meaningful learning, centered on the learner, and a conception of knowledge as a social good. It involves a look at the very identity of educational institutions. In a traditional educational institution, learning takes place only in classrooms and laboratories. The pedagogy of service learning recognizes that one can also learn from the community and in the community (p. 28).

2.3. Solidarity pedagogies from a university perspective

Universities, like any other educational institution, have the task of training people, with the difference that this population goes directly to occupy a position in the labor market, therefore, they are more committed to making contributions to society. Therefore, universities are currently institutionalizing those pedagogies that allow them not only to train and graduate professionals, but to do so from a more social perspective, where greater contributions and benefits to society are achieved. According to Arratia (2008), this was born as a "response to the permanent demands for innovation in higher education, in order to integrate educational strategies to promote problem solving" (p. 61) by and for society.

In this sense, in recent decades, higher education institutions have been working to enhance University Social Responsibility, understood as the role played by these institutions in the generation of positive impacts on society, through the articulation of several factors that consolidate the formation of ethical, personal, and social principles, typical of the different professional fields. Fuentes et al. consider it a valuable contribution if viewed from the point of view of the substantive mission of each university, since it links the principles of equity, inclusion, and social justice (Fuentes et al., 2018, p. 16).

Finally, and in addition to the above, Gezuraga and Herrero (2017) state that the insertion of solidarity learning in universities "has led to the emergence of more and more meeting points in the Latin American context where to talk about university solidarity pedagogies and their institutionalization" (p. 10) as a method to optimize teaching practices in favor of training professionals more committed to a society in constant evolution (p. 10).

3. Methods and materials

In order to respond to the stated objective, a qualitative type of research was used, with descriptive scope and documentary type design, with a purposive probability sampling, based on primary documentary sources consisting of scientific articles, books, official sources, technical reports, among others.

To address the study variables, a total of 98 documents were chosen, which were collected in high impact indexed databases such as Scopus, Elsevier, Dialnet, Google Scholar. Subsequently, we proceeded to analyze all the documents in order to take an intentional sample of 57 refereed articles, especially those investigations that best fit the objective proposed in this study, finally, we used the technique of review and analysis of the

information collected to support the theoretical basis of this research and proceeded to establish the relevant results and conclusions.

4. Results and discussion

4.1. Solidarity pedagogies (service learning)

The accelerated changes that have taken place worldwide in the last century have caused transformations in the ways of observing the world and life, these changes determined the prescription of traditional educational paradigms, which generated the need to rethink them, both theoretically and practically.

This is why, according to Abal de Hevia, service learning is currently emerging, offering a multiplicity of options that aim to help remedy the reality of current educational environments, improving educational offerings at all levels and using the knowledge acquired to meet the needs of the community (Abal de Hevia, 2016, p. 3), building a more humane, united and equitable society in solidarity with the countless vicissitudes they present. Abal de Hevia, points out that solidarity service learning is an educational innovation that, based on the ethics of solidarity, breaks with the current individualistic models, promoting more and better educational and social conditions for all those involved; as well as rescuing and strengthening the social sense, establishing itself as a promising tool both for training and for the cultural and social transformation demanded by a society in constant change (Abal de Hevia, 2016, p. 5). Figure 1 below shows the main characteristics of solidarity learning as an educational innovation.
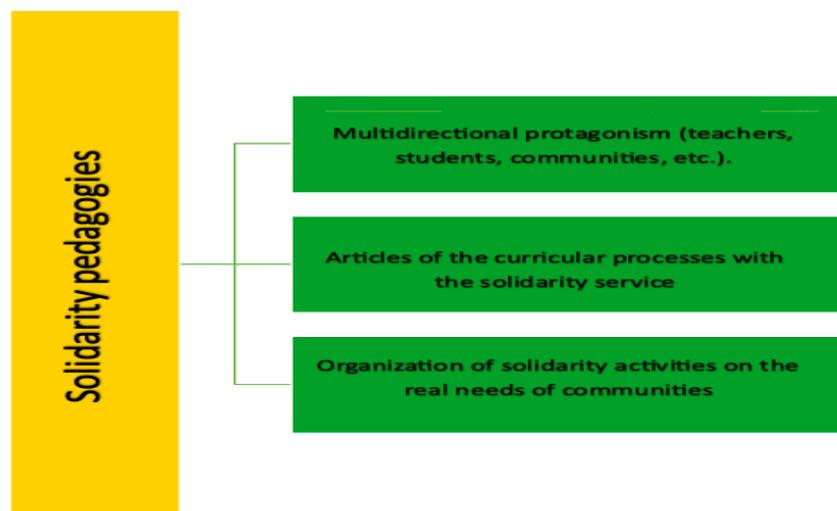
Figure 1. Main characteristics of solidarity learning as an educational innovation. Adapted from Abal de Hevia, 2016

In this context, Tapia (2010) expresses that service-learning understood as pedagogy involves important aspects that propose articulations within the educational environment, where it is possible for teachers and students to learn together from reality, while creating a commitment for its transformation, which "implies active and meaningful learning, centered on the learner, and a conception of knowledge as a social benefit" (p. 29). The author argues that educational systems must understand that society does not need a traditional education that takes place only in classrooms and laboratories but requires new educational forms in which it is also possible to "learn from the community and in the community".

Thus, solidarity pedagogies are derived from that pedagogy that seeks to educate from freedom and for freedom, in order to achieve socio-cultural transformations in humanity, leaving behind the mechanicity of the educational process, and orienting it rather towards the unlearning of what is already outdated and does not provide significant contributions to society. The above, argue the authors, must be orchestrated from reflexivity and in the "perspective of making each person a better person, who gives the best of himself, for his own good and that of others" Arboleda and Lopera (2011, p. 57) since, solidarity pedagogies educate for that purpose, as an integrated universe.

In this sense of approaching education from the perspective of solidarity pedagogies, Table 1 presents a set of knowledge and assets that could be put into practice to ensure that the actors participating in this form of teaching-learning can coexist and survive in an equitable and harmonious manner for all; this would be:

	Knowledge and assets
Educación desde la solidaridad	- To focus teaching and educational action on the particularities of this type of organizations, in the development of social, community, solidarity and participatory thinking that is oriented to social practices of transformation. - To build contextual reflections from today's education and pedagogy, which relate the old educational contents with the new ones, in which the subjects are considered as self-managers of a culture of solidarity. - To generate, from critical reflective processes, a pedagogy of solidarity that means recovering the memory of the values and principles of cooperation and solidarity, reciprocity, mutual aid and the common good. - To recognize dialogue as a pedagogical act that can become liberating and transforming based on the recognition of others. - To promote pedagogical acts of recognition of freedom, in which autonomy, self-management, solidarity and cooperation are expressed as manifestations of the being in its constant eagerness to improve its human expression, always in dialogue with others; - To live values close to the construction of humanity, but also to carry out educational and pedagogical acts with approaches and intentions that mean the incorporation of solidarity in the pedagogical practice; - To conceive a praxis of solidarity economy, working on a pedagogical proposal that allows reflection from the educator and the educated subject, mediated by a community educational practice that enables the reunion between beings.

Table 1. Knowledge and assets of education from solidarity pedagogies. Arboleda and Lopera (2011, pp. 60-61)

In addition to the above, it can be added that these pedagogies, given that their dynamics transform knowledge by allowing a new perception of the world, generate a mixture of knowledge and, in turn, a better understanding of collective processes from their diverse realities. Service learning is based on social construction, "a collective praxis capable of engendering actions and results acceptable to all individuals" Albuquerque (2019, p. 50) which will allow the establishment of a current of interaction within the economic, socio-

political, and cultural spaces of societies from a broader perspective; it is what the author has called as "multiproportionality" is a way to ensure balance and respect for each actor in the process.

Similarly, and with equal importance, the studies of Buxurrais (1998), who "starting from the premise that solidarity is an attitude and a learned disposition" (p. 2), are incorporated into this discussion. 2), allowing individuals to place themselves in the other's place and show unity, also generates empathy, thus leading to a greater understanding of the reasons, feelings, attitudes, and values of other people, which contributes to an increase in the level of disposition with respect to their participation in the consolidation of a united society to achieve ends that are common to all those involved.

For their part, Blandon and Niño emphasize that it is necessary for pedagogy to be implemented in all areas that make up the community, in order to generate practices that consolidate an experiential current of supportive, critical, creative and entrepreneurial thinking, as a means to achieve development and harmony within the community. There, praxis becomes the foundation that sustains solidarity and finds its basis in teamwork, which is a collective effort, in which everyone contributes their personal knowledge, skills and ideals, thus favoring a successful work where all members know their strengths and weaknesses and those of their peers (Blandon and Niño, 2009, p. 85).

To conclude, Abal de Hevia (2016) states that whatever the educational level, where education "based on the ethics of solidarity" is practiced, they emerge as responses to the different challenges that are posed by society and demonstrate how service learning can be applied, originating the commitment of the actors and showing its formative and transformative potential, managing to overcome both curricular and social barriers, which can be evidenced in the results achieved. From the formative point of view, it is much more enriching to participate in activities that contribute to the support of the communities, than to prepare for an exam that in most cases blocks the student, while preventing him/her from giving the best of him/herself, besides for the benefited communities, the services not only repair inequalities, but also contribute to empowerment which stimulates the transformation of the included communities (Abal de Hevia, 2016, p. 5).

4.2. Solidarity teaching intervention

Human beings acquire most of their learning through relationships with others, whether in the family or social environment, but it is in educational spaces where this learning takes on greater relevance and it is the teachers who are responsible for ensuring that this acquisition of knowledge is not exclusively a curricular task, but fundamentally one of human development. Countless investigations have determined the "classroom as an environment of vertical relationships between a teacher who decides what activities should be carried out and students who, in the ideal case, conform to these indications" (Morales et al., 2022 p. 47). It is for this reason that the actions and performance of the teacher's intervention become more relevant, taking into consideration the need to direct the teaching activity towards a social and cultural transformation of the student, which can be catalogued as supportive teaching intervention.

Thus, solidarity teaching intervention is what Fernández calls "the pedagogy of difference", which is based on abandoning prejudices and obsolete practices and understanding the role of the teacher from a perspective far removed from the role of a unilateral transmitter of knowledge; on the contrary, it is necessary to conceive the participation of students from a

reality that is constantly changing and that demands different learning conditions. To support this assertion, Figure 2 shows that the teaching intervention, seen from solidarity pedagogies, includes multidirectional and cyclical learning (Fernández, 2005, p. 39).
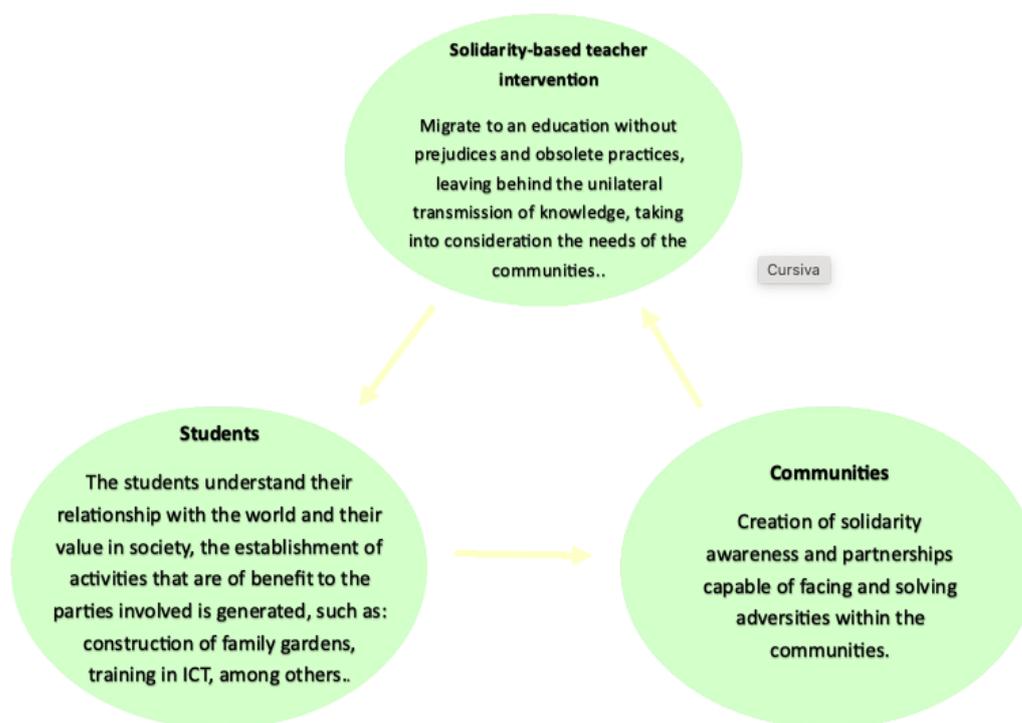

Figure 2. Teaching intervention based on solidarity pedagogies

Considering the results in research such as those of Ramos and Centurión (2018) which determined that among the students surveyed there is "a weak social awareness to apply their pre-professional learning in the social field" (p. 66), it calls for reflection again on the very important role that teachers play in the establishment of forms of learning that contribute to increase that level of awareness. In this sense, Amariles proposes that teacher participation based on the principle of solidarity must allow the objective of strengthening and consolidating the educational environment through the teacher-student-community articulation, taking into consideration the social movements under the indisputable position of a transformation of society (Amariles, 2015, p. 79).

From the point of view of Magill and Rodriguez (2021) "teachers could begin by adopting and embodying a critical ontological pedagogical stance to articulate transformational forms of learning" (p. 1), and in turn, recognizing that solidarity is not a series of practices, but an approach to the reality in which today's societies live. Undoubtedly, teachers have a very complex but not impossible task, contemplating the evolution of a totally different society today, assuming as a responsibility the obligation to fulfill the training of people both at the curricular level to achieve an academic degree, as well as in the formation of more sensitive and committed individuals to make significant contributions to the community in which they operate.

4.3 Solidarity pedagogies from a university perspective

A large percentage of universities worldwide are choosing to implement the application of pedagogies that promote social development as part of the University Social Responsibility (USR) promulgated and executed by these educational institutions. In this regard, the United Nations Educational, Scientific and Cultural Organization (UNESCO) states that the main role of universities in this area, should be "socially transformative and projected in the community through the participation of teachers, students and the university space in general" (UNESCO, 2018 s. p), i.e., a joint work should be carried out between all the actors that make life in universities to ensure success in the proposed objectives.

Such is the case of the Universidad Surcolombiana, which has institutionalized solidarity pedagogies, internalizing them from its vision and mission, since as an educational center they have to their credit the integral human formation, through academic, social and political transforming processes, committed to the construction of a democratic, deliberative, participatory and peaceful nation, supported by human, social, sustainable and sustainable development in the region. Thus, in order to be coherent and committed to the above, the Universidad Surcolombiana brings together all teachers and students of all faculties, developing different themes at each meeting, making approaches such as the development of a diploma in solidarity pedagogies, to demonstrate how solidarity and equity can be a key element for institutional development. The implementation of these pedagogies as a result of what happened with the arrival of the covid-19 pandemic, which forced, evolved and changed some elements of pedagogical training involving the word solidarity, as a way to contribute to the implications that this health emergency caused at a general level throughout the world.

Although these pedagogies seem to have come to stay, not everything is positive in their application, in this regard Ramos and Centurión (2018), highlight in their research that there is a "predominant tendency not to interact within the spirit of solidarity with the problems of the community" (p. 66) arguing, then, that it is the responsibility of the university itself, to reorient its policies, in a more aggressive way, to the implementation of educational programs of solidarity service, seen in another way, the authors, make it clear that the active participation of its authorities as a leading and thinking head is fundamental in this sense.

In this order of ideas, Lugo and De-Juanas (2020) obtained similar experiences in their study, since a large part of the population studied was more inclined to participate in social action initiatives, suggesting the authors that universities should "foster a participatory culture and expand training for the development of competencies in line with sustainability, entrepreneurship, autonomy and professional initiative"(p. 75) in order to achieve greater social and solidarity commitment. Thus, higher education institutions (HEIs) need to understand that they should not only assume and fulfill the role of knowledge production, but also include social and solidarity issues as something permanent within the university community (Pastore, 2017). For his part, Urdapilleta (2019) argues that HEIs should review the type of orientation they provide to their social programs and policies, as one of the most important aspects of their social responsibility.

For Gallardo (2019) universities should be creators of positive impacts to achieve social change, promoting in their community and for the collectivity "ethical values, adaptability in new environments, creativity and leadership" (p. 23) as part of their social responsibility. According to Gezuraga and Herrero (2017), including "solidarity learning in higher education in Latin America has led to more meeting points in which to discuss the benefits of putting solidarity pedagogies into practice in the teaching-learning process in

universities and making them part of their curricular structure, with the aim of training professionals who understand from the inside the changes to which societies are subjected" (p. 10). However, Ramos and Centurión warn, that these processes of institutionalization of service-learning may take a long time, it may take years of consistent institutional policies to appreciate significant results (Ramos and Centurión, 2018, p. 69).

Finally, Gavrila proposes that HEIs establish the existence of a harmony between the objectives of higher education and the main needs of society, as a mutual necessity to achieve the development and transformation of individuals and, therefore, of society in general (Gavrila, 2018, p. 3).

5. Conclusions

Solidarity pedagogies are necessary as a learning model for social transformation, since they are innovative forms of learning oriented to the service of society, originated from the need to achieve an alternative that promotes growth and social development, they are models of intervention, which not only promote social progress, but also improve the quality of education, formation of values and principles in those involved.

This research agrees with the investigations of other researchers such as: Ramos and Centurion (2018); De-Juanas (2020); Pastore (2017); Gallardo (2019); Guezuraga and Herrero (2017); Gavrila (2018); UNESCO (2018) among others, who affirm that the implementation of these pedagogies implies the protagonism of several actors, such as teachers, students, governments and society in general, making present an articulation between them, oriented to generate social responsibility to achieve sustainable human development. At the same time, these actors must understand that this learning in solidarity involves assuming a position in terms of commitment to the society they wish to build.

From the perspective of the Universidad Surcolombiana, it is visualized that the practices that link learning and solidarity service allow students to apply what they have learned in the classroom to the service of the community, and simultaneously help them acquire new knowledge and put into play competencies in real contexts, developing valuable practices both for the formation of an active and participatory citizenship and for the insertion in the labor market.

Finally, it is suggested the creation of new lines of research supported from the solidarity perspective that will help the development of communities in health, economy, education, trying to solve the problems of the communities in order to achieve a society more committed to its environment.

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Evaluation of the managerial process in the interaction of students with functional diversity in the university environment

Evaluación del proceso gerencial en la interacción del estudiante con diversidad funcional en el entorno universitario

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Abstract

The purpose of this article was to build a theoretical corpus on the vision of the emerging reality of the managerial process of interaction of students with disabilities in the university environment. For this purpose, the research was based on the interpretative paradigm, qualitative approach, and the epistemological position was based on the conception of knowledge as a social construction, directed by the phenomenological method and

supported by hermeneutics with the purpose of interpreting and understanding the meanings created by the social actors from their frames of reference on the phenomenon in an intersubjective environment. An in-depth interview was used as a technique to collect the information, applied to five social actors: two university educational directors; two students with some diversity; and a university professor. The information processing was systematized through codification, categorization and triangulation, where categories associated with the reality of the managerial process of interaction of students with disabilities in the university environment were formulated. A theoretical approach was established from the results unveiled from the voices of the social actors, and categorically in combination with the theory, it was evidenced the imperative need to be trained, both teachers and the student population, to keep in constant learning and update the knowledge bases in relation to the management of students with functional diversity. This led to reflect on the existing collaborative actions that should take place in the educational community, since they are the main actors who, by definition, interact with people with different abilities.

Keywords

Resumen

El presente artículo tuvo como propósito construir un corpus teórico sobre la visión de la realidad emergente del proceso gerencial de interacción del estudiante con discapacidad en el entorno universitario. Para ello la investigación se fundamentó en el paradigma interpretativo, enfoque cualitativo, y la postura epistemológica partió de la concepción del conocimiento como una construcción social, direccionado por el método fenomenológico y apoyado en la hermenéutica con el propósito de interpretar y comprender los significados creados por los actores sociales desde sus marcos de referencia sobre el fenómeno en un ámbito intersubjetivo. Como técnica para recopilar la información se utilizó la entrevista en profundidad, aplicada a cinco actores sociales: dos directivos educativos universitarios; dos estudiantes con alguna diversidad; y un docente universitario. El procesamiento de la información fue sistematizado mediante la codificación, categorización y triangulación, donde se formularon categorías asociadas a la realidad del proceso gerencial de interacción del estudiante con discapacidad en el entorno universitario. Se estableció una aproximación teórica a partir de los resultados develados de las voces de los actores sociales, y categóricamente en combinación con la teoría se evidenció la necesidad imperante de estar capacitados, tanto los docentes como la población estudiantil, mantenerse en constante aprendizaje y actualizar las bases del conocimiento en relación con el manejo de estudiantes con diversidad funcional. Esto condujo a reflexionar sobre las acciones colaborativas existentes que se deben dar en la comunidad educativa, pues son los máximos actores que, por definición, interactúan con personas con capacidades diferente.

Palabras clave

1. Introduction

One of the main characteristics of the new global landscape is the one presented with the accelerated changes in the globalized context of technology, information systems, economy

and politics; changes that have led organizations to develop transformation processes that lead them on the competitive path and manage to respond with quality products and services to satisfy the customer. According to Garbanzo these changes have led organizations to develop transformation processes that guide them on the competitive path and manage to provide a significant response to the university population (Garbanzo, 2015, p. 12). Thus, universities are not left out of these changes, since they have experienced in recent years an enormous evolution, both in their structure, operation, and organization. Many of the transformations that have arisen within this educational sector have been the result of the integration of people with disabilities into the university environment, representing for universities a way to meet the demand of people who wish to enter, carry out and complete their university studies.

In this regard, this research represented the significant bases of students with functional diversity from a university context, because the information provided by social actors, as well as previous informants, allowed observing that diversity cannot be seen as an isolated element of the academy, but that it should be inclusive in all areas. Echeita and Duk (2008) refer to the fact that "it should be conceived as part of the institution, of society in general, permeating it, permeating it to make changes in accordance with the needs of the same society to which students with special conditions belong" (p. 5). Thus, it was considered appropriate to review the university management of the generalities involved in the entry of people with disabilities to the university environment, including plans, programs, projects, decision making, including motivations in order to articulate policies to their real conditions of personal, social, academic, vocational and professional development, in attention to the diversity of each person. It has been taken into account, that deciding is circumstantial to life, for this reason, neither the individual, nor the scientific, professional, social or community activities can be abstracted from making decisions.

From this point of view, under reasonable aspects, the action of university studies in people with functional diversity obliges to recognize the full acceptance of a limitation, but, attached to the regulatory bodies that require extreme management with the purpose of guaranteeing the effective fulfillment of these educational rights, since it is fundamental for the students who suffer from some deficiency or disability. In this way, the management of university education is intended to be seen as the activity carried out by human beings with specific capacities within the cosmos of the academy.

In this regard, it can be reasoned that university education leads to the social process with the responsibility of planning, regulating and executing operations in it, with which a purpose is timely achieved, so that it can respond to the needs of the environment and achieve the success of this form of education, applying for this purpose a particular managerial style. Thus, the manager with his style and his particular way of exercising management becomes an individual capable of guiding, making decisions and achieving vital objectives for the success of the university and the human talent that works there to integrate the work team, and finally, is a precursor of the academic growth of the students.

In this sense, and due to the lack of research on the subject, the present work arises to contribute with a set of knowledge derived from the construction and representation of management. Specifically in relation to the integration of people with disabilities to the

university environment, considering the knowledge, opinions, perceptions, and beliefs of social actors and thus build a theoretical approach to the subject in reference.

For this purpose, the study was structured in four scenarios. Scenario I called ontological semblance refers to the approach to the object of study, the intentions and importance of the research; scenario II where a literature review was carried out, the approach to the object of study, the intentions and importance of the research and the theoretical references that support the research were presented. Scenario III, entitled methods and materials, contains the onto-epistemological and methodological view of the research. Scenario IV, entitled results, corresponds to the emerging vision from the real perspective, where the comprehensive sample of the findings of the study is presented and the reflective event that allows the integration of diversity into society is envisioned.

2. Literature Review

2.1. Management Process

The managerial processes refer to the study of the missions of the organizational areas in terms of the services they provide inside or outside an institution, Miner (1978) refers to the fact that the "administrative process contains five elements, planning, organization, direction, coordination, control" (p. 28). These elements are usually imposed in the managerial processes, bringing them closer to academic events, when reference is made to planning, the contribution of the objectives is evidenced as well as the extension of the planning to finally verify the effectiveness of the plans; while for the organization there are the quantifiable objectives in a scenario with a clear concept of activities or activities involved as well as the clear and concise area of authority or decision. For the management axis, there is the purpose of the company in this case is none other than the university scenario, in the same way the productive factors and the nature of the human factor are included. Finally, there is the control by means of which standards can be established, corrections can be made and due measurement can be made, without neglecting to consider the respective feedback.

In the face of the eventual changes that are taking place in the world, new forms of work are demanded, training of citizens, which have their genesis in the epistemological rupture of the sciences and events that are accentuated by the greening of information and communication technologies, the academy with the flowering of a new era. In this sense, we can see how this era invites organizations to reorient their processes based on the creation of networks of workers, users, the community, organizational forms, and labor relations oriented to continuous and innovative change. With the purpose of walking in the context of profound changes as well as transformations. In this sense, organizations have to identify themselves in a current competitive environment that admits globalization, with the capacity to adapt to situations, move forward in the face of unforeseen events, overcoming the opposite and taking advantage of challenges to unlearn, learn, relearn and deploy.

To achieve the aforementioned, these organizations must have various resources, especially human talent, which becomes the essential backbone of any organization. Chiavenato (2006) states "that organizations constitute the dominant form of the institution, of modern society and involve the participation of countless people to achieve pre-established objectives" (p. 7). From there, then, the organization is visualized as a unit composed of two

or more people working in relative continuity to achieve a goal or set of goals for the common good.

In this way, organizations constitute a biological system where the primordial axis are all the members, human beings in action and interaction that integrate it for its effectiveness, where conditions are established to prevail that are not determinant in the intellectual or physical capacities that hinder the achievement of organizational goals, but it is the lack of aptitudes and attitudes to act with other individuals. In line with the above, Crosby (1996) refers to the lack of aptitudes and attitudes, which "must be present when selecting simple, harmonious and integrating solutions, since simple solutions are more practical, as an undeniable fact in the world we live in" (p. 32). Just as the environment in which organizations operate can have an impact on a more turbulent and uncertain world, so too can the competitiveness that is exacerbated to the extreme, for example, markets that are highly fragmented.

On the other hand, management practices aimed at operational efficiency are not in themselves sufficient to consolidate competitiveness and ensure the long-term viability of an organization due to the management of the people in it, as they are part of a key success factor in organizations. This with the purpose of advancing in the productive process, strengthening and adapting to the structures that today's society demands. Thus, with the passing of time, we have tried to respond to a changing society; companies, for example, have management styles coupled with organizational performance in which they demand real needs that allow to increase the quality of life in a dynamic world that points towards technological and professional progress in different areas. Therefore, organizations have sought to respond to these demands by means of management paradigms and approaches that allow them to satisfy the current needs of human beings.

It is worth considering that the managerial context of organizations demands an ever-increasing effort; it is a range of uncertain environments where not only the managerial capacity to intervene in this context is at stake, but also to generate effective and innovative management strategies and managerial styles that allow addressing challenges in the search to provide real solutions for the benefit of social expectations. In this regard, Robbins and Coulter (2005) state that management "consists of coordinating work activities so that they are carried out efficiently and effectively with and through other people" (p. 17). While Chiavenato (2006) states that management "is an operational process composed of functions" (p. 126). Taking into consideration the above quotations, it is possible to observe the coincidences of both authors with respect to various elements pertaining to management, which, when combined, constitute the managerial process. It should also be noted that among the elements of the management process it is very important to define separately the functions performed by managers, which, when interrelated, constitute the management process.

2.2   Elements of the management process

According to Robbins and Coulter (2005), "managers who perform the planning function define goals, set strategies to achieve them and draw up plans to integrate and coordinate activities" (p. 9). In other words, management is required to think in advance about the course to be followed by the organization, establish the actions to be carried out, their timing and frequency. This element also makes it possible to determine clearly and precisely

what are the objectives and results to be achieved by the institution as a result of its production processes. The organization can also be observed; this managerial function allows companies to determine how to achieve the established goals. In this sense, Münch (2006) explains that "through organization, functions and responsibilities are determined and methods are established to simplify work" (p. 92). The author describes the structure, the limits and the way in which the organization's participants will carry out the tasks that will make it possible to achieve what is established in the planning.

According to Chiavenato (2006), citing Fayol, this element of the management process allows "guiding and orienting personnel" (p. 70). It is clear that setting the path in the performance of tasks by the collaborators, as expressed by the author, requires the manager's ability to lead, influence and motivate the staff, in order to obtain their maximum performance and achieve the proposed objectives and goals. This managerial function consists of comparing the results obtained from a given management or production process with respect to the planned goals or objectives. Within this framework, the authors Bateman and Snell (2009) explain that control "is about how effective managers ensure that activities are carried out as planned" (p. 574). Thus, it is evident that any deviation from what was planned will require the manager's action to ensure that goals are met, and processes are continuously improved.

In addition, it is important to mention the motivation of human resources for any organization, since it is undoubtedly one of the most important factors in the development of production processes, achievement of objectives and attainment of goals. Based on this premise, it is a priority for any manager to maintain in his collaborators a constant disposition in the application of skills, abilities, knowledge, and capacities in order to maintain and increase business productivity.

2.3 Overview of the Social Model of Functional Diversity

To enter into the knowledge of the emblematic history leads to present a social theoretical model on functional diversity and it becomes relevant to go through the cognitive world through the formation of some movements that have been formed with the passing of time. However, behind this curtain of wills lies the most important thing: the organizational factor with the support of the Ecuadorian national government.

Peña (2014) explains how he changes the term disability for functional diversity as a very accurate position:

> The term disability reminds us of a deficiency, the particularity of an individual that in a given context can also diminish other abilities. For this reason, we prefer the concept of diversity because it transforms the negative meaning of disability into something positive. This clarification in terminology is also a challenge, that of undoing prejudices that we have assimilated and that have much to do with the role that has been attributed to people with disabilities throughout history (p. 172).

It should be noted that within the complexity of life, all human beings have a trajectory of value; in this sense, the existence of people with a notorious difference of acting differently from others is what has made it possible to put an end to the myth of differentiating a human being who may be imbued with many other virtues despite his or her diversity. This is what

has made it possible for studies on the subject to break this milestone and integrate and include this population in society.

It is pertinent to bring up a movement that has been decisive for the inclusion of students with functional diversity in the academic world. That is why this movement of independent living, according to García (2003):

> It was born in the United States at the end of the 60s of the last century, at the University of Berkeley, California. Although this movement is strongly charged with the struggle for civil rights, in it, with the voice of the discriminated people themselves or their functional diversity, radical changes were established from the moral point of view to approach this human reality (p. 136).

With this approach to what we have as a guarantee of the radical struggle for such a special right as discrimination, it is necessary to find the basis of the voice of those who have lived the experience of being discriminated against or excluded from rights and guarantees such as education and free academic development. As reaffirmed by Palacios (2007) "a student with severe disability entered the University of Berkeley, California, to study Political Science, demonstrating this event is the ability of a person to achieve academic goals". This social model presents its entrance in the 60s. Thus, by allowing him to enter the university, he demonstrated his ability with the approval of the career.

When it comes to investigating the causes of the origin of disability, they are attributed to the social aspect, Perez (2010) argues that:

> Solutions" should not be individualized with respect to each "affected" person, but rather should be directed at society as a whole. Hence, in contrast to the medical model, which is based on the rehabilitation of people with disabilities, the social model emphasizes the rehabilitation of a society, which must be conceived and designed to meet the needs of all people, managing differences and integrating diversity. (p. 1100).

In this sense, the social model includes the conduction to citizen rehabilitation. That is to say, to a trend that contributes to cover the elementary needs of the person who requires the appropriate treatment to his disability. In this way, it may eventually be conceived and designed to the total integration of this person with functional diversity so that he/she can fully adapt to the regular activities of any person.

Unlike the medical model that seeks rehabilitation in the field of health. It is postulated from Psychology in its Diagnostic and Statistical Manual of Mental Diseases (DSMV, 2018) the International Classification of impairments, disabilities and handicaps. Thus, according to the Muñoz (2010) approach, it indicates that:

> Impairment refers to any loss or abnormality of a psychological, physiological or anatomical structure or function. Impairments are disorders in any organ, and include defects in limbs, organs or other body structures, as well as in any mental function, or the loss of any of these organs or functions (p. 48).

In this way, to refer to the deficiency is to turn psychological functions that disturb in any way the functional organic structure; they can be in the limbs or any other organ, with reduction in the precise and determined operation, for which it deserves it function in normal state. With no other limitations than those inherent to this functional anomaly, considered for the realization of fundamental movements, such as walking, organs such as vision and hearing are compromised, dysphasia is present, among other characteristics of disabilities in human beings that limit their development on their own. However, due to technological advances, successful surgical operations are already available worldwide to recover the compromised organ, as well as assisting equipment that provide conformity to perform normal activities.

Muñoz (2010) demonstrates handicap as:

> Minusvalía (handicap), hace referencia a una situación desventajosa para un individuo determinado, consecuencia de una deficiencia o discapacidad, que lo limita o le impide desempeñar una función considerada normal en su caso (dependiendo de la edad, del género, factores sociales y lo culturales). El término es también una clasificación de las circunstancias en las que es probable que se encuentren las personas discapacitadas. La minusvalía describe la situación social y económica de las personas deficientes o discapacitadas, desventajosa en comparación con la de otras personas (p. 50).

In this context, it can be taken into consideration the fundamental tuning of a reality that appears as a barrier to be carried for life for those who present the condition of functional diversity. Due to these causes people may require more attention to basic needs, however, with the social integration model, freedom of studies is guaranteed, which favors the development and evolution of a person with functional diversity. In the current position, the three main diagnostic criteria are present: significant limitations in intellectual functions; significant limitations in adaptive behavior manifested in conceptual and social and practical skills; onset before the age of 18. Therefore, intellectual disability should not be understood as a characteristic of the individual.

By 1992, intellectual disability was considered with the intention of eliminating the excessive use of tests aimed at diagnosing IQ. However, this task has been for years the problem of psychology professionals, who under the contributions of successive manuals have concentrated their use by eliminating some anomalies to merge them with others. Seeking to have information, to evaluate the person under their individual needs, with the reflection of the external factors that surround him/her.

It is relevant to mention that people with intellectual disabilities or functional diversity, in one way or another, are people who are protected from a significant and meaningful perspective by Human Rights. Hence, they should not be discriminated or excluded from academic and professional training as other similar, not complying with this decree would be violating the right that is inherent as a person, regardless of the difficulty or limitation it has. Nowadays called intellectual development disorder.

Thus, fundamental criteria are set out that gather the standards to evaluate the person's intellectual capacity that would be within the reasoning valued as a disability. In this regard, the Diagnostic and Statistical Manual of Mental Disorders DSMV (2018) indicates that:

> deficits in intellectual functions, such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning and experiential learning, as verified by clinical assessment and individualized standardized intelligence testing. Adaptive behavioral deficits resulting in failure to meet developmental and sociocultural standards for personal autonomy and social responsibility. Without ongoing support, adaptive deficits limit functioning in one or more activities of daily living, such as communication, social participation, independent living in multiple environments. Onset of intellectual and adaptive impairments during developmental period (p. 3).

Among the characteristic elements of the deficiencies as limiting the knowledge for being a mental state that compromises learning, it is evident the presence of experts in the field to evaluate the progress or not of a patient with pathologies of this type, but the human being, in his environment does not have individual mediated limitations, but more accurately than our own limitations. Hence, a person with a functional diversity will have one or more limitations in the activities of daily living but will still be able to function in his environment under a period of adaptation.

2.4   Pedagogy of Diversity

Pedagogy from the inclusive perspective as referred to in the framework of action of the Salamanca Statement (UNESCO) should recognize and respond to the diverse needs of students, accommodating both styles and speeds of learning and ensuring their education through an appropriate curriculum, organizational modalities, teaching strategies, use of resources and community relations. With reference to what this approach suggests, it should direct its interest to some specific areas such as curriculum, school organization, resources, community, and teaching strategies.

From this approach it can be mentioned that school curricula should be revised so that both the objectives and the contents included are sufficiently broad, functional, relevant, and flexible to facilitate, precisely, that an equally broad and diverse number of students find in them significant and varied opportunities to learn. It is not enough for a curriculum to be broad and relevant for the majority since it must be adaptable to the extent necessary to meet the special needs of certain students.

Regarding teaching strategies, Ortiz (2000) suggests that "interactive teaching and learning should be adopted" (p. 16). In this new understanding of teaching, the teacher's action becomes more complex, as his or her critical action in adapting the common curriculum to the different individual needs is considered basic.

On the other hand, the inclusive school has set as one of its principles the progress of communities and societies, i.e., societies where everyone develops a sense of belonging and where everyone has the same rights, opportunities, and responsibilities. This explains that inclusion is a model designed to achieve social improvement where each member of the community is committed to achieving inclusive results.

At the same time, it is essential to deepen the teaching-learning processes and the elements that condition the curriculum, such as organization, planning and coordination among all the sectors involved. This would transform the school climate and result in greater and better collaboration and participation by all. The fundamentals contained in the term inclusion are important foundations for this concept to be increasingly adopted by the international context with the intention of clarifying, assuming, debating, and understanding that all children should be included in educational and social life, and not only those considered to have special educational needs and/or disabilities.

Therefore, inclusion does not attempt to integrate into school and community life someone or some group that is certainly excluded; its objective is to promote improvements in school and society so as not to leave anyone out. That is, it focuses on how to build a system that manages to successfully respond to needs.

It is significant to present Peña (2014), who opportunely comments on functional diversity in university classrooms, stating that:

> More and more frequently we find students with disabilities in university classrooms. In these cases, the educator must take on the challenge of planning and designing strategies that provide answers on what and how to teach in order to achieve their inclusion along with the rest of the students. In this article we present the experience of a blind student in the art education classroom. Image is our language, and we intend to undo the apparent contradiction between image and blindness in order to understand that artistic and visual creation is possible for blind people. The experience refers us to that universe of internal representations of the blind person that makes him/her capable of generating other new images. The visual thus becomes a language with which to establish bridges of communication between those who see and those who do not (p. 9).

In this regard, it is intended that the university teacher can integrate and include students with functional diversity, for this hade use all the necessary tools and strategies that allow the learning fluency of people with learning disabilities, as well as those who lack this conditional state.

2.5 The University Curriculum

The dizzying cultural, social, political, and technological changes that are impacting society have been generating complex, changing and dynamic realities that affect educational institutions, especially universities. In most cases, universities are located under a logic that responds to the demands of the market and the designs of these globalized times.

This rationality is what has led to the development of objective science, to the imposition of universal laws proclaiming a univocal method, where calculability and accuracy predominate; that is to say, technical, and instrumental reason. This is how, from this positivist paradigm, both man and nature have been subjected, turning them in many cases into passive, distant, hopeless objects with a disciplined and regulated subjectivity. From this simplifying perspective of reality, binomials are privileged as antagonistic opposites: object-subject, change-stability, nature-society, among others.

These approaches are intimately associated with the pedagogical practices carried out in our universities. In this sense, several authors agree in affirming that the different predominant conceptions in university curricula involve diverse epistemological and ideological perspectives, closely linked to the hegemonic logic and its dominant mechanisms of social control in the educational space (Follari, 1996; Lanz, 1997; Pérez, 2000). Hence, much is exposed in Higher Education Institutions as knowledge content and the singular language with which it is defined does not respond to the choice of each one but obeys what is established as legitimate by the scientific community.

On the basis of this scheme, it is stated that the university has installed, maintained and reproduced a training model characterized by an accentuated professionalizing orientation, whose purpose is directed towards the training of efficient professionals, trained for the elaboration, application and mastery of techniques and procedures far from any creative subjectivity. This position is due to the fact that knowledge is assumed from the homogeneous, the analogical, the univocal, oriented towards the universalization of laws as an unobjectionable reality.

It is found, then, as Gil (2012) points out, in front of an institution that "prefigures, standardizes, molds and controls the main protagonists of the educational fact, stripping them of their cultural background and their creative, symbolic, volitional and affective sense" (p.17). Therefore, normativity and reductionism become the refuge that contribute to those instrumental practices that permeate and prevail in the discourse of academic environments.

This economicist-positivist discourse subordinates the university educational process to notions of efficiency, effectiveness, productivity, competitiveness, orienting pedagogical practice to the mastery of issues such as: training, instructing, transmitting; curricular objectives in terms of observable and measurable behaviors; pre-established competencies aimed at mastering reality and not reflecting on it, to demonstrate evaluative skills in terms of performance. In this context Díaz and Rodríguez (2016) argue that "the curricular preaching imposed in the different models come from varied theoretical referents such as: competency-based education, flexible curriculum, strategic curriculum planning, institutional analysis, total quality, among others" (p. 55). In most cases, these visions prioritize the ideas of efficiency, quality, and excellence in the formation of highly competent and competitive human capital.

2.6 The University Curriculum in the Face of Functional Diversity

One of the fundamental tools available to the university to attend to the individual and diverse characteristics of its students is educational planning. For Escudero (1992), the preparation of these documents should be considered "as something more than a purely administrative process and should incorporate the explicit recognition of and commitment to a new style of promoting change in education: participation, negotiation, autonomy and involvement of the social community and the teaching staff" (p. 37). In short, these school management documents would have to respond to the expression and demand of a political, social, cultural, and economic background that would respond to the linguistic, cultural, and personal diversity of each individual student as it characterizes a democratic society.

From this approach, we can speak of an open and participatory curriculum that recomposes in a non-authoritarian and non-centralist way the administrative, social, political, organizational, and pedagogical conditions, managing in a collegial and effective way the reality and culture of our student body. A community of people who are not pressured but interested in building and improving their own educational mission from within. People understood as subjects of change capable of transforming educational policy and reconstructing the curriculum towards educational responses properly contextualized according to the students and their socio-cultural environments. Without forgetting, likewise, the social, ideological, and political coordinates of the moment and of our democratic history.

This perspective promotes a new school model where teachers, students, parents and other social entities trace their own trajectory as a school community. Entering into this process of debate is what is truly enriching for the school. Otherwise, the elaboration of the different levels of concreteness of the curriculum can become a mere administrative formality, as a result of which the school project would not give an explicit account of its existence; it would not have the value or the strength to transform the daily practice of the school. Moreover, it would not respond to a shared reflection and assessment of the reality of its environment.

The concept of special educational needs in the framework of the comprehensive school focuses its attention on the needs necessary to provide the student with his or her development process. From this perspective, the school's responsibility is decisive since it has to assume the commitment to develop new lines of action and methodological approaches conducive to changes in teaching procedures.

Consequently, the curriculum constitutes the central element for designing the response to the different educational needs of the students attending school. A curriculum that shifts the focus of the teaching-learning process from the content to the subject in order to provide all students with equal opportunities in their education. In this way, open systems of education are promoted that conceive learning as a process carried out by the students themselves through their own exchanges with the environment and from their particular ways of thinking. This promotes a school open to diversity that allows the adaptation and adaptation of the curriculum to the educational needs of each student. Therefore, it is necessary to have a single basic curriculum framework of an open and flexible nature that radiates the precise orientations and programs to adapt to the demands of each subject, while taking into account the specific characteristics of the environment in which it is to be applied.

3. Methods and materials

3.1 Approach

The research was based on the qualitative approach. When referring to this type of qualitative research, Cook and Reichardt (2009) indicate that its focus is on "understanding human behavior from the actor's own frame of reference, grounded in reality, discovery-oriented, exploratory, expansionist, descriptive and inductive" (p. 29). Thus, the research, far from attempting to generalize, sought to perceive and apprehend reality from the feelings and thoughts of the social actors involved in the phenomenon studied.

3.2   Reach

The research had a descriptive scope because a verbal description or explanation of the studied phenomenon, its essence, nature and behavior was made. From this perspective, it can be said that social studies are not only to understand the elements that characterize and configure the phenomenon under study, but also to build a theoretical approach in which are expressed the doings, knowledge, and attitudes that characterize the phenomenon under study. In addition, it allowed the construction of a theoretical approach in which the doings, knowledge and feelings of its ethnographic legacy are expressed. According to Álvarez-García (2005), this scope makes it possible to:

> to bring together the results of observation in an exposition of the features of the phenomenon under study, according to criteria that give coherence and order to the presentation of the data, in order to arrive at the formulation of hypotheses. At the descriptive level, no hypotheses are put forward; the purpose of the descriptive stage is to generalize in order to arrive at the formulation of hypotheses (p. 95).

From the above it follows that phenomenological studies contemplate much more than a description, as they also include the understanding and interpretation of phenomena until reaching theorizations about them. Therefore, according to this reasoning, the study not only includes the description of the values, beliefs and customs that are part of the teachers; but also can interpret and understand the vision of the reality of the student with disabilities in their process of interaction with the university environment.

3.3   Method

As for the method, the phenomenological and hermeneutic method of Ricoeur was adopted, which allowed the interpretation of the meanings given by the social actors to the reality immersed in the development of the phenomenon under study in the research process. Thus, as the circumstances that link the elements of managerial action with the environment of university students emerge, functional diversity is shown to be reflexive. The authors define the method of phenomenology as a vast project that is not restricted to a precise work or group of works; it is, in fact, less a doctrine than a method capable of multiple embodiments and of which Husserl has developed only a small number of possibilities (Ricoeur, 199, p. 11).

3.4   Population and sample

The research started from the idea of conducting a study with students with disabilities in the university environment which were called social actors and through them the genesis of their interaction process was reached, in relation to these key informants Taylor (1986) argue that "informants are those who sponsor the researcher in the scenario and are the primary source of information" (p. 61). Therefore, key informants are almost memorable figures that constitute notable examples in relation to them. According to Martinez (2008) in the use of qualitative studies requires the researcher to "identify precisely which is the population that allows to identify describe and interpret in detail situations of the contexts to be studied" (p. 85).

In this sense, the social actors of this study were two (2) administrative management personnel, two (2) students, and one (1) professor, whose characteristics are the following:

the administrative personnel formed by the Dean and the Sub-Dean, are management personnel who belong to the University, experience of 12 years the first and 5 years the second, as well as university students who have some diversity, and the professor, co-worker who represents the guild in the University Council with experience of 18 years at the university. The criteria used for the selection of the social actors and the meetings with them were shaped according to their availability, as well as the presence of the aforementioned characteristics. Also participating as previous informants were the teachers whose pedagogical experiences in the interaction with students with disabilities were important to know what resources and strategies, they use to achieve the pedagogical purpose and fulfill the educational objectives. In addition, it is important to determine their needs and feelings about teaching this group of students.

Social actor	Position	Profession	Sex	Years
A	Senior Management	Administrative	F	37
A2	Senior Staff	Administrative	M	29
B	Student with diversity	Semester	M	19
B2	Student with diversity	Semester	M	22
C	University professor	Teacher	M	41

Table 1. Social actors in the study

3.5 Research techniques and instruments

The in-depth interview technique was used as a strategy for the collection of information from the social actors. According to Benney, this is a tool that makes it possible to enter the world of the subjects through stories, the way they see and experience their reality and how they project it in their actions. This represents a valuable resource where the object of study is constituted by the life, experiences, ideas, values, and norms of the interviewee (Benney, 1970).

The interview was organized according to the central themes of the research and will be carefully applied to obtain clear accounts of the social actors and their experience related to the emerging reality of the interaction process of the student with diversity in the university environment.

3.6 Reliability of instruments

The reliability of this research is detected by the same intentionality related to interpreting the reality of students with disabilities in their interaction process with the university environment, which is assumed in the non-replicability. This is supported by the arguments of Goetz and LeCompte (2008) that in a natural setting the difficulties of replication are particularly susceptible "the generation, refinement and validation of constructs and postulates may not require the replication of situations. Moreover, since human behavior is never static, no study (...) can be replicated with accuracy" (p. 215). Thus, in order for the transcribed information to be reliable, the social actors were presented with the material in the interview so that they could say if this was really what described each of the situations on which the interview was based. As for the comprehensive observation, the protocol was presented to each actor so that he could verify whether the hermeneutic account presented therein corresponded to reality.

3.7   Data processing techniques

For data processing, the technique of categorization was used, which consists of the interpretation of the information, and serves to develop the theory, while at the same time forming the basis for deciding what additional data should be collected. Thus, the linear process of first collecting the information and then interpreting it is abandoned in favor of intermingled procedures. With the interpretation in the thematic approach, two specific goals were pursued: one of them deals with the relationship, discovery or contextualization of statements which normally leads to an augmentation of the original text; and the other goal allowed the reduction of the original text by segments (coding of the material for the purpose of categorization) assuming the elements that mostly draw the attention of the researcher's interest. For the purposes of this study, once the material resulting from the interviews had been transcribed and presented to the social actors so that they could verify whether what was expressed their corresponded to what they wanted to say, we proceeded to read and simultaneously listen to the content in order to recall the moment, taking note of the emerging categories around the intentionality of this study, as well as those elements that define the category and which constituted a posteriori the subcategories or dimensions of each one of them.

In order to facilitate the categorization process, the thematic areas around which the categories revolve were identified. All this in a hermeneutic process that will allow us to go back and forth, asking questions to the data based on the concerns that guide this study. Finally, the development of the theory implied the formulation of categories or concepts and their interconnections in a structure of high conceptual level in order to build a theoretical corpus of reflection on the vision of the reality of the student with functional diversity in his process of interaction with the university environment.

Finally, after grouping, codifying, identifying, classifying the categories, we proceeded to elaborate a comprehensive synthesis in order to build the theoretical approach by reducing the information of the social actors to transform them into a set of knowledge that allows understanding the events and phenomena that respond to the intentions of the research, and thus provide an explanation, a solution in an innovative way to the existing problem.

3.8   Data analysis techniques

Hermeneutic interpretation was used for data analysis because this technique offered an adequate articulation and understanding of an educational reality that builds its meaning and sense from the intersubjective language, which begins in the conception that each social actor has of the process of interaction in the university environment, but which will then be shared and agreed upon in the relationships that are established between them from everyday life.

Thus, with the intention of interpreting different positions, it is observed that each of the interpretative levels are theoretically based, for the purposes of the open, axial and selective categorization process, presenting then the triangulation as the event that facilitates the confrontation of the different versions given by the social actors during the four meetings previously arranged in each locality, which supports the level of investigative confidence, as shown in the following Figure 1 that has to do with the hermeneutic cycle, refers to the understanding, the explanation and finally the interpretation..

Figure 1. Hermeneutic Cycle. Source: (Martínez, 2008)

4. Results

From the analysis of the data, five categories emerged with their respective subcategories: (1) program, generating the subcategory: planning (2) inclusion, generating the subcategory: non-discrimination (3) curricular unit, generating the subcategories: knowledge management, knowledge transfer (4) strategies, generating the subcategories: will, institutional policies and decision (5) training with the subcategories of awareness and humanization. In addition, a graph showing the emerging categories is presented, followed by an outline of these categories:
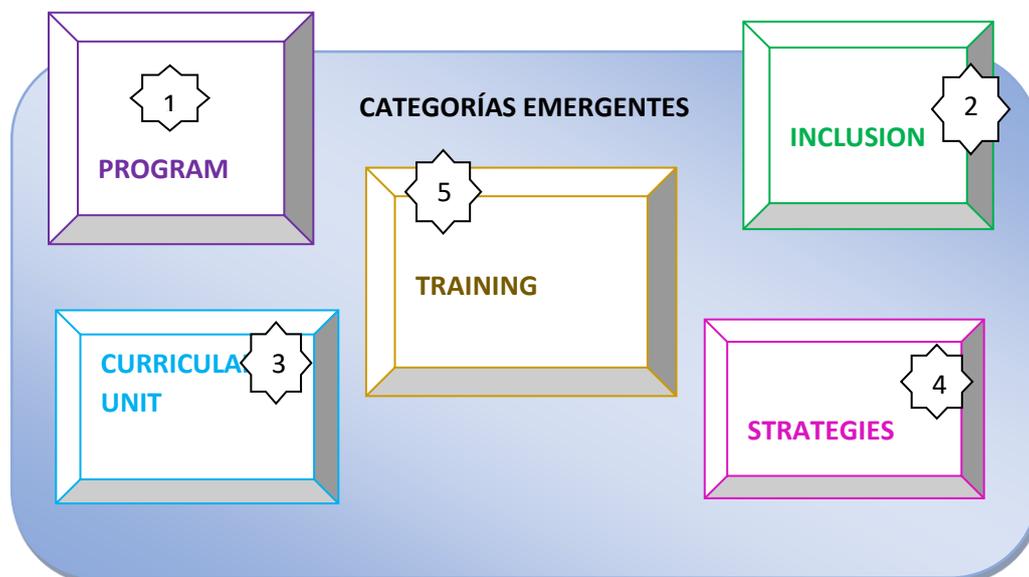
Table 2 shows the categorical structure obtained from the in-depth interviews with each of the informants

N	DIMENSIONS	CODES	RELEVANT QUOTATIONS
1	Managerial in the university setting with students of diverse functions.	Programs A1-B1-C1	Participation and procedures that guarantee access and permanence in programs [A1]. Programs are not defined [A1] program that strengthens [B1] possibility of repeating a subject as reinforcement. [C1]
2	Knowledge management with students with functional diversity	Inclusion A1-B1-C1	I believe in the right of inclusion because each diversity must be addressed individually. [C1] I believe in the right of inclusion because each diversity must be catered for individually [B1]. There should be no discrimination [A1]
3	Learning for students with functional diversity	Curricular unit A1-B1-C1	But we can speed things up if there were projects to teach the classes in a more didactic way, they transfer to us the knowledge they have, without pedagogy [C1]. But we can speed things up if there were projects to teach the classes in a more didactic way, they transfer to us the knowledge they have, without pedagogy. [B1] They must respond to a management in which the academic level or performance for learning lies. [A1]

4	Managing the management process in the university environment for students with functional diversity.	Strategies A1-B1-C1	There they have to apply strategies, learning, put students with functional diversity, to explain what they have learned [C1]. There have to apply strategies, of learning, put students with functional diversity, to explain what they have learned. [B1] That teachers implement pedagogical strategies both by personal conviction, and by university guidelines. [A1]
5	Academic learning management consolidates quality training for students with functional diversity.	Training A1-B1-C1	That the training of students who have difficulty in mobility, even in learning, should be able to make progress, that would be training. [C1] Our university is a company whose purpose is to train people so that they can defend themselves in life through learning. [B1] That the teachers know about specialized materials. [A1]

Figure 3. Categorical structure Informants. Dimensions and codes A1=Administrative Management Staff B1=Students with diversity C1=University Faculty, interviewed. Numbers 1 to 3 indicate the order of participation.

Finally, once the information categories had been generated (open coding), the categories were selected and positioned within a theoretical model (axial code), in order to subsequently present the interpretation of the findings, which emerged from the social actors of the research. Thus, the following categories were identified:

4.1 Category: Program

In relation to the category referred to the Program, it is necessary to mention what the United Nations Organization (1982) expects from the world action for people with disabilities, which is considered as a global strategy to consolidate their prevention, rehabilitation and equal opportunities. In this way, it seeks the full participation of all persons with functional diversity in social life and national development. The program also stresses the need to address diversity from a human rights perspective.

Based on this, changes are evident in all contexts around the world, with education being one of the most important, since people with disabilities or functional diversity were excluded from this area for a long time, especially from the university education subsystem. This is due to the fact that the insertion approach evaluated more the weaknesses than the capacities present in this group of people, preventing the possibility of insertion, continuation and completion of some university careers. This category incorporates its respective planning subcategory.

4.2 Category: Inclusion

With regard to this category, the subcategory: non-discrimination was generated. In this sense, Booth points out that inclusion has to do with the process of increasing and maintaining the participation of all people in society, education, or community simultaneously, trying to reduce and eliminate all types of processes that lead to exclusion (Booth, 1996). It will imply, as Ainscow (1999) also refers, "the disappearance of all forms of discrimination, as well as deciding what needs to be changed and how" (p. 25). Issues

such as social justice, equity, human rights, and non-discrimination are key in the field of inclusion. From the participatory perspective, the academy should not discriminate for any condition, especially because it is a human right, established in all nations of the world, inclusion allows the development of the personality, and human beings unify feelings, knowledge, regardless of race, sex, social status, age, that people have, and the fact that they are not discriminated against for any reason.

4.3 Category: Curricular unit

Another substantial category that emanated from the social actors in their versions was the curricular unit, since, being efficiently implemented in each of the neuralgic processes that determine the effective development of the same and to achieve the goals set, sustainable programs must be incorporated to be inserted in society, a binomial society-enterprise (public and private university institutions) in which they are immersed. This curricular unit includes the following subcategories: knowledge management, knowledge transfer and knowledge management.

4.4 Category: Strategies

In this regard, a category was visualized that refers in a particular way to the level of education and the management process, it is about strategies; these must be applied at all times by the teacher in the educational mantle, it is the duty to recognize and respond to the diverse needs of students, accommodating both styles and speed in learning and ensuring education to all students through an appropriate curriculum, organizational modalities, teaching strategies, use of resources and relations with the community". This was also underpinned by the Salamanca Declaration (UNESCO) 1994. With reference to what this approach suggests, we must address specific areas such as curriculum, school organization, resources, community and teaching strategies. From this category, the following subcategories were generated: will, institutional policies and decision.

4.5 Category: Training

It is similar to academic standards, in this sense García-Hoz (1981) mentions that:

> In the field of education, all authentic educational activity must be centered on the harmonious development of the personality. The purpose of educational activity does not lie in the perfection of the intelligence, of the will or in the education of a technical training, but in promoting the process of personalization, through which man puts into action his personal potentialities (p. 10).

Therefore, the training of the personnel working in the university institution must be constantly acquiring the necessary competences for the insertion and adequate integration of students with functional diversity. In this regard, Ruiz linked training to management in the university educational sector, is logically referred to the wise administration of all resources, including physical, financial, human, and technological resources in possession of the institution, useful and necessary to achieve the goals established by the organization to fulfill its mission and vision within the framework of its institutional values (Ruiz, 2002).

Because of this, the manager must strategically take care of management, which consists of planning, organizing, directing, and controlling the praxis of all workers, as well as generating the necessary motivation to achieve the objectives in a satisfactory work

environment. In the strict sense of the word, the academic government led by an innovative and transforming manager must have middle management staff, in this case, deans, directors, department heads, and even teachers, with transforming thinking, who promote synergy and emotional balance in all strata of workers, that is to say, teaching, administrative and service personnel, as well as the team of external consultants and advisors who work in the promotion of the institutional image, providing the necessary tools and strategies to achieve both internal and external vision objectives in order to enter the world of the transmodern galaxy.

5. Conclusions

This experience leads us to consider that diversity in the university classroom implies an integral work of constant collaboration that involves all members of the academic community, including students, teachers and tutors. In this circumstance, some issues that reflect on diversity in the university classroom were described based on this educational experience. Thus, the managerial scheme presents a level of depth within the academic, as it has to be conceived as the backbone of the learning process, so that access to distant realities generates new values when the scholar faces knowledge and subject to changes, adaptations to new cultures. The fundamental purpose, from the reflective perception is the effectiveness in the transmission of knowledge, in this, we must educate the affective states that we know of those who have limitations, which is not an impediment to continue academically.

In this sense, when managing education, it is seen as a result that will be obtained from a praxis enhanced from the point of view of the culture of teachers that constitute an accumulation of knowledge, habits, beliefs, customs, or capabilities. To upset the dream of education at the university level reflects the endless labor opportunities, in the term referring to the educational term, which will open the doors to personal and family sustenance. Within the pedagogical thinking, with today's tendency towards the eco-cognitive, it is important to offer management training programs to the directors of school organizations, as well as to the members of the community. The purpose of this is to strengthen and consolidate creative actions to increase knowledge in the search for technological advances in the field of educational management in order to attract a greater number of students with functional diversity and insert them into the occupational world.

In this sense, the commitment of teachers is felt, as stated in the constitutional norm of Ecuador, which serves as a cognitive gear in the future of the graduate and his potential labor insertion, contributing to the configuration of professional identity. From this reflection, the transcendence of the experiences for the intervention through university professional practices lies in the fact that through them a transmission is made about the profession, in terms of a professional task, which inevitably leads to questioning about the raison d'être of the discipline.

In addition, practices characterized by rejection, segregation and exclusion of students with functional diversity were observed, in a constant search of their own and their families to find an educational space where they are recognized and accepted. Finally, the lack of collaboration, communication and leadership of the authorities were identified as the main

challenges of the University, highlighting the need to unify goals, considering the voices of the faculty and students with functional diversity.

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Inclusive methods for reading ability: case of students with moderate intellectual disability

Métodos inclusivos para la capacidad lectora: caso de estudiantes con discapacidad intelectual moderada

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Abstract

This article deals with inclusive methods as methodological strategies and their scope in addressing the reading ability of students with moderate intellectual disabilities. The teachers' lack of knowledge and little mastery of inclusive topics limit their capacity to respond to individual and diverse demands. The critical vision of four experts on the subject nourished the research task and allowed confronting the development of real practices with the pertinent ones. The basic objectives made it possible to describe the characteristics of inclusive methods and to evaluate the reading ability developed by students with moderate intellectual disabilities; through a reading test, the strengths and weaknesses in the linguistic area were evidenced. The analytical and deductive methods were evidenced in the study, constituting valid references for obtaining reliable data. The relevant results obtained in the test allowed concluding that, at an average level, the reading ability of the student group is in the process of being acquired, being viable the incorporation of inclusive initiatives oriented to the continuous improvement of the reading development. The presentation of texts with images is a valid option since it facilitates the comprehension and interpretation of the topics addressed.

Keywords
Learning, reading, disability, inclusive methods, reading skills

Resumen
El presente artículo trata sobre los métodos inclusivos como estrategias metodológicas y su alcance en el abordaje de la capacidad lectora de estudiantes con discapacidad intelectual moderada. El desconocimiento y poco dominio de temas inclusivos por parte de los docentes limitan la capacidad de respuesta ante las demandas individuales y diversas. La visión crítica de cuatro expertos en el tema nutrió la tarea investigativa y permitió confrontar el desarrollo de las prácticas reales con las pertinentes. Los objetivos bases permitieron describir las características de los métodos inclusivos y evaluar la capacidad lectora que desarrollan los estudiantes con discapacidad intelectual moderada; a través de una prueba de lectura se evidenció las fortalezas y debilidades en el área lingüística. Los métodos analítico y deductivo se evidenciaron en el estudio, constituyéndose en referentes válidos para la obtención de datos confiables. Los resultados relevantes obtenidos en la prueba permitieron concluir que, en un nivel promedio, la capacidad lectora del grupo estudiantil se encuentra en proceso de ser adquirida, siendo viable la incorporación de iniciativas inclusivas orientadas a la mejora continua del desarrollo lector. La presentación de textos con imágenes es una opción válida puesto que facilita la comprensión e interpretación de los temas abordados.

Palabras clave
Aprendizaje, capacidad lectora, discapacidad, métodos inclusivos

1. Introduction
Inclusive education is currently becoming a challenge for educational policy regulators, not only at the national level, but also at the international level. The inclusive institution must contemplate reflective processes of analysis and identification of negative patterns for the implementation of improvements in educational development, thus promoting the dynamic participation of key actors in the process. It entails the implementation of strategies to reduce barriers and harmonize environments for an effective assimilation of knowledge in the midst of special needs.

Indeed, an institution that prides itself on being inclusive generates spaces where educational relationships are strengthened in equity and exclusion is combated, forming human beings not only with academic achievements but with solid values, capable of forging a more empathetic social development In the process of laying firm foundations, each link in the chain plays a preponderant role, as UNESCO (2020) cites in its study regarding inclusive education:

> In Portugal, Decree Law 54/6 of July 2018 requires schools to have a multidisciplinary team, composed of a teacher, a special education teacher, a psychologist and three members of the pedagogical council, in order to support, advise and train teaching staff in the implementation of inclusive pedagogical practices (European Agency for Special Educational Needs and Inclusion Education, 2020c), (p. 4-5).

In the scientific study by Gallo and Naranjo (2021) called Effectiveness of the pedagogical inclusion of students with intellectual disabilities in the Fiscal Educational Units of the 06-

11 circuit of the city of Latacunga, belonging to Ecuador, several constructs are established, among them.:

> The effectiveness of the educational inclusion of students with intellectual disabilities in the Fiscal Educational Units of the city of Latacunga shows great inefficiencies from the pedagogical, didactic and administrative point of view. There is a lack of a practical methodology of mandatory compliance in the Fiscal Educational Units of the city of Latacunga so that they can correctly apply the curricular adaptations required for the inclusion of students with intellectual disabilities (p. 135).

Students with special educational needs have constituted a population present in the educational system and, as such, deserve due attention so that their achievement levels are correctly weighted. The situation faced by teachers, when dealing with a diversity of contexts in their work environments, prompted them to be recursive. However, continuous training in inclusive matters is a priority, so that attention to intellectual disabilities and other conditions can be more effective.

Regarding the structure and content of the article, section 2 presents the studies related to the research. In section 3, the review of different bibliographic sources and concepts on inclusive methods and reading ability. Section 4 details the methodology used to develop this research. Section 5 shows the results. In section 6, conclusions are drawn according to the results obtained.

2. Related studies

The research conducted by Viero-Iglesias et al. (2015) cites Montero (2003) to support the analysis regarding strategies applicable to people with intellectual disabilities:

> One of the areas susceptible to support is the area of communication, which in people with intellectual disabilities (ID) is limited in terms of difficulties in the comprehension, acquisition and use of morphosyntactic elements, in the development of oral language in all its dimensions and in its comprehensive and expressive aspects, etc. (p. 33).

The moderate intellectual disability has an impact on language problems consistent with the degree of disability faced. The way to go, to significantly support students suffering from such condition is not simple, but it becomes a great challenge for the teacher, since it contributes to the pedagogical progress and social development. The task is not only the teacher's responsibility, it is a work that involves specialized educational bodies and those who manage the educational system.

The objective of the research is framed in analyzing the incidence of inclusive methods in the reading ability of students with moderate intellectual disabilities in the third year of high school of the Costa Azul Educational Unit. The mission is to manage metacognitive strategies, learning control, improvement of reading comprehension and academic performance of students as a fundamental part of the pedagogical strategy.

The constitution of Ecuador contemplates inclusive education, which allows the admission of students with different abilities in the various educational centers of the country; however, there are drawbacks that must be overcome by teachers, in circumstances of ignorance of appropriate methods to promote the school development of all. The key strategy is curricular adaptation, which in the case of students with moderate intellectual

disabilities is placed in grade 1, covering the adaptation of spaces or material resources without influencing significant modifications in the curriculum. In this instance, the contribution of the educational community is crucial, as evidenced by Lara's research (2020) in his study in Ecuador on curricular adaptations for students with special educational needs:

> The area of literature, being a creative and dynamic subject, lends itself to the use of different innovative methodologies that will undoubtedly be of great benefit to students with SEN. A correct elaboration and application of the curricular adaptations will achieve the objective of school insertion, besides forming students with the same capacities and at the same level as the rest of the students, for this the support of the state, the educational institutions, teachers and parents is needed, who are the ones that must grant the pertinent conditions so that the schooling of these students is carried out following the guidelines proposed by the Ministry of Education and the LOEI (p. 4).

The starting point for shaping curricular adaptations is the relevant information of each case, such as the neuropsychological diagnostic assessment. With such guidelines, participation and learning are favored, optimizing the work of the teacher. Inclusive educational scenarios in Ecuador, as in other environments, seek to focus their attention on appropriate schooling modalities that guarantee quality education. This conceptualization is consistent with the assertion of Alcaraz and Arnaiz,

(2019) in their study *La escolarización del alumnado con necesidades educativas especiales en España: un estudio longitudinal.*:

> The process of inclusive education, as has been pointed out, is linked to the presence of non-ordinary schooling systems for a type of students such as those with SEN. It may be a good opportunity to achieve a transformation of the Spanish educational system towards effective inclusion. It is true that this transformation requires progressive change processes, accompanied by an economic policy that invests in the provision of resources to educational centers and in teacher training to provide a quality response to all students; but it is necessary for Spain to move towards the materialization of an inclusive schooling policy in all its territories to meet the commitments of the 2030 Agenda for Sustainable Development, approved by the General Assembly of the United Nations (p. 317).

In Spain, schools that receive students with Special Educational Needs (SEN) program the Individual Curricular Adaptation (ICA), which is included in the Individual Curricular Adaptation Document (DIAC) that is also applied in Ecuador. The format is the responsibility of each teacher or subject teacher, with the advice and guidance of support pedagogues. The adapted activities can involve the group, in order to achieve true inclusion. They can be planned so that they can be progressively developed autonomously by the learner.

The educational challenge of addressing language difficulties activates communication through clear and coherent linguistic patterns, so argues Morán-Alvarado et al. (2017) in the article published in Ecuador *Los trastornos del lenguaje y las Necesidades Educativas Especiales. Considerations for attention at school*:

> The etiology of special educational needs related to language development is elaborated from a broad causal spectrum in which sensory, neurological, psychic, intellectual disability, rhythm disorders, organic failures, maturation or functional articulation disorders are identified, which resulted in special educational needs associated with disorders of different types (p. 194).

Paying attention to the origin of the educational needs present in the classroom clarifies the picture and allows the teacher to propose methodological alternatives aimed at creating spaces for communication and stimulation of cognitive processes. Early detection of language disorders allows for timely mediation, preventing the progression of other pathologies that aggravate the condition, as well as promoting targeted intervention, ensuring the support of specialized entities.

Educational systems must address inclusion in a well-founded manner, i.e., focusing public policy on strengthening quality education. The elimination of exclusion and the approach of knowledge in an environment of equity is the goal of many states, as Tobón and Cuesta (2020) argue in their research on Universal learning design and curriculum.:

> ...both in Colombia and in other Latin American countries, focus their work on curriculum and didactics, establishing as a basis the development of flexible curricula that include all students and which reduce learning barriers and provide the necessary support so that everyone has the same possibilities of accessing knowledge, based on the Universal Design for Learning (UDL) (p. 169).

Each state in the world implements its own educational models according to its own reality; however, it is relevant to take as valid references countries that have contributed to a teacher training with support and recognition and therefore a high level of education.

Such is the case of Finland. This is confirmed by Alarcón and Benito (2019) in their research *El sistema educativo finlandés y el aprendizaje invisible* (The Finnish educational system and invisible learning).:

> In Finland, the figure of the teacher is recognized as the key to the quality of education, which is highly valued and is the main driver of success in this country. There, teachers are respected and respected, they are part of the educational process and are the main agents guiding education, which does not mean that they are authoritarian. Inclusive education is of great importance because it is a guarantee that all children and young people, with or without the detection of any disorder, disability or difficulty, learn together in regular schools and classes, with all the necessary means to address the difficulty that causes slow learning. The Finnish educational system is no less in this aspect, and its main function in its ideology is to integrate students with Special Educational Needs (SEN) with the rest (p. 167-168).

Finland maintains a perspective of continuous innovation, highlighting the teacher as an authority, whose preparation places him/her in a position of pedagogical autonomy, capable of timely evidencing the general and particular needs of his/her classroom.

3. Related concepts

3.1 Inclusive methods

Education in an inclusive context demands practices in line with the requirements of the educational scenario. This is stated by Yépez (2017) in which he indicates that:

> Addressing diversity in educational contexts entails the development of new methodologies and strategies to respond to the needs of the heterogeneity of students in the classroom, which constitutes a challenge for teaching, which must overcome its traditional selective and exclusive processes, to become a true social space for the development and integral transformation of the human being (p. 132).

Under this theoretical perception of inclusion, it can be determined that inclusive methods are conceptualized as pedagogical strategies that seek the inclusion of students with special needs, particularly in highly vulnerable groups. Teachers should promote ideals of inclusion and respect for diversity, and inclusive methods should be innovative and relevant to the context and educational management.

3.2 Characteristics of inclusive methods

Inclusive methods seek to meet the pedagogical needs of a specific group, for this purpose Quevedo-Álava et al. (2020) in their study on inclusive education and its contribution in teaching practice, Portoviejo -Ecuador, state:

> It is important to consider that there are characteristics that must be contemplated in schools whose objective is inclusive pedagogical practices. In the first instance: a) Guarantee that students learn in a climate of equality and justice. b) As a second characteristic, educational practices should include everyone regardless of their diversity. c) Encourage teachers to adapt their planning to the particularities of the students. d) Encourage collaborative learning (p. 192). e) Encourage teachers to adapt their planning to the particularities of the students (p. 192). f) Encourage the development of a more inclusive education system (p. 192). g) Encourage teachers to adapt their planning to the particularities of the students (p. 192).

An advanced educational policy demands transforming methods that respond to the defined needs of a special population, enhancing their abilities and skills, respecting and safeguarding their integrity.

3.3 Reading ability

According to his research study, Vivanco (2020) points out that intellectual disability is marked by an IQ between 35-40 and 50-55. He highlights the following particularities of this condition:

> The characteristics of moderate ID according to developmental domains. Cognitive: difficulties in learning symbols, interpretation of information, attention, memory and latency time, at the same time little interest in activities, but with the possibility of learning sequences and concrete thinking. Communication and language: slow in the development and acquisition of language skills that affect their oral language, communication and speech, presenting alterations in articulation and

> speech fluency. Autonomy: they are automatons when performing activities of daily living and personal care, as for their behavior they require a degree of support because they can generate disruptive behaviors (p. 11).

The design of the material to be used in the educational process with students with moderate intellectual disabilities should contemplate the characteristics that identify this condition. The approach should link thought and language, prioritizing the application of strategies that manage inclusive, comprehensive and cooperative learning.

3.4 Assessment of reading ability in students with moderate intellectual disabilities

Teachers should analyze the conditions of their vulnerable population and make use of techniques for their evaluation, as confirmed by Bastidas and Briones (2020):

> The tools that the teacher will use have as a prerequisite a thorough analysis of the student, in order to discover their skills and abilities and thus enhance them. In order to obtain this type of information, there are several tests: basic skills tests, learning styles tests, informal tests, and the most important is "observation", direct and indirect, the latter being of indispensable value, since it makes it possible to cover the situations that occur in the school context in a natural and real way, thus providing necessary information for the evaluation process and at the same time to adapt the curriculum as required (p. 11).

Students become the protagonists of the cognitive process, while teachers play the role of guides, providing the appropriate tools for the construction of solid learning. To reaffirm that there is a true appropriation of knowledge and development of skills and abilities in specific times, the acquisition of competencies is evaluated, learning problems are assessed and support guidelines are suggested, involving the participation of the family. The parameters to be evaluated must show the achievements attained by the students. Learning environments should be accessible to all and should generate confidence. The use of appropriate strategies and the material to be used should create security for an appropriate performance of those being evaluated.

4. Methods

The present research work considers a non-experimental and descriptive qualitative-quantitative approach. The collection of data through a questionnaire addressed to a group of specialists evidences the quantitative approach, while the observation and the critical view of the reality experienced by high school students with limited intellectual conditions, mark the qualitative topic. This orientation made possible the expansion of the information, the measurement and description of the variables and the approach to the object of inquiry. The criteria obtained through the application of interviews to four experts in inclusive methods for the reading ability of students with moderate intellectual disabilities, allowed contrasting the scientific basis of the various bibliographic sources with the expertise of experts in the field.

The research analysis was carried out in the "Costa Azul" Fiscal Educational Unit, located in the Manta canton, province of Manabí, Republic of Ecuador. The population studied consisted of 12 students with moderate intellectual disabilities. The specific segment analyzed did not exceed the established population base; therefore, it was not necessary to

use a probability sample. The professional information provided by the specialists surveyed made it possible to assess the management of the inclusive pedagogical practices carried out in the classroom environment. As an instrument to measure the level of reading comprehension of third year high school students, aged between 16 and 18 years, a reading test was used, designed in a very didactic way, taking into account the suggestions of the experts, regarding the association of images with an interesting text, which allowed to show the levels of reading development considering the criteria of accuracy, speed, comprehension and motivation.

The selection and approval of the tools for obtaining information and data, counted on the vision and criticality of 2 professionals who participate significantly in research topics. The expertise and high knowledge in scientific methodologies and techniques enables them to direct in the best way the various instruments for information consolidation. The analytical and deductive methods were evidenced in the study, constituting valid references for obtaining reliable and accurate results, which were processed through analysis tables according to the reality of the research task.

5. Results and discussion

Educating is a process that involves commitment and decision. However, the research reconfirmed that the applicable actions for a positive management are not exclusive to a specific actor, they derive from the convergence of contributions from the various instances; the scaffolding that is erected is part of the sum of ideas and professional criteria reflected in the crystallization of objectives emanating from a clear vision.

It is evident that the analyzed student group requires strengthening the development of reading skills, through educational practices that materialize formative processes of dialogic interaction, oriented to meaningful learning. The initial diagnosis of each case marked the route to follow in the pedagogical management of the disability. The application of the reading test made it possible to understand the needs of the student population under analysis.

The educational institution at the base of the study, partially manages inclusive proposals that help in the task of educating the most vulnerable. The research sought to clarify the panorama of action that is being carried out; precisely because of the background of the problem raised, it became fundamental to analyze the incidence of inclusive methods in the reading ability of students with moderate intellectual disabilities.

The interview to national and international experts, developed through digital platforms, contemplated 5 questions according to the researched topic, being considered the 3 most relevant questions, highlighting that:

Inclusive pedagogical methods are defined as methodological strategies that guide the educational task in an environment of diversity, respecting the unique and individual ways of perceiving the learning of each student. These particularities may derive from a special neurological condition or may come from exclusion caused by different social factors. Educational institutions must work collaboratively to create real opportunities that contribute to the integral development of the most vulnerable. These premises are in line with what Cornejo (2017) states that:

> Attention to diversity is understood at a general level as the set of educational actions aimed at responding to the different abilities, rhythms and learning styles, motivations and interests, social, cultural,

linguistic and health situations of students. It is, therefore, a fundamental principle that should govern all educational levels, ensuring equal opportunities for all students in education and avoiding, as far as possible, school failure and the consequent risk of dropping out of the educational system (p. 78).

Question	E1	E2	E3	E4
1. What is your opinion on inclusive teaching methods?	Inclusive pedagogical methods are socioecological, contextual and neuroscientific in nature. They seek to improve learning .	Inclusive teaching methods are relevant to address neurodiversity. Neuroadaptations help to ensure that teaching methods respect individual processing.	Inclusion methods vary in their essence. They are approached according to how the school approaches the inclusive culture, fostering support and engagement.	Inclusive education addresses the learning needs of vulnerable children, youth and adults.

Table 1. Interviews with experts on inclusive teaching methods

The criteria issued and shown in Table 1 are congruent with the inclusive education proposal that is contemplated in the laws of the Ecuadorian State, for the attention to diversity according to the special educational needs presented by each student and that responds to the quality initiatives of the educational institution.

The educational system in Ecuador is based on principles of solidarity and attention to differences, however, action must go beyond rhetoric, the purpose is to strengthen the structural bases of education, for a true social justice, it is not only about issuing guidelines. The regulatory bodies of the education system have the competence to provide the necessary means and materials for the comprehensive care of students with special educational needs, through timely intervention and monitoring throughout their school life.

Inclusion is linked to human rights, equal opportunities, values of respect, tolerance and equity, avoiding exclusion and marginalization. The elimination of barriers affects new social positions, framing a comprehensive and cooperative teaching management. Inclusive methods are not static, they must be flexible to each particular situation. The different areas of the curriculum need to be adapted to bring the contents closer to students who, due to different circumstances, have marked difficulties in understanding arguments in relation to their peers.

Other criteria exposed by the experts interviewed show the importance of motivation and the implementation of learning from a sensory perspective, thus reaffirming understanding through playful, novel, and motivating strategies that captivate the attention and interest of students. The work with students with moderate intellectual disabilities should start from the activation of phonological and phonemic awareness, through the association of sounds and their correspondence with graphemes, enhancing reading skills and encouraging participation through varied and timely actions. The methodological alternatives proposed should involve everyone, avoiding discrimination and exclusion. Adequate interaction will depend on the correct location of each individual in the classroom. Successful school

environments are built with joint work. Such assertions are consistent with Ocampo (2016), in his book *¿Cómo fomentar la lectura en niños y jóvenes con discapacidad: desafíos desde la educación inclusiva y la neurodidáctica* (How to encourage reading in children and young people with disabilities: challenges from inclusive education and neurodidactics)*:*

> In the case of students with disabilities, reading competence is developed through daily life interactions that allow each child and young person to construct contextualized meanings from what they speak, read and understand. Thus, the principles of reading encouragement for people with disabilities will combine the contributions of play therapy, art therapy (particularly in its symbolic dimension), lateral thinking and creativity, as key elements in strengthening their communicative competence and reading education (p. 240).

Reading skills require the development of semantic, syntactic and schema activation aspects that allow text comprehension. Cultural and socioeconomic differences become axes of action. With attitudes and a firm vision, a dignified inclusion is obtained, guaranteeing a more balanced, sensitive, and fair society. Knowing the environment in which students develop is key to determine the approach and broaden the horizon to forge meaningful content. All teaching must be based on stimuli and motivation, and above all, on emotion. Curricular contents must be combined with the development of knowledge through experiences.

Indeed, the positive association between reality and the student's environment and the construction of learning is indisputable. In the school analyzed, the specific situation of each home sometimes limits the family contribution, so crucial for balanced progress, which demands a double effort in the classroom on the part of the teacher, with the support of the specialist in pedagogical support for special educational needs being a priority. This intervention does not connect as required, because the professionals who carry out this work are assigned not only to a specific institution, but two or three, which makes a correct follow-up impossible. Therefore, it is still essential to combine theory and action from the main spheres of school administration.

These statements are consistent with the assertions of López (2015) who indicates that:

> Coordinated family-school-specialist professional support for the development of executive functions increases the chances of acquiring useful compensatory strategies in the present and in the future. Psychoeducation addressed to the child/adolescent, his/her family, and educators, is a protective factor for mental health (p. 47).

Table 2 shows the suggestions of the experts interviewed on inclusive methods:

Question	E1	E2	E3	E4
2. What suggestions could you issue for the management of reading skills in students with moderate	The teaching of reading to young people with moderate disabilities is developed considering personalized work and	The key to stimulating the level of reading proficiency in students with moderate intellectual disabilities is to work on	Students with intellectual disabilities have limited reasoning. It is necessary to encourage reading through	Systematic didactic games can be used for learning to read, considering the exercise and development of

intellectual disabilities?	individual reality.	phonological awareness.	interesting topics.	psychological functions.

Table 2. Expert interviews on reading skills management.

The experts consulted in this study are of the opinion that the inclusive methods that can be applied to improve the development of reading skills in students with moderate intellectual disabilities will depend on the context and the feasibility of resources. The starting point will be determined by a neuropsychological assessment. According to their expertise, they mention that it is not advisable to saturate students with extensive reading; topics should be interesting and motivating. The techniques to be used should be far from traditional and should rather be adaptable to the intellectual disability addressed, which despite being moderate, is characterized by a level of understanding different from that of their peers. The use of screen readers with voice is another viable alternative, according to experts. The easy reading method is another option to cover condensed content and uses simple and clear language; according to progress, other levels of reading comprehension with greater complexity can be added. Pictograms and the association of words and images also contribute to the reading objective. Inclusive education must involve classmates in the classroom, otherwise it would be exclusive. The sum of efforts consolidates firm progress. This is also supported by García (2017) in his research *La educación inclusiva como mecanismo de garantía de la igualdad de oportunidades y no discriminación de las personas con discapacidad.* A proposal for inclusive pedagogical strategies states that.:

> Rigid and transmissive methodologies are less advisable to achieve an adequate attention to diversity in the classroom, being, on the contrary, more appropriate methods based on discovery and on the active role of the students. Among the different types of methodologies of this type, project-based learning and cooperative learning stand out, which involves the application in the classroom of the usual procedures in scientific research and which allow students to develop all the key competences (p. 166).

Reading is part of the Language and Literature curriculum of the compulsory education system in the Ecuadorian State and is aimed at achieving the skill of understanding texts and the use of available resources, however, the interpretation of content is present in all subjects and in everyday life, hence the importance of using effective teaching strategies and very useful for the cases of students with moderate intellectual disabilities. The participation of students in trusting environments allows for active social interaction and balances the emotional health that contributes favorably to any cognitive transformation. The design of activities that combine the affective and emotional give way to the imagination, the topics to be read should be motivating for all, however, for students with disabilities, images that make assimilation more entertaining will be considered. Students must master reading skills in order to take advantage of the academic and work opportunities to which they will undoubtedly have access in the near future. The formative responsibility that emerges from the teaching authorities should, as a priority, be supported by inclusive orientation workshops, coordinated by the governing body of the educational

policy, but not as a mere formality, but as an opportunity to create true managers of knowledge and inclusion. Table 3 shows the vision of the experts.

Question	E1	E2	E3	E4
3. According to your experience, what inclusive methods can be applied to improve the development of reading skills in students with moderate intellectual disabilities in the 3rd year of high school?	The proposal of pedagogical progression based on reading difficulties is useful. It is recommended, more time for evaluation, not penalizing spelling mistakes, not excessive reading.	Phonological methods are the most appropriate to lay the foundations for reading, depending on individual variables. A neuropsychological evaluation will allow choosing the appropriate method..	Easy reading is essential for children with intellectual disabilities since it uses key ideas. Use clear language, replace difficult words with simple terms.	The global method is adequate, since it starts with words, allows to decompose in syllables, associate terms with pictures.

Table 3. Expert interviews on inclusive methods for reader development

The reading test applied to students with moderate intellectual disabilities in the third year of high school at the school analyzed generates results that place the student group at a level of reading development in the process of being reached. It is noted that the criteria of accuracy and speed are at 50%, while comprehension is at 33.33% and motivation at 41.67%, being these ranges the ones that predominate in the global analysis.

These results project the feasibility of inserting inclusive methods that respond to diversity and balance the missing competencies of the students. In the case of moderate intellectual disability, it is convenient to include images allusive to the topic so that the association of data and their assimilation is more meaningful. What is relevant is to structure the basis for the enjoyment and autonomous practice of reading, taking into account that the more didactic a strategy is, the greater its effect will be. This is also referred to by Wengrowicz (2020) in his research University and disability. The use of technologies in the teaching of design disciplines: didactic strategies that favor inclusive education.:

> Considering the design of the class in a flexible and accessible way, implies planning strategies taking into account the actors involved, listening to them, contemplating the different environments, and the tools available, having as a horizon the concept of Universal Design for Learning (p. 225).

In fact, the simplification of texts, easy reading, the adaptation of playful activities, help the comprehension of texts in a more dynamic way and collaborate in social integration and in the elimination of disruptive behaviors. All this was evidenced through the reading test, applied individually and in a period of 8 minutes, considering equal conditions, previously a gamification activity was developed that maintained the emotional balance of the group. Due to the current study modality, derived from the covid 19 pandemic, the scenario for the application was virtual, however, the work environment was marked by the students' predisposition. Table 4 shows these results:

Indicators	Levels of reading development			
	Not acquired	In process	With assistance	Acquired
Criteria	**%**	**%**	**%**	**%**
Accuracy	25.00	50.00	8.33	16.67
Speed	8.33	50.00	16.67	25.00
Comprehension	16.67	33.33	25.00	25.00
Motivation	8.33	41.67	16.67	33.33

Table 4. Reading test to students with moderate intellectual disabilities.

Within the established time frame, each student demonstrated his or her reading development. Through the visualization of the text on the screen, one by one, they proceeded to read the 300 characters exposed, where accuracy and speed were validated. Subsequently, questions were asked about the plot to determine the level of comprehension and assimilation. Finally, a fragment was added in accordance with the story already presented and the degree of motivation to the new reading time was measured. The results determined that the level of reading development was "in process" of being reached.

While it is true that the active and recursive involvement of teachers in the educational system of Ecuador has managed to channel inclusive education, good will is not enough to build learning in diversity, much more is needed, the involvement of the authorities in the process, teacher training, the provision of resources and materials, technical aids, all together will allow institutions to adapt to the pace of their students with moderate intellectual disabilities, allowing them to flow in their educational, personal, labor and social development, feeling strong links in the process.

It is undeniable that the general teacher training does not cover this connection with the inclusive culture, making it a real challenge to promote different initiatives, when the necessary support is not available. This perception is shared by Ricoy (2018) indicating that.:

> Teacher training for diversity will be useful to develop a higher quality
> education for all if it is configured as an aspect of the educational system
> that helps to change the professional culture of teachers (reconstruction
> of their identity and professional development processes), in a context
> open to all and guided by inclusive values (p. 162).).

Teachers as guides have the power to set routes to formative phases, clearing as much as possible each stage, and preparing students to face the obstacles that arise. The greater their preparation, the more impactful their work will be. Undoubtedly, dealing with the learning difficulties of students with moderate intellectual disabilities is a task that involves the school environment, teaching styles and the support of the family environment. Timely responses within an enabling environment generate the application of accessible and appropriate techniques or methods that enrich the formative work in creative and emotional areas. In Guayasamín's research (2019) it is argued that.:

> The importance of the didactic strategies used by teachers is based on the
> fact that they contribute in a positive way to the development of a better
> reading comprehension of students through the use of texts with images,
> since in this way students will feel motivated by reading (p.8).

What is really important is to enhance skills and continually reinforce them.

6. Conclusions

The criticality of the experts interviewed allowed concluding that the inclusive methods are methodological strategies aimed at the attention of diversity and as such present specificities directed to the development of adequate pedagogical practices implemented with the support of the educational policy. The research allowed defining the characteristics of the work techniques applied to students with moderate intellectual disabilities, highlighting among them, the flexibility in the management of tactics for the personalization of the various learning experiences, promoting the integration and cohesion of the group, through the connection of emotion and education, encouraging reflection and critical vision, complying with principles of organization and logical order, paying attention to the development of phonological and phonemic awareness, respecting individuality and scope in data processing.

Text comprehension is achieved with adequate pedagogical practices. The research made it possible to evaluate the reading ability of students with moderate intellectual disabilities through the application of a reading test based on criteria of accuracy, speed, comprehension, and motivation. The results obtained allowed determining that, at an average level, the reading ability of the group is in the process of being acquired. Therefore, it is feasible to incorporate new inclusive initiatives aimed at the continuous improvement of reading development. The family should be part of the work, accompanying from home activities that improve concentration. The teaching advice on cognitive and metacognitive strategies and the support of specialized professionals is essential for the success of the management. It was found that the reading of texts with images is well received by students because it facilitates their interpretation.

Based on the results of the research, the design of projects aimed at the development of reading strategies that activate previous ideas, facilitate the identification of main and secondary ideas, and enhance reading comprehension, without neglecting the learning styles of the group, is suggested. A suitable alternative would be the creation of an easy reading club, whose purpose is to encourage enlightenment and social participation of

people who share similar difficulties. In this context, the reading of books or texts is carried out in parallel in a determined space and time; later, through a joint session, the achievements reached in terms of comprehension of the texts addressed are analyzed. The use of information and communication technologies (ICT) is conducive to the implementation of these spaces in the current educational scenario.

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Chakana as an intercultural methodological instrument for strengthening reading comprehension

La Chakana como instrumento metodológico intercultural de fortalecimiento de la comprensión lectora

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Abstract

In the educational field there is a great variety of methodologies aimed at improving the teaching-learning process, which has usually been centered on the traditional methodology of knowledge transmission. However, recent times have revealed a new way of interacting with knowledge with alternative proposals. In this sense, the Andean Chakana is an alternative didactic resource that can improve the critical or reflective thinking of students, which contributes significantly in different subjects such as Literature, a field that within the present study has been approached taking into account reading comprehension, a fundamental factor to acquire knowledge as well as to reinforce it. In this sense, the main results showed that the level of reading comprehension in 5th grade students of the "Cardenal Spínola Fe y Alegría" educational unit has deficiencies in vocabulary, sentence construction, but mainly, deficiencies in literal reading. In addition, teachers do not know the intercultural methodological instrument Chakana. It is thus concluded that in the face of the evidenced shortcomings and according to the benefits offered by this alternative methodology under the Andean cosmovision, the Chakana forges spaces for an integral education such as learning in harmony according to the use of its colors, principles and dimensions; being, in this way, of great utility in the field of reading comprehension, where

this instrument facilitates to deepen on a previous text a process that involves harmonizing the knowledge, by putting the student in contact with nature.

Keywords
Chakana, reading comprehension, intercultural education

Resumen
En el ámbito educativo existe gran variedad de metodologías orientadas a mejorar el proceso de enseñanza-aprendizaje que usualmente ha estado centrada en la metodología tradicional de transmisión de saberes. Sin embargo, los últimos tiempos han develado una nueva mirada de interactuar con los conocimientos con propuestas alternativas. En este sentido, la Chakana andina es un recurso didáctico alternativo que puede mejorar el pensamiento crítico o reflexivo de los estudiantes que aporta significativamente en distintas asignaturas como la Literatura, un campo que dentro del presente estudio ha sido abordado tomando en cuenta la comprensión lectora, un factor fundamental para adquirir conocimientos como reforzarlos. En este sentido, los principales resultados evidenciaron que el nivel de comprensión lectora en los estudiantes de 5to. año de Educación Básica de la unidad educativa "Cardenal Spínola Fe y Alegría" tiene falencias en vocabulario, construcción de oraciones, pero principalmente, deficiencias en la lectura literal. Además, los docentes desconocen el instrumento metodológico intercultural la Chakana. Se concluye así que frente a las falencias evidenciadas y conforme las bondades que ofrece esta metodología alternativa bajo la cosmovisión andina, la Chakana forja espacios para una educación integral como el aprender en armonía conforme el uso de sus colores, principios y dimensiones; siendo, de esta forma, de gran utilidad en el campo de la comprensión lectora, donde este instrumento facilita profundizar sobre un texto previo un proceso que involucra armonizar los saberes, al poner en contacto al estudiante con la naturaleza.

Palabras clave
Chakana, comprensión lectora, educación intercultural.

1. Introducción
The experiences of intercultural pedagogical practice in Latin America reveal that intercultural pedagogical inclusion initiatives have been a theme that not only vindicates indigenous struggles, but also makes visible those aspects that indigenous communities can contribute in the educational field, in fact, this suggests that such practices contribute significantly to improving knowledge in various areas, including reading comprehension; a problem that in the region presents great challenges for students, teachers and the education system in general that, although "theoretical and practical knowledge about reading and its teaching has proliferated remarkably" (Shanahan and Lonigan, 2010, cited in Orellana, 2018, p. 15), the implementation in the classroom has manifested itself slower and uneven trying, even, to repair shortcomings of the teachers themselves who are in training. It is also observed gaps in the inclusion of more efficient pedagogical strategies, where ancestral wisdom, such as Chakana, has also not been considered in the field of education. This is evident, above all, because in the classroom and now in the virtual classroom the traditional methodology is still used, which reflects limited educational proposals with methodological tools from spaces such as interculturality, in areas such as Language and Literature, and more specifically in reading comprehension, a space in which students need an adequate level to abstract knowledge in a better way.

The above leads to break the traditional canons of teacher-centered education under a model of linear memoristic teaching that is still used in countries like Ecuador, for another that promotes meaningful learning from the contribution that students can give to the educational process, as protagonists of the knowledge they acquire in the course of their student life, where the proposal from the pedagogy with intercultural approach becomes an encounter and permanent dialogue of knowledge, in which knowledge is built based on other discourses from diverse ethnic and cultural groups.

The reality of intercultural pedagogical practice in the national context reveals that in the country "there are important antecedents of the struggle to achieve the construction of an intercultural education system that makes visible the history and knowledge of indigenous peoples" (Di Caudo, Llanos and Ospina, 2016, p. 167). This has been a proposal that at the Latin American level has given impetus to inclusive policies that incorporate an approach that values the contribution that ancestral knowledge, such as the Chakana, can make to knowledge; therefore, it has become a line of action to make these intercultural methodological tools visible in the educational sphere.

The National Plan for Good Living 2017-2021 in Ecuador establishes in its objective 1, "to guarantee a dignified life with equal opportunities for all" (Senplades, 2017, p. 53), as the right to grant to all, a dignified life with equal opportunities. This in the educational sphere means promoting spaces for inclusion, comprehensive development and continuous and quality learning. "Similarly, it reveals the need to promote and strengthen education with cultural, linguistic and environmental relevance, which addresses the specific educational needs of peoples and nationalities" (Senplades, 2017, p. 55). The above, in effect, means to promote intercultural bilingual education in order to vindicate the achievements of the peoples and nationalities of Ecuador in the face of the homogenizing process of the West, in addition, to give value to the proposals that from ancestral wisdom can contribute to education. To this end, it is necessary to promote educational plans and projects aimed not only at training teachers in active methodologies with a focus on intercultural bilingual education practices, but especially the contribution that Andean wisdom such as the Chakana can contribute to the process.

Thus, in the research, which is the result of a thesis, the research questions are: how does the Chakana, an intercultural methodological instrument, strengthen reading comprehension in 5th grade students of the "Cardenal Spínola Fe y Alegría" educational unit in Quito? what are the essential factors of the Chakana as an intercultural methodological instrument? What degree of reading comprehension do the students have, and what intercultural educational proposal from the Chakana strengthens reading comprehension in the students of 5th year of Basic Education of the educational unit "Cardenal Spínola Fe y Alegría in Quito"? The main objective is to investigate the Chakana as an intercultural methodological instrument to strengthen reading comprehension in 5th grade students of the "Cardenal Spínola Fe y Alegría" educational unit, and the specific objectives are to identify the essential factors of the Chakana as an intercultural methodological instrument; to determine the degree of reading comprehension in students, and to design from the Chakana, an intercultural educational proposal to strengthen reading comprehension. It is thus understood the importance of promoting other teaching methodologies with a focus on ancestral wisdom, as part of the intercultural proposal in education, since if adequate levels of reading comprehension are not achieved in the classroom, in practice the student will not be acquiring significant learning.

In this sense, the limitations of this research are mainly due to the insufficient bibliography related to the Chakana methodology, since it is a teaching process that is little addressed in formal education. However, it is a great challenge to propose a proposal aimed at forging reading comprehension in students according to the parameters of an intercultural methodological instrument, understanding that within the teaching-learning process it is vital to understand what is read; therefore, the purpose of the study is to offer a methodological alternative from the ancestral wisdom to the difficulty that students have in reading comprehension.

Thus, the structure of this article begins with the introductory part, in which the experiences of intercultural pedagogical practice in Latin America and Ecuador, the research questions and the objectives of the study are presented. In the second point, a bibliographic review is made on topics such as the Chakana, an alternative teaching method, essential aspects of Andean symbology: its colors and dimensions; definition and scope of reading comprehension. In the third point, the section on methods and materials is developed, that is, the approach and design of the research, as well as the description of the sample and the context of the research. This is followed by the results: analysis and discussion, a step that allows, finally, to present the conclusions.

2. Literature review

2.1 2.1 The Chakana as an intercultural methodological tool. Alternative teaching method

The pedagogical proposals that have been put forward throughout history have been varied. This with the purpose of proposing more useful alternatives to enrich the teaching-learning process, from a teaching action that provokes significant knowledge towards quality education. In this sense, from the point of view of Pérez, Africano, Febres-Cordero and Carrillo (2016) alternative pedagogies in general, "are a set of innovative strategies that open paths to positions based on educational trends that claim to be renovators of the educational fact" (p. 237) and in the specific case of the Chakana it is framed within the so-called alternative pedagogies, posed as an intercultural methodological tool, which takes as a basis the constructivist approach by actively involving the student in learning.

Indeed, within the educational context, the Andean Chakana is used as a didactic resource that favors learning, being a facilitator to forge critical and reflective thinking, thus becoming "an icon not only of culture, but also of deep knowledge of multiple areas ranging from exact sciences such as mathematics to social sciences through natural sciences and literature" (Escandón and Rivera, 2020, p. 26); therefore, the symbol is proposed as an alternative to promote interdisciplinarity. It is thus understood that in the face of the great variety of didactic pedagogies that are proposed as alternative teaching methods, the Chakana becomes an interesting proposal that from the Andean vision promotes a new type of teaching that forges the knowledge of the learner from the particularity of its millenary symbology.

2.1.1 Andean Symbology

According to Puma (2014), "the Inca empire developed its culture assuming the Chakana as a model of territorial organization and ritual symbol associated with wisdom" (p. 15). Thus, translated into Spanish as Cruz del Sur is represented in a square shape with 12 points and eight edges, whose essence according to Escandón and Rivera (2020) symbolizes from the indigenous worldview, the harmonious relationship between nature and the cosmos widely related to social organization and agricultural production. In addition, it means the bridge or stairway, where it is 4000 years old. This symbol can be seen in the fabric of the Aymara

culture, which preserves the 13 moons of the year, with 28 days each. The Andean cross has a geometric shape of a perfect Latin cross. The Andean Chakana not only can perceive architectural or geometric concepts, but also acquires the meaning of "stairway to the highest" (Escandón and Rivera, 2020, p. 27).

It thus constitutes the synthesis of the Andean cosmovision with a complex multiple use; linked, in addition, to the seasons of the year from the astronomical concept, in essence:

The Andean cross is the image that invites to coexistence with nature, to respect the water and all that mother earth does to give food to her children. "The chacana signifies our experience, and how we must conserve Mother Nature for our children, grandchildren and for all those to come," says Samuel. The taitas hang an Andean cross from their necks. Taita Yaku carved his own chacana out of rosewood. It is a chacana that has its white part and its dark part, this is how it represents duality, whether it is good and evil, man and woman, etc. (El Mercurio, 2017, para. 1) (See Figure 1).

Figure 1. The Chakana: Confederation of the Cayambi People

Thus, as part of the Andean symbology, the Chakana promotes the integrality of the human being in its different dimensions from the construction of ancestral knowledge, where it harmoniously integrates the elements of nature that has lasted until today assuming different roles within the Andean cultural context.

2.1.2 Colors

From the indigenous cosmovision, the colors of the rainbow "have a transcendence in the development and union among the peoples" (Vinueza, 2016, p.27) expressed in the wiphala

(symbol of Andean philosophy); where its 49 strokes "are closely related to the Andean Chakana, because it creates parity order to the Andean cosmogonic world, from the masculine-feminine duality or yanantin and from the double duality or Tawantin divided into four quadrants" (Quispe, 2017, para. 3). In this sense, the colors of the Chakana constitute the most representative element of the identity of indigenous peoples acquiring a particular meaning by enhancing the importance of the duality of people, mother earth, time, space, among others that, embodied in a geometric figure, in past times was used as a resource for fields such as religious, philosophical, social sciences and mathematics.

The colors of the Chakana for Mayanza (2019) reflect the ancestral vision on the importance of the knowledge of the Andean man as the value of cultures and human life, that is, its preservation and procreation; "as well as nature: its wealth for the benefit of the peoples and the moral principles (from the Andean cosmovision) that every human being practices" (Mayanza, 2019, p. 4).

In the educational field, according to Gualavisí (2018) it is represented by five colors: red, yellow, blue, green and white redistributed as follows:

> Yellow: Fine and gross motor development area, hard texture, rhombus shape, earth element, percussion, feeling of security, medicinal plant Chamomile, sweet taste, sense of taste, Alli Ruray.
>
> Red: Area of Socio-Affective development, smooth and rough texture, the figure of the square, the element of fire, the sound of the voice, feeling of love, medicinal plant lemon verbena, sour taste, sense of smell, Alli Yananti.
>
> Blue: Cognitive development area, soft texture, rectangle figure, water element, rattle, feeling of fear, medicinal plant zunfo, salty taste, sense of hearing, Alli Yachay.
>
> Green: Language development area, rough texture, triangle figure, wood element, strings, feeling of anger, medicinal plant Ruda, bitter taste, sense of touch, Alli Rimani.
>
> White: smooth texture, circle figure, air element, feeling Peace, medicinal plant Rosemary, sense of sight, spicy taste (p. 18).

In essence, the central role of colors in the teaching-learning model is aimed at transforming a society in unequal conditions by articulating both the ancestral wisdom expressed, according to Castro (2017) in its four dimensions, wanting muñaña, knowing yatiña, doing luraña, and being able to atiña with the science of the West.

2.1.3   Dimensions

Within traditional thinking, concepts such as knowing (knowledge), knowing how to know (internalizing knowledge), knowing how to do (skills), knowing how to be (development of attitudes), knowing how to live together (development of social competencies); are part of the competencies focused on the new education model that takes as a basis the globalizing process focused on improving productivity and competitiveness of human capital, and within it, social recognition. However, within the Andean cosmovision, the Chakana takes into account the following dimensions:

- Knowing how to trascend-to wish–to say

- Knowing how to be
- Knowing how to do
- Knowing how to think
- Knowing how to emote/corazonar

It is understood that, under this conception, the individual is in the capacity to develop, within the Chakana approach, the tool that privileges aspects such as coexistence, harmony of being, the sense of community and equality.

2.2 Reading comprehension

The term reading comprehension has been addressed by a number of researchers who have not found a single and agreed definition, so according to Fuentes (cited by Amaya, 2017), it has been defined in different ways according to the methodological orientation, thus reinforcing the idea that it is a complex process widely associated with the act of reading; where, reading is a procedural activity and that reading comprehension, on the other hand, refers to the psychological processes performed by each individual, where motivation "is a central pillar in determining the efficiency of their ability to understand what they read" (Amaya, 2017, p. 20). It is thus understood that the action of reading is relevant for the acquisition of new knowledge as the reinforcement of others, as long as the process is performed in depth, where the student when transcending to the stage of understanding a text must have previous knowledge as skills to grasp; so that "in this interactive complexity, several processes -perceptual, cognitive and linguistic- are involved, and the reader must infer information at various levels of processing, not only in the most basic, superficial or explicit ones (Núñez and Donoso, 2000, cited by Herrera, Hernández, Valdés and Valenzuela, 2015, p. 128).

The above suggests understanding that, just as reading is a complex process, so is reading comprehension, which involves three levels: literal, inferential, and critical, for which a series of skills are required. In this sense, it is essential that an effective process towards the acquisition of meaningful learning involves strategies and methodological tools based on constructivism, which takes into account the student as the protagonist in the teaching process.

2.3 The Chakana: as a tool for text comprehension

As the Chakana is understood as a millenary symbol coming from the Andean cultures, it contains a series of opposing but complementary elements, which according to Torres (2015) explains the Andean worldview based on elements such as "masculine/feminine, sky/earth, sun/moon, north/south, up/down, time/space" (p. 28). In this sense, for Coarite (2014), within the educational field, the Chakana is a skillful tool for areas such as text comprehension, where:

> The two tasks of reading to write are made possible by the use of the Chakana as a text analysis tool. The text is read with the Chakana model, that is, the text is analyzed with the tool. The activity of reading with the Chakana brings the task of writing, interpreting the parity of meaning. Writing can derive in the structuring of different types of texts, for example: precise, reviews, commentaries, essays, and monographs. Consequently, thanks to the analysis tool, reading and writing activities are carried out simultaneously (para. 28).

In this way, the Chakana takes as its center the text, whose problems around it are solvable by means of this tool; however, it is necessary that there be on the part of the reader the

interest in reading towards the deployment of the strengthening of a critical reading; where for Coarite (2014), comprehension gives way to the reciprocal and complementary parity of meaning, and that understanding the subject starts with a critical position, which is what is of interest in reading comprehension. In this sense, the so-called development of the vivencia or learning experience is present in the Chakanic sequence, whose process addresses four steps: "Step 1: Vivencia from close to life (red). Step 2: Description and meanings, use of resources (blue). Step 3: Augmentations and yapas (green). Step 4: Vivenciad of what has been learned (yellow)" (Confederation of the Kayambi people, 2018, p. 26). This learning experience applied to the context of reading comprehension involves, according to Coarite (2014), taking into account the following aspects: at the center of the Chakana is the text, the problem to be solved, secondly, the person's willingness to read is essential. Third, "comprehension brings the reciprocal and complementary parity of meaning, which occurs in the center of the Chakana, is noted in the Taypi" (para. 32) and, finally, in the face of what has been understood, a critical position is assumed that makes it possible to argue.

3. Methods and materials

In the research work, the mixed approach was applied, i.e., qualitative and quantitative; the same that according to Hernández, Fernández and Baptista (cited by Otero, 2018) make use of a systematic, rigorous and empirical process to produce knowledge. In this sense, the quantitative approach uses numerical measurement to analyze a reality, where "it begins with defining an idea that goes delimiting the sequential systemic process that the researcher gives to the scientific rigor that he puts in the search for new knowledge" (p. 10). Thus, within the present study, the quantitative approach has served as a basis for obtaining more information about the level of reading comprehension in fifth grade students of the "Cardenal Spínola Fe y Alegría" educational unit.

Regarding the qualitative approach, Hernández-Sampieri, Fernández and Baptista (2013), point out that it is based on the interpretative perspective of the reality addressed, where "the qualitative researcher uses techniques to collect data, such as unstructured observation, open interviews, document review, group discussion, evaluation of personal experiences, recording of life stories, and interaction and introspection with groups or communities" (p. 9); the usefulness of this approach in the present research was given by allowing the analysis of information obtained from the interview technique, from which the variable of the Chakana was investigated.

Finally, the descriptive level of research is taken as a basis, which "is carried out when one wishes to describe, in all its main components, a reality" (Guevara, Verdesoto & Castro, 2020, p. 165), where in this research it is used to describe the variables: reading comprehension and the Chakana in the educational environment.

3.1 Description of the sample and the research setting

Within the use of the test, the population used was the students of the fifth year of Basic Education of the educational unit "Cardenal Spinola Fe y Alegría", a total of 21 students belonging to this level, where a sample was not taken because of the small number of students.

The school belongs to the province of Pichincha, canton Quito, and is located on Marcelo Spinola Avenue Oe3-102 and Lorenzo Flores. The school has a morning schedule from 07h00 to 12h45. It operates from first grade to third grade of high school, and additional subjects such as English, art and religion are taught.

In relation to the interview, two technical experts from the intercultural dedication of the Cayambi people's confederation and two teachers from the "Cardenal Spínola Fe y Alegría" school were interviewed.".

4. Results

4.1 Student research: evaluation test

This section analyzes the results obtained from the reading comprehension test administered to the students according to the following scale:

a) a) Scale of 0-1 correct answer: low
b) b) Scale of 2-3 correct answers: medium
c) c) Scale of 4-5 correct answers: high
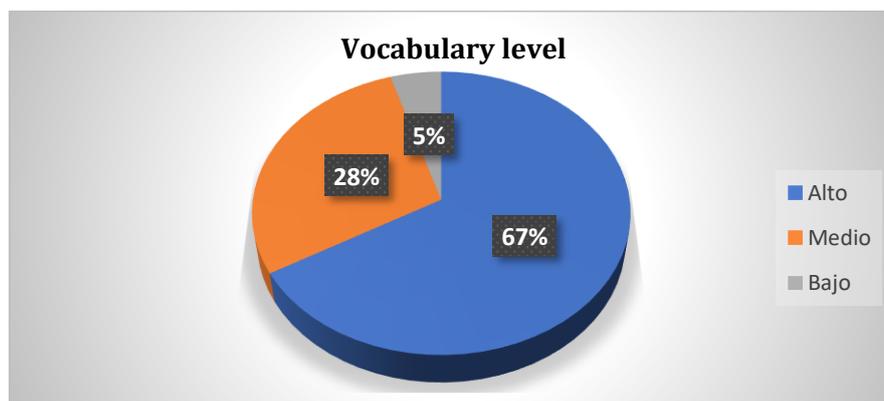
Figure 2. Vocabulary level

In relation to knowing the students' vocabulary level, 67% have a high level, 28% a medium level and 5% a low level. The results indicate that, in general, among the group addressed, this point is mostly strengthened, a positive aspect when it is understood that knowing the meaning of words contributes to a better understanding of a text and, therefore, does not result in a situation that frustrates their learning.
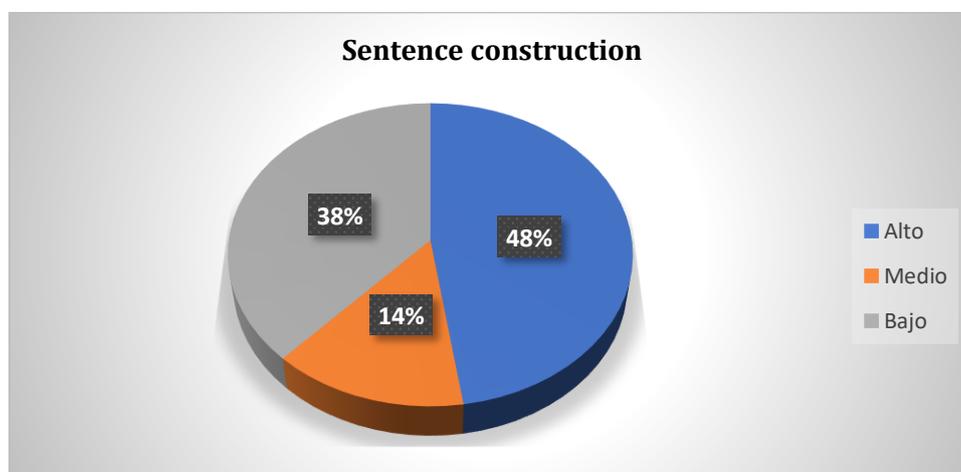

Figure 3. Sentence construction

With respect to knowledge of the ability to construct sentences, 48% have a high level, 14% a medium level and 38% a low level. It is thus inferred that this point needs more attention, since the results are less positive in relation to the level of vocabulary previously analyzed.
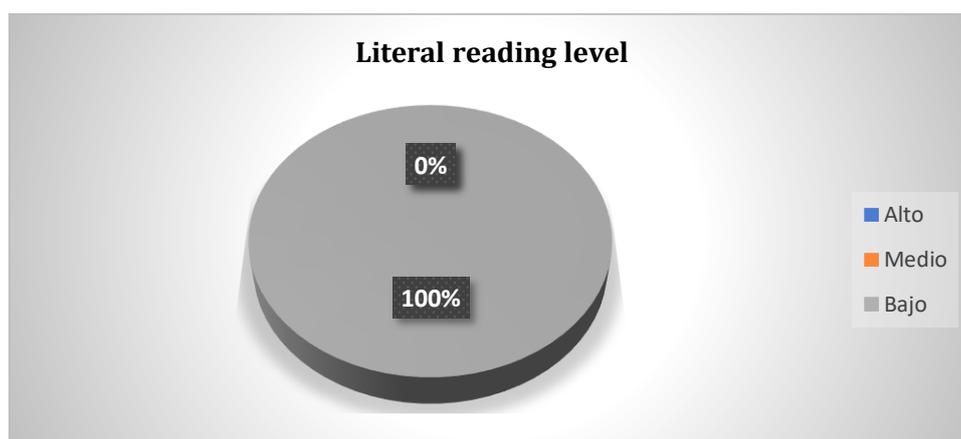

Figure 4. Literal reading level

In relation to knowing the type of literal reading, it can be seen that 100% have not reached this point, since when indicating that within the paragraph exposed on the work Huasipunga answer the characters of the story, the time in which the story takes place and the place of the story; there were strong shortcomings of response. The above leads to determine that it is necessary to strengthen this aspect in reading comprehension, being so far the weakest point evidenced in the test conducted in the fifth year of elementary school students.
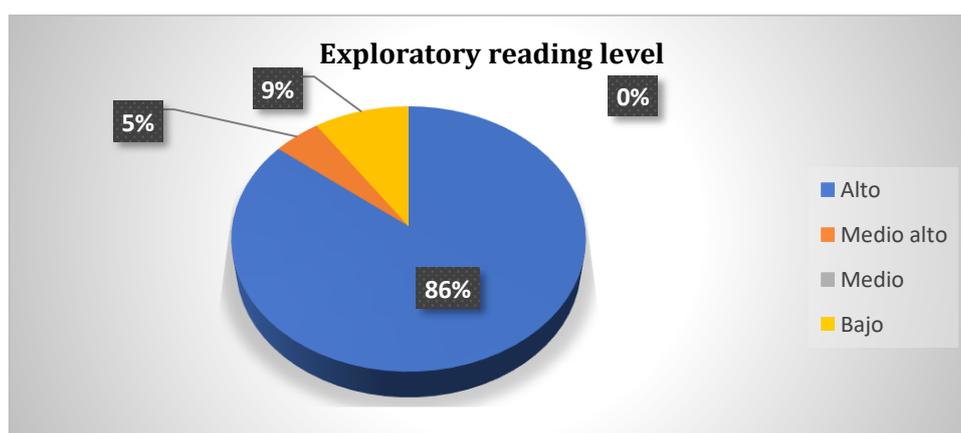

Figure 5. Exploratory reading level

With respect to knowing the level of the type of exploratory reading, 86% had a high percentage, 9% had a low percentage, 5% had a medium-high percentage and none obtained a medium score. Thus, it can be seen that this is the most positive result achieved in the group of all the points addressed so far, since they were able to answer extensively the title of the text, the chapters it contains, its author and type of story according to the options presented (Jorge Icaza, indigenist, none and Huasipungo, etc.).
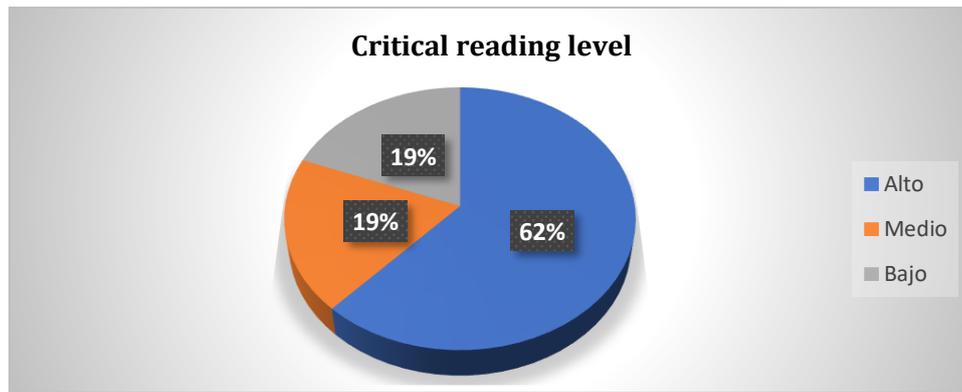
Figure 6. Critical reading level

Finally, regarding the critical level, 62% have a high level, 19% a medium level and 19% a low level. Thus, it can be deduced that, within this aspect, students achieve a moderately positive score, but that it still needs to be reinforced.

4.2 Teacher interview analysis

Within this point we have taken into account the interview with two teachers from an educational center in the country, to whom codes have been assigned (interviewee 1 and interviewee), in order to maintain confidentiality. Thus, in order to determine the degree of knowledge they have about the Chakana (its definition), the results were as follows:
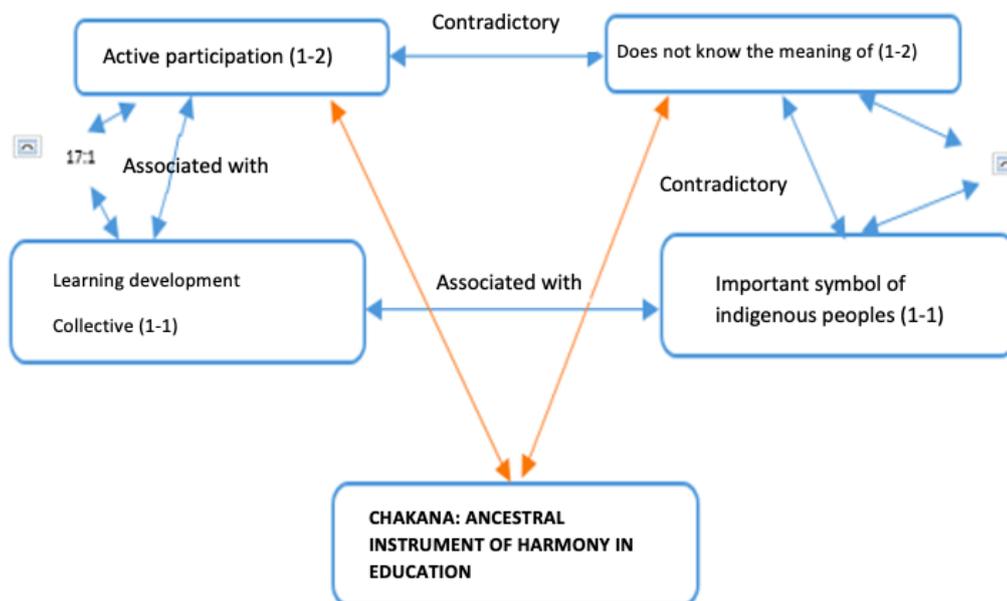

Figure 7. The Chakana: an ancestral instrument of harmony in education

Figure 7 shows that there is a knowledge base about it, understanding that one of them stated that it encourages participation, is part of the development of collective learning, and the second stated that he has a general knowledge about the Chakana. "It is a very important symbol for indigenous peoples; however, I have not been aware that it serves as a harmonization tool" (Interviewee 1, interview, September 28, 2021).

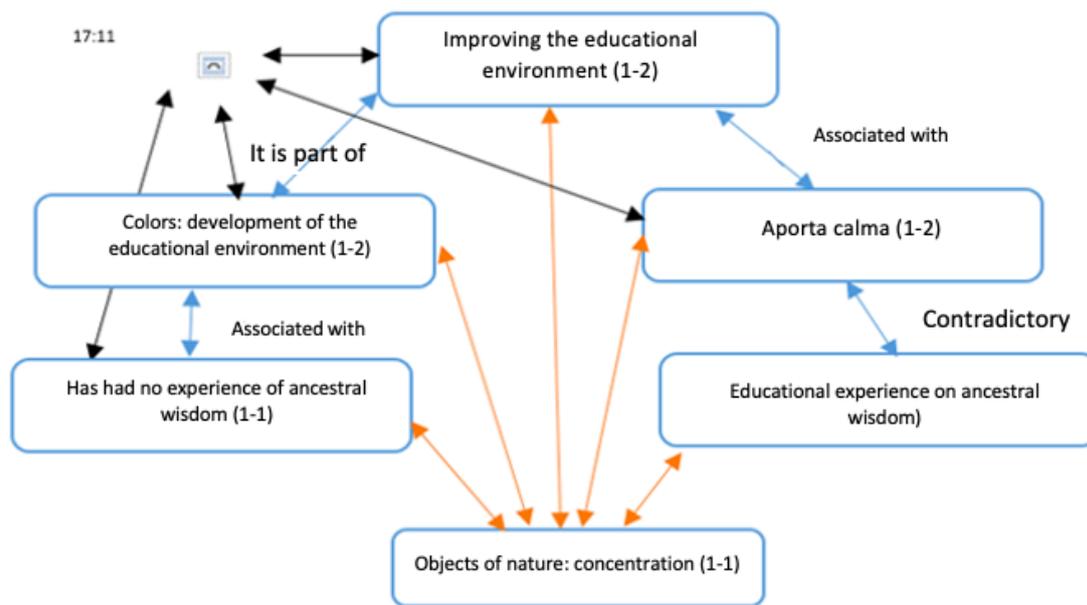With respect to knowing the educational experiences from ancestral wisdom, the following was obtained:

Figure 8. Educational experience on ancestral wisdom

In Figure 8, a general knowledge is seen in one of them, who points out that "the ancestral part in education influences a lot in the use of colors where the educational environment is developing, the placement of plants and sounds to reflect nature. It helps to improve the concentration and care of each student by placing a responsibility of protection, and improves at the environmental level the stress of the day to day influencing calm at the time of developing classes" (Interviewee 2, interview, September 28, 2021). The other, on the other hand, points out "I have never had any experience linked to ancestral wisdom" (Interviewee 1, interview, September 28, 2021).

Finally, regarding whether they would like to learn new teaching methodologies based on intercultural methodological tools such as the Chakana, the following is observed:
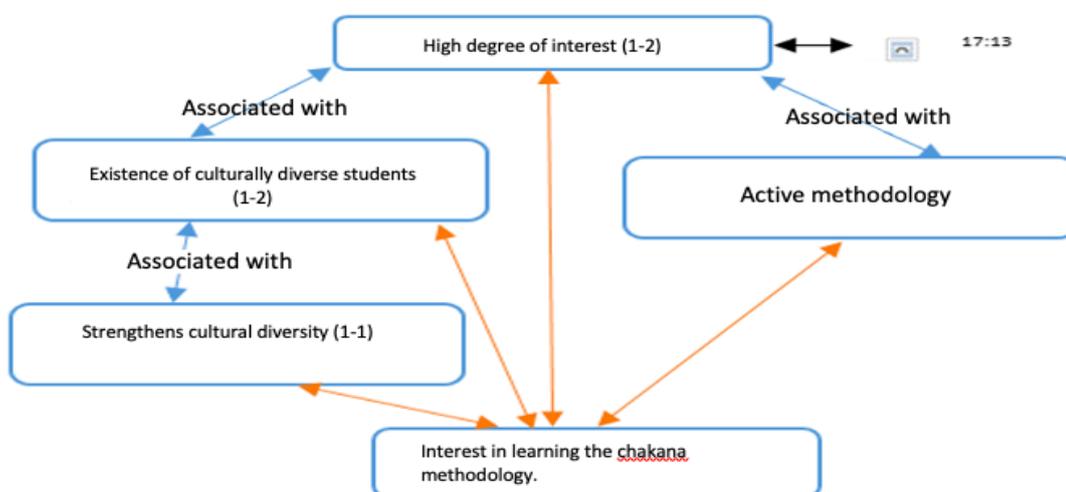
Figure 9. Interest in learning the La Chakana Methodology

Figure 9 shows that there was a unanimous response in indicating that it generates a high degree of interest, it is a useful methodology, since "it would be interesting to learn new methodologies, since in our educational establishments we have students from diverse cultures and different customs that are an essential part of our identity" (Interviewee 1, interview, September 28, 2021).

4.3 Analysis of expert interviews

This section presents the results obtained from the responses of two experts in intercultural education and the Chakana, who have been assigned a code (Expert 1 and Expert 2). This is followed by an explanation of.
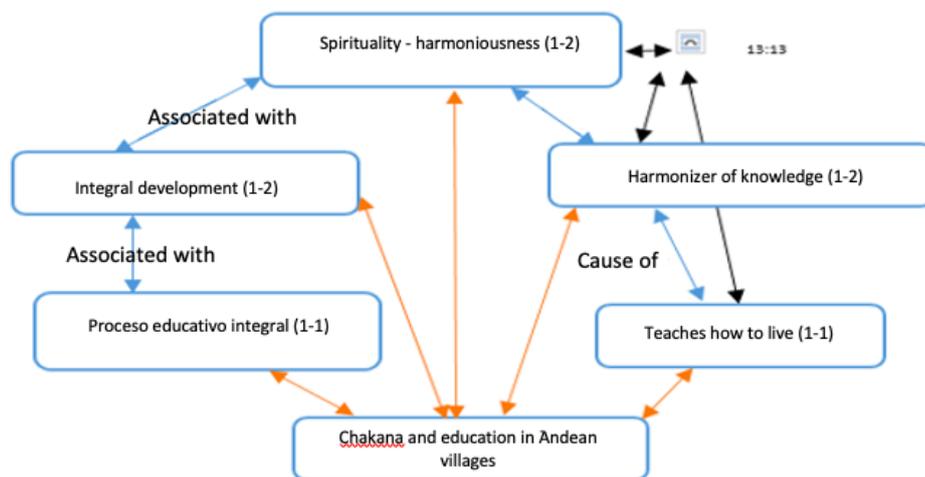

Figure 10. Chakana and education in Andean villages

When asked what the Chakana is or what it represents for the education of Andean peoples, it can be seen that in the experts' answers there are two central categories: integral development and harmony. In this sense, one of the interviewees considers that "it is an integral educational process, that is why it should not even be called education but integral development. The issue is that education has been disintegrated" (Expert 1, interview, September 24, 2021), so for the expert the Chakana "teaches us to live a spiritual-harmonious part" (Expert 2, interview, September 20, 2021) in areas such as education by teaching the student to live.
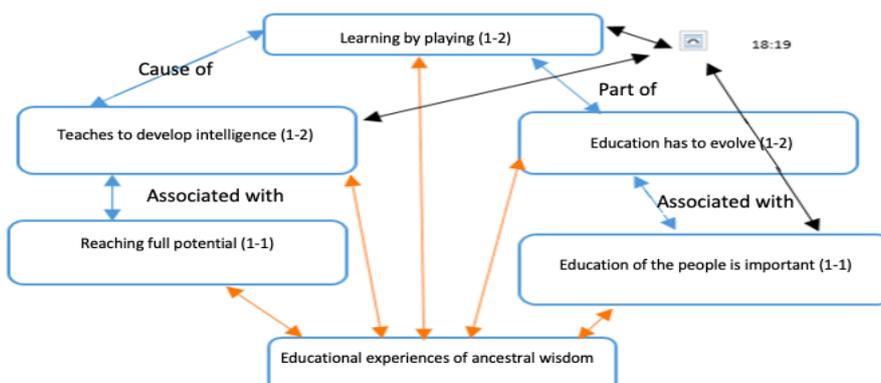
Figure 11. Educational experiences of ancestral wisdom

With respect to knowing what educational experiences from the ancestral wisdom have been lived in the country, what results have been achieved. At this point they point out that the educational experiences have shown the importance of the education of the peoples, "the problem is that in the country there is no public policy that says that the education of the peoples is worth, or that the language has to be worth to enter a place to work. They teach rather to eliminate because what matters is to know Spanish" (Expert 2, interview, September 20, 2021), therefore, for one of the interviewees, education has to evolve and if it does not "we are lost" (Expert 1, interview, September 24, 2021); it is essential to teach to develop intelligence and to embrace the full potential of the child.
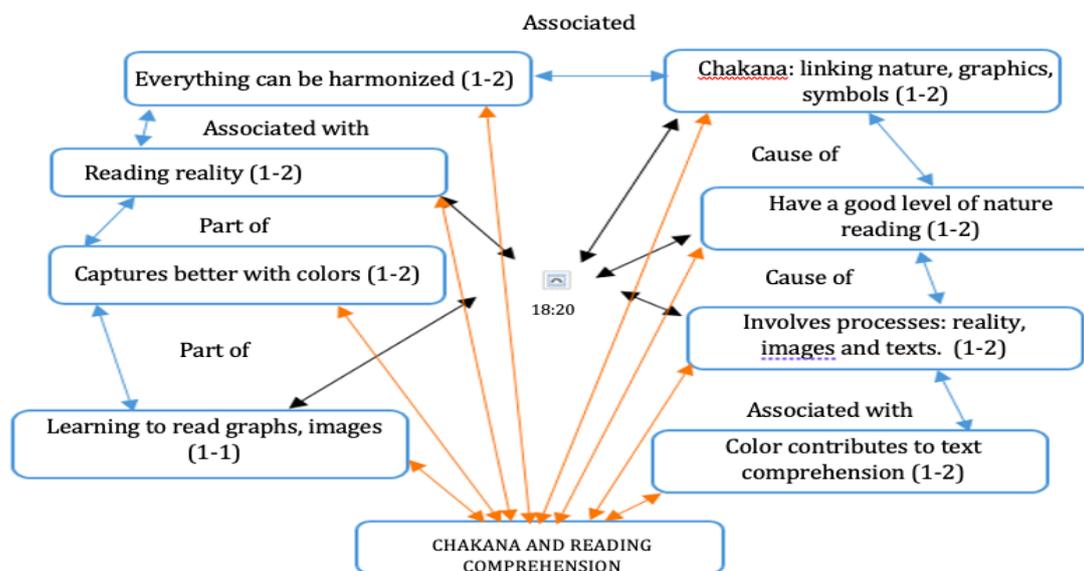

Figure 12. La Chakana and reading comprehension

Finally, regarding the way in which Chakana can contribute to the field of text comprehension, the answers indicated that it is necessary to teach from Chakana based on the reading of reality, which involves a process. "It is the ability of a person to meaningfully interpret a text, but for us it is not only that, it is to make use of circular Chakana, that is, to integrate nature, graphics and symbols" (Expert 1, interview, September 24, 2021). To do this, "we must have a good level of reading nature and, therefore, reading reality: reading in reality" (Expert 2, interview, September 20, 2021).

In this sense, Expert 2, from the Kayambi people, states that the use of colors helps students to better grasp reading comprehension, where:

> In each color you can put texts depending on the topic. You can also plan in each color in education, and there are several ways to work on the colors. For children you can put the animals, for example, in red is the guinea pig, which teaches us the maximum fertility, the maximum love for the loved one. In the blue color we have the snake, and you can tell stories with the animals. In the green color we have the hummingbird and there we also find the pig. The yellow color gives us security, and it is represented by the little dog, the security is in the mountains, the strength of a community that is the little dog and/or the little bear. In the

center we have the spiritual, visionary part, the condor, the little turtle
(Interview, September 20, 2021).

5. Discussion of the results

The data obtained made it possible to demonstrate, on the one hand, the level of reading comprehension among fifth grade students and, on the other hand, to determine to what extent the teachers interviewed know the Chakana as an intercultural methodological instrument, but also to identify the essential factors of this proposal of the ancestral conception.

In this way, it can be seen that in the group of students' reading comprehension, which is clearer on the literal than on the critical level, but also in the lack of knowledge of how to construct a sentence, it is determined that the methodology used has not given the expected results. On this point, the study conducted by Moreta and Mayorga (2020) led to the conclusion that, through the traditional methodology used in an educational center in Colta, Ecuador, "48% of the students evaluated do not reach the expected average (normality) for their level of education, and only 13% of them show a high or very high reading competence" (p. 60; results obtained from a Reading Comprehension Evaluation test, of a sample of 101 students.

Now, within the teaching-learning process, it can be seen, in the present study, that teachers have not introduced new methodological proposals as proposed in the research, and that this is demonstrated by the results, widely ignoring the benefits that the Chakana offers to education in different fields of knowledge. Here it is important to point out the study developed by Escandón and Rivera (2020), for whom the current educational system does not take into account ancestral didactic resources for the development of skills in areas such as Geometry. This was evidenced by their research developed using the technique of interviewing teachers and surveying students in an educational center, where it was concluded that the group does not understand the topics covered in class, nor does it reach the required learning under the traditional methodology, but as a Didactic Unit Plan (PUD) was applied with a focus on the use of the Chakana, their learning process improved significantly.

Thus, it can be seen that this methodological instrument is an interesting proposal in the field of reading comprehension (a field in which there is not much literature in Ecuador), since, as experts point out, it not only provides spaces to improve this process, but also articulates the experience of reading comprehension with reality, integrating elements of nature on the precept of learning to read reality. But, in the same way, it contributes to forge an integral development from its principles and colors, since it deals with aspects such as emotional aspects by generating harmonization environments.

5. Conclusions

Within this section, the conclusions are developed. This is based on the results obtained throughout the research process, which are detailed below in accordance with the specific objectives set out in the study.

On identifying the essential factors of the Chakana as an intercultural methodological instrument, it is concluded that within this methodology two central categories are taken into account: integral development and learning in harmony, where the colors of the Chakana (good feeling: red, good thinking: blue, good saying: green, good doing: yellow and white: harmony) allow the student to interact with reality, being the game an important

part within the educational process understood from the Andean vision as a healing, healing entity.

It is also concluded that another essential factor is given by focusing the methodology according to a learning based on experiences in which both teacher and student interact actively under a shared education. This applied to the field of reading comprehension, involves teaching from the use of a reality-based reading, that is, helping the student to interpret the meaning of a text, but integrating in the process elements such as graphics, symbols and nature. With respect to determining the degree of reading comprehension in the students, it is concluded that among the aspects that need to be reinforced are mainly the ability to construct sentences, but especially the reinforcement of the use of literal reading, a point that none of the students achieved. In addition, it is necessary to improve the level of vocabulary and the critical level, both aspects that were evidenced to be obtained at a medium-high level; being the best developed the exploratory reading type with more than 80% reached in the group studied.

Finally, regarding the objective that refers to designing an intercultural educational proposal from the Chakana to strengthen reading comprehension, it is concluded that the proposal should be focused on the elaboration of a didactic guide based on the colors of the Chakana that reinforces aspects such as improving vocabulary, literal reading and the critical level and knowing how to construct sentences, but based on the use of a text as well as learning to read graphics, symbols based on the game and experiences within the context that nature can contribute to reading comprehension. Likewise, it is concluded that the proposal should be directed to encourage the active participation of the student, from the Chakana as an ancestral instrument of harmonization of knowledge, giving an initial induction on this methodology, use of its colors in education, dimensions, principles, understanding that, in the interview with the teachers, they evidenced to have very general knowledge on the subject.

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The culture for the recognition of the identity: case of the fang culture of Equatorial Guinea

La cultura para el reconocimiento de la identidad: caso de la cultura fang de Guinea Ecuatorial

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Abstract

Culture is a manifestation that helps the recognition and identification of a certain social group or individual. It is defined as the set of manifestations that express the way of thinking, way of living, customs and intelligence developed by a social group. This paper clearly deals with culture in the Fang ethnic group of Equatorial Guinea. Therefore, the purpose of this research is to make known that culture is an essential and vital element for the Fang man, currently a lively collapse is being observed. As this research deals with a socio-cultural issue such as the Fang culture, it was necessary to adopt a qualitative methodology. The reasons that induced to apply this approach is because there are studies on social relations. One of the most relevant results is that all respondents believe that culture has an influence on the person. It must be said that in the current context, it is not possible to speak of a culture apart from a social group. And as the most revealing conclusion, there is the issue of the decline of the fang culture. It is noted that there are several reasons that are fueling this decline. Globalization and/or modernism are pointed out as causes.

Keywords

Culture, fang culture, fang culture, personal self, cultural identity, recognition

Resumen

La cultura es una manifestación que ayuda al reconocimiento e identificación de un determinado grupo social o de un individuo. Ésa se define como el conjunto de manifestaciones que expresan el modo de pensar, modo de vivir, las costumbres y la inteligencia desarrollada por un grupo social. En este trabajo se trata claramente de la cultura en la etnia fang de Guinea Ecuatorial. Por lo que, el propósito de esta investigación consiste en dar a conocer que la cultura es un elemento imprescindible y vital para el hombre fang, actualmente se está observando un animoso derrumbamiento. Al tratarse de una investigación que aborda una cuestión sociocultural como es la cultura fang, se ha visto necesario adoptar una metodología cualitativa. Los motivos que indujeron a aplicar este enfoque es porque existe estudios sobre relaciones sociales. Uno de los resultados más relevantes es que todos los encuestados estiman que la cultura tiene influencia en la persona. Cabe decir que en el contexto actual, no se puede hablar de una cultura al margen de un grupo social. Y como conclusión más reveladora, está el asunto del declive de la cultura fang. Se observa que varios son los motivos que están atizando dicha decadencia. Se señala así el caso de la globalización y/o modernismo como causas.

Palabras clave

Cultura, cultura fang, ser personal, identidad cultural, reconocimiento

1. Introduction

This paper is entitled Culture for the recognition of identity: the case of the Fang culture of Equatorial Guinea. There are several motivations behind the writing of this paper. Firstly, because of the importance of culture for every human being belonging to a certain social group; and in the context of the Fang black-African Bantu. On the other hand, it is estimated that the Fang culture is currently suffering a decadence in the sense that it is losing its essence, knowing that culture is power, it is history, and that people who forget their own history are condemned to repeat it. It can be affirmed that the recognition of a social group or of a personal being obviously passes through its cultural identity. If we take the following example, how does a Fang person identify himself to a Malian when he arrives in a metropolis like Paris? It is believed that it is by their culture if the question of nationality is omitted and having only the black-African skin color as an aspect.

Culture is understood as that set of manifestations that express the way of thinking in the sense of knowledge, way of living, customs and intelligence developed by a social group considered here as a people or civilization according to the context. And so it is that each people, each social group has a cultural recognition, in other words, identity. Culture through its manifestations and elements is what defines us in our essence. As far as the personal being is concerned, it refers to a term whose Greek etymology is prósopon, that is to say, person. The person is the peculiarity of each human being, a human nature with principles, ethical, moral and cultural values that is in accordance with its socialization process.

Finally, there is the fang culture. The Fang are a social group or black African people located more frequently in Central Africa, spread in different Central African countries such as Equatorial Guinea, Gabon, Cameroon, Congo Brazaville; and it should also be noted that they form a trunk with the same historical and cultural reality, with the same beliefs (animism, for example) and speak the Bantu languages of a common trunk, among which we have Fang, Bubi, Balengue, Kikuyu, etc.

The purpose of this research is to demonstrate that culture is an essential and vital element for the Fang. That is to say, with culture, the Fang Bantu man defines and identifies himself socially and has recognition of his personal being. The problem of our research concerns the decline of Fang culture today, and this situation has attracted attention. From this perspective, it is thought that it is necessary to investigate on the subject and give a revaluation to the Fang culture.

Based on the above, the following research questions are formulated: what is the impact of the Fang culture on their personal being, in other words, what does the culture contribute to the Fang being and why is it important to them; why is the Fang culture in its decline nowadays? Hence, the thesis put forward in this paper is Fang culture as a set of values, ways of thinking and living, customs and knowledge of the Fang ethnic group is their identity. Therefore, it must be protected and valued.

According to the criteria required for the realization of a research work, the following sections are developed: in section 2, the state of the question is presented, which consists of the review of the bibliographic sources that address the issue under study. Section 3 establishes the defense of the thesis where the need to protect culture is effectively shown. For this purpose, the first subheading is the considerations and perspectives on the term culture; and as a second point, the stages of the Fang culture. Section 4 details the methodology used to develop the research. Section 5 shows the results, analysis and discussion. In section 6, the conclusion is established according to the results obtained.

2. 2. The state of the art

The question on the Fang culture has several bibliographical supports, it is noted that many authors have devoted their full attention to write about the black-African Fang culture. This is how this subject is approached from an anthropological perspective. The studies on the Fang culture have made it possible to see that it is a very peculiar people. It is necessary that the cultural aspects of this social group be transmitted from generation to generation in order to perpetuate it. The Fang are undoubtedly pure traditionalists. That is to say, everything he does on a social level has an inclination towards knowledge or behaviors that are transmitted from one generation to the next.

This research does not intend to open a new theoretical framework on Fang cultural studies because of the number of authors who have already written about it, the authors have talked about the cultural aspects of the ethnic group. The objective is to start from those previous writings to show the vital importance of culture for the Fang. It is necessary first of all to know the historical framework. This is why Adjoa and Kouakou-Kouamé (2017) point out that:

> Written history reports that the Fang originated in what is now South Sudan, from where they left to avoid the Muslim invasion; they migrated to the southwest, reaching the Congo and Nigeria. Anthropologists agree that they belong to the Bantu ethnic group, and mixed very intensely with Sudanese, Ethiopians and Congolese. Known for being brave, strong and warlike, they managed to occupy and appropriate the areas to which they were forced to migrate in search of a solution to their way of life.
>
> In addition, their territorial distribution is so large that it exceeds the geographical area of Equatorial Guinea. Thus, they can be found in five countries among which Equatorial Guinea where they occupy 75% of

> the population, in Congo with 38%, in Gabon with 33%, in Cameroon with 23% and in Sao Tome with only 10%; a situation that makes us reflect on how inappropriate it is to consider the ethnicity of a country as an exclusive entity. In this sense, we can accept that the Fang people are more a cultural than a biological entity (p. 41).

The Fang are currently located with dense frequency in the geographic area of Central Africa. This is where they carry out their cultural activities. The history of these people indicates that they come from South Sudan where they escaped from the slave trade, and in their flight, they migrated towards the southern part until they settled in Central Africa in Gabon, Cameroon, and Equatorial Guinea where they are found en masse. The Fang thus represents an ethnic group with cultural greatness.

According to Bituga-Nchama (2020), it indicates that:

> For several years, these people have been shaping their own worldview of the world. In fact, we can speak of a culture that has been transmitted from one generation to another, preserving the cultural legacy inherited from their ancestors. It is a people that has a diffuse origin because they are ungrammatical and there are no testimonies that really describe with exactitude their origin. The frequent hypothesis is that the Fang come from North Africa, where they had migrated in search of better settlements to dedicate themselves to cultivation and hunting (p. 17).

Along the same lines, the same author thinks that "the Fang constitute an ethnic group with its own idiosyncrasies. This means that they have their own myths, philosophy, anthropology, which constitute the cultural heritage that makes them unique" (p. 18). The Fang culture develops in different spheres as mentioned by Bituga-Nchama.

Research on Fang culture is still extensive due to the fact that there are other writers who deal with this subject. This is the case of Cornelia Beatriz Ondo Emerua who conducted research on the dowry in the marriage of the Fang ethnic group, the dowry being a cultural element of the Fang society. The same author states the following:

> In the case of the Fang people, a marital phenomenon called nsua appears, which would consist of a payment from the groom to the family of his bride. The dowry is especially important among the Fang, it is the economic consideration that the family of the future husband must pay the family of the future wife, it is so important that without dowry there is no marriage (Ondo-Emerua, 2013, p. 30).

Fang culture has several dimensions. Each dimension has been investigated according to the interest of the researcher himself. Those who talk about marriage, family, funeral rites, religion, etc. for this reason there is enough information about the Fang culture, since it is an open field.

3. Thesis defense

The thesis defended in this work is the following: Fang culture as a set of values, ways of thinking and living, customs and knowledge of the Fang ethnic group is their identity. Therefore, it must be protected and valued.

Cultural authenticity is an aspect to be taken into account, it is considered that each people must respect its origins, its own culture. Thus the Chinese must be authentic, the French must be authentic, as must the Equatoguinean or Nigerian, the Colombian, the American, etc. Respecting the culture does not diminish its essence, but rather gives much value to one's personal being. Cultural authenticity is therefore a matter of dignity. Culture has a positive influence in all its aspects, it is said with respect to its contribution in the cultural construction of the human being. It is not being argued that culture does not have negative aspects.

Returning to the thesis, it is reaffirmed here that the cultural identity of the fang man makes him authentic because it defines him and gives recognition to his personal being. The argument of Boleká (2003) is now analyzed, indicating that:

> The Fang are an ethnic group with a very characteristic cultural and linguistic identity [...] It is a people that continues to preserve its tribal structure with patriarchs above whom there is no other authority [...] We must say that it is a people governed by the clan system, whose base group is the horizontal family, and whose members are grouped around a patriarch, some descendants, other blood relatives, etc. (p. 25).

The Fang culture has been taken as a paradigm among the Bantu cultures. However, the others would possibly be in the same conditions, alluding to transmission and conservation. Culture has a great influence on the lives of the people living in a community or society. Thus, there is no society without culture. Since ancient times, human beings have been developing traditions and customs, and thanks to it, they define themselves. Among the cultural knowledge that the Fang man has developed can be highlighted in the following fields: religion, art, sexual life, marriage, circumcision, funeral, gestation, among others. In each sector mentioned here, some type of ritual or process that resembles this ethnic group is recognized. It is important to point out and emphasize that the Fang constitute an ethnic social group with a very peculiar culture.

Among the important cultural values in the Fang ethnic group is the family. From his perspective, Bituga-Nchama (2021) stipulates that "the concept of the Fang family remains strong and blood ties constitute an unbreakable bond" (p. 14). The family concept in Africa, especially in black Africa, is highly respected. For this reason, the author cited a priori goes on to say that the family "constitutes one of the great values that African peoples possess and on which society fundamentally rests. The kinship ties that are established in the Fang people condition the individuals who belong to this tribe or family" (Bituga-Nchama, 2021, p. 14).

Within the same values, ayong appears as a fundamental value in Fang society.

> Socially or communally, the term or concept Ayong (clan or tribe) as it is usually translated into modern European languages, turns out to be the primary category for the Fang, because their life revolves around it. In traditional society, it was the identity card of the Fang man and woman when they introduced themselves to an unknown village or when they occasionally met unfamiliar people, sometimes as a rule of courtesy and sometimes as a search for reputable people in distant lands, since the Fang lived in scattered villages in the equatorial jungle. The Ayong also had, in that ancestral society and still has today, the self-defensive and

> conservation character of the group, i.e., it avoided intestine wars and the danger of a centralized power (Eyama-Achama, 2014, p. 301).

As mentioned above, the tribe or clan is called ayong in Fang culture and represents the identity card of a Fang before other groups. Therefore, the tribe for the Fang is a value. Belonging to the same ayong clearly avoids relationships of a sexual nature. This vision of the ayong involves a taboo according to which individuals of the same clan cannot marry, if it were to happen it would be considered as zama duru translated in English as incest. The ayong thus has an inviolable moral dimension. In the words of Eyama-Achama (2014), "its moral character prevented incest and, therefore, made the fang people open-minded, since they always looked for their partner outside their own clan (ayong)" (p. 301). Next, we will develop some sections that help to understand the issue under study.

3.1. Considerations and Perspectives on the Term Culture

This subheading is introduced with the following series of questions: what is culture? why is man considered as a cultural being? what are the considerations and perspectives on the term culture? why is culture so important for any human being in general and for the fang man in particular?

At the outset, it can be stated that man is a cultural being from the philosophical perspective. By antonomasia, man belongs to the animal kingdom, but his rational and creative capacity makes him a cultural animal. We wish to emphasize that culture is a social fact because it represents the way of life, the way of thinking, the customs and habits of a given social group. Anthropologically speaking, culture is a human product, that is to say, it is the manifestation of ideas conceived by man himself in order to accommodate and affirm himself in nature while respecting its essence. It should also be mentioned that culture is a historical process that promotes the legacy of the ancestors to posterity.

Within the framework of the theme to be addressed, we observe the Bantu Negro-African, who develops his own culture, peculiar and authentic, appropriate to his human nature and personal being. The Bantu black African culture thus manifests a set of values to be protected and safeguarded. What has been said so far assumes that the Bantu black African cultural identity is reflected in all its cultural manifestations and constitutes a set of values for it. Many "social psychologists and anthropologists agree in defining culture as a way of life. Culture consists of socially acquired patterns of thought, feeling and action" (Paéz and Zubita, 2001, p. 1).

Ron (1977) defines culture as "that complex whole which comprises knowledge, beliefs, art, morals, law, custom and other faculties and habits acquired by man as a member of society" (p. 13). The notion of culture is evidently linked to personality; in fact, it is argued that there are no societies or individuals that lack a culture. All societies or communities have their own peculiar culture, however simple it may be, that is, no matter its greatness or its impact on a supranational scale, the important thing is to respect it.

The human being has abilities and faculties to transform nature, this is what is called culture. So everything he has created, everything that is added to his nature through actions constitutes a cultural product. Culture is also considered as a social fact, it is the mode of organization among men in the face of nature. It is acquired through learning, education, initiation to the norms that govern the life of a whole community or social group. Therefore, societies distinguish themselves from one another by means of culture.

Culture is also a "set of knowledge shared by a group of individuals who have a common history and participate in a social structure" (Paéz and Zubita, 2001, p. 3). And precisely, in

this work, the paradigm taken as a paradigm is the black-African Bantu culture. This social group [Bantu] has evidenced, of course, the development of knowledge, values, norms, rules and lifestyles that have been preserved and transmitted from generation to generation. Thus, the objective of this research that demonstrates how culture influences the personal being of the Bantu man continues to be maintained.

3.2. Fang Culture Stages

Taking into account that our research has been carried out taking as a paradigm the black-African Bantu in general and the Fang in particular as part of this family. Three periods can be highlighted in the Fang culture:

a. **The original stage.** This stage of Fang culture refers to the culture in its raw state, i.e. the essence and purity of the culture before it came into contact with other peoples or civilizations..

> These are fields of cultural tradition, understood as the whole of the shared heritage of the members of society, or the set of cultural goods that are transmitted from generation to generation within a given community. Tradition stored and guaranteed the existence of those values, customs, socio-cultural manifestations and levels of knowledge that were recreated by the society, because they were considered valuable and should be inculcated and transmitted without further ado to the new generations (Boleká, 2014, p. 35).

b. **The colonial stage.** At this stage, the Fang culture is affected by the process of colonization. From means of transmission such as the school through the inculcation of new knowledge, the Church with the process of evangelization; colonization has greatly affected the black African cultures..

Thus, it is estimated that in this colonial stage many cultural values and "knowledge of the previous stage" have been eroded (Boleká, 2014, p. 35). In the Fang man, a victim of colonization, one therefore recognizes "a profound deculturation, a conscious enculturation and the construction of new identities, new values and knowledge for Africans mentally trapped in the permanent process of colonization" (Boleká, 2014, p. 36).

c. **The post-colonial stage**. It is a more advanced stage where the same fang has to choose between an authentic culture (original culture) and an imported one (western culture). Hence, the establishment of a cultural heterogeneity.

There is currently a cultural hybridism, a coexistence between the authentic culture of a fang and the imported western culture. It is a rather disturbing situation that puts many in the situation of opting for the culture that suits them according to the current reality. The impact of globalization on black African cultures is considered to be one of the major anthropological problems. Bantu cultures today are in full decadence, therefore, it is necessary to look for mechanisms to eradicate this scourge.

In synthesis, before the question of the stages or periods of the Fang culture, it can be said that no black African culture has remained safe, that is to say, that all cultures have been in contact with other peoples, civilizations or cultures. It has already been pointed out above with the colonial stage, when colonization begins, cultures have been affected in all aspects. For example, at the cultural level, the importation of Christianity as a new doctrine to which the black African Bantu Fang were subjected to the detriment of their

own religious beliefs. It is known that these people were animists, believing in the power of nature. In the following section, we show a convincing reason why the culture of the Bantu Negro-African must be preserved.

3.3. 3.3. Culture as recognition of the Fang identity

If culture participates in the recognition of the identity of the Fang people, it is important that it be preserved and valued. Tradition is the transmission of culture so it "was learned and was part of the cultural identity (such as music, rituals, dances, stories, among others)" (Boleká, 2014, p. 35). There are cultural manifestations and elements specific to each culture. The black African Bantu has developed this culture since ancient times and it has been transmitted from generation to generation until today. Despite this transmission, Bantu culture has undergone many modifications. Modernism has been combined with culture; as in genetics, there is always a dominant allele, and in the case of the above-mentioned combination, Western culture is the dominant one.

It is important to point out that it is thanks to culture that the Bantu man becomes an integral and authentic person.

> The cultural identity of a people is historically defined through multiple aspects in which their culture is embodied, such as language, an instrument of communication among the members of a community, social relations, rites and ceremonies, or collective behaviors, that is, the systems of values and beliefs (...) A characteristic feature of these elements of cultural identity is their immaterial and anonymous character, since they are the product of the community (Molano, 2007, p. 73).

Each people or ethnic group must be authentic and this authenticity is based on its cultural elements. For example, the name of a Fang Bantu is its identity. Thus, "the name, having the meaning of familiarity, the name of a friend was imposed on the children, as well as that of the in-laws or sons-in-law" (Nsue-Mibui, 2005, p. 92). What the author means is that the imposition of the name on the son or sons obeys a certain pattern, since the objective is the preservation of the lineage.

> The fang name, seen from the point of view of its application, obeyed the same conditions of the western model, i.e., the name imposed by the father became the proper name of the person and the father's name became the common surname of all his sons and daughters (Nsue-Mibui, 2005, p. 92).

The fang name as seen is one's identity. In the Bantu context one does not count the baptismal name (western name, for example, Boniface, Peter, James, etc.) but rather the cultural names are the ones used to identify one. From this perspective, there are names that are clearly used for men, such as Nguema, Ndong, Nze, Ondo, Ngomo, Esono, Obiang, Tomo, Bituga, etc.; and names such as Nchama, Ñengono, Angue, Obono, Mikue, Okomo, Ayang, Nfono, among others to identify women. For more Fang names, both male and female, it is recommended to read the work of Rosendo Ela Nsue Nsue Mibui whose title is Historia de Guinea Ecuatorial. Pre-colonial period (life of the first inhabitants of Equatorial Guinea).

Regarding the fact of giving names to sons and daughters, Nsue-Mibui (2005) explains it as follows: "a person whose name is -NSUE- will all have as surnames the name of his father -

NSUE-" (p. 92). As already mentioned ut supra, the fang considers the Bantu name. And the son or daughter is called by a name given to him or her by his or her father. If the father had four children, three boys and one girl, he would give them the names of the members of the family or of the tribe to perpetuate the lineage plus the family name which is his own. Thus would be the result: First son: Nguema; Second son: Ondo, Third son: Nsue and the daughter Obono. And in relation to the father, all the sons would have the surname -NSUE-. The first son would be -Nguema Nsue-; the second would be -Ondo Nsue-; the third would be -Nsue Nsue- being the onomastic representative of his father who would take the name to his children hence the square of that name; and the daughter would be called -Obono Nsue-.

It should also be said that the names have from time to time meanings. Of the men there is a relationship with the animals of the jungle or birds: Nze (Tiger), Nkisogo (the elephant's den), Obama (sparrow hawk) or season of the year: Oyono (summer), Okiri (morning) while women's names relate to themes or social issues such as Ayetebe (difficult to get up), Ñengono (mother of the bride or mother-in-law), Ayecaba (difficult to share out), Abumgono (young girl's pregnancy), Asangono (not yet a woman), Nlang (tale, story), Nchama (destroyer woman) etc. Nsue-Mibui (2005) teaches another approach to Fang names by stating that

> In all the names of the Fang people, we find names which seem to be clearly original and from which no possibility of derivation or circumstantial composition can be found, such as Mbomio (Mbomeyo), Esono, Edú, Elá, Mbá, Abeso, Nguema, Obono, Mibui, Angue, Mangue (Mengue), etc. To other names, then, by their composition, other meanings can be given, as Ndabengono: from NDA-house, and BENGOHAN-daughters The name of Ndabengono will be given to one of the daughters of a family that only had daughters. Abecara: from ABE-ugly and cara (acaran) or to make competing ugliness that competes. Ncara: NCART-negar. It will be given to a daughter who was born with a suspicion of adultery committed by her mother during gestation and refused to denounce it at birth (p. 102).

This onomastic dimension in the Fang culture is very important and vital in the sense that "when a man died and left many descendants, it was understood that his name, when repeated as a surname in each of his children, was naturally perpetuated in time and space" (Nsue-Mibui, 2005, p. 102).

Another cultural element that can be highlighted here is art. Art is understood to be an important manifestation in the Fang culture.

> Art represents something essential and important in the culture of Fang society. Indeed, traditional Fang art overflows mainly in sculptures made of wood, and with it they seek not only aesthetics, beauty, but also something more important and higher: spiritual perfection (Adjoa and Kouakou-Kouamé, 2017, p. 41)

Masks are discussed here as a cultural identity. Anthropological studies have been conducted on the types of black African masks and their representations. Thus, "the category of masks responds to the conception of identity and the relationship of the different realities of the human being" (Revilla-Carrasco, 2014, p. 103). Revilla (2014) shows the importance of masks within black African cultures, in fact for him, "the use of

masks entails a supplanting of our own nature that is replaced by the supplanted one" (p. 102). That is to say, with the mask, the Bantu being acquires a transcendental identity.

> Within the social function, the masks can refer to fertility rites (Nimba mask of the Baga, Do mask of the Bwa, the Ty Wara helmet masks of the Bamana, the Ma'Bu mask of the Nwarog secret society of Cameroon), to initiation rites (the Cikunza mask and the Kalelwa of the Tshokwe, the Yaka mask of initiation, the Nkaki mask of the Lwalwa of Zaire, the Salampasu mask of the Salampasu and the Mbagani), or to the foundations of social life, as well as to the foundations of social life, the yaka mask of initiation, the Nkaki mask of the Lwalwa of Zaire, the mask of the Salampasu and the Mbagani) or, to fundamentals of social life, such as the legitimization of authority (aron arabai type brass mask of the Temne), or the war mask of the Grebo (Revilla Carrasco, 2014, p. 103).

On the same lines,

> A mask is not exactly a disguise - in any case, in the context of the magical cultures in which it flourishes, a disguise is not merely a disguise: the frontier between being and appearing has not yet established its prestige, so that endorsing a mask does not belong to the domain of appearance and simulation, but of transformation and metamorphosis (Morey, 2001, p. 18).

In this sense, the masks have a representative aspect, i.e. they are not used as a mere disguise to adorn the face, but the masks are used for special moments especially during rituals. Bantu languages also constitute a cultural identity for the Bantu man. For the Negro-African, "language is not, as it usually is for Europeans, the conception of the world of a people, by which it presents itself as a cultural unit" (Picotti, 2005, p. 47).

In black African culture, the word understood as language has an essential role and importance: that of identification. Thus, "these considerations about the summoning African sense of the word, which has so much weight in our identity and which recovers its original dimensions in an era of instrumentalization and manipulation of language" (Picotti, 2005, p. 49). Anthropologically, languages distinguish peoples, in other words, they are bearers of a system of cultural values that constitute an important element of nationality as a concept, and form a unifying factor between individuals of the same social group (Zamora, 2001). Language is in accordance with culture, which is why it is necessary to identify with it. Throughout this research, it has become clear that language confers a certain cultural identity to its speakers.

It is thought that Bantu languages, being a cultural element for identity, should be conserved and preserved. It should be added that

> The linguistic imposition can even destroy the identity of the inhabitants of a given region, because when they lose their language, they lose their culture and therefore their identity. It seems a link that is best safeguarded because it contains the essence of the human being (Bituga-Nchama and Nvé-Ndumu, 2021, p. 39).

The cultural identity of the black-African Bantu in general and of the Fang in particular is demonstrated by its different cultural manifestations, we reiterate the thought. If we look

back to the original stage of this culture, we can see that they still follow the criteria of transmission of knowledge today. In order for the fang to identify itself, it starts from general considerations to particular ones. For example, I am human, I am African, I am black, I am Bantu, I am Fang, I am from tribe X..., son of X... is an aspect that is still maintained. However, it should also be added that culture cannot be static for life, it will always undergo some alterations, but these modifications should not affect the very essence of culture. It is considered that evolution does not imply substantial change, since, in the case of the fag culture, it should be the same.

4. Methodology

Since this research deals with a sociocultural issue such as the Fang culture, it was necessary to adopt a qualitative methodology. The reasons that have induced us to adopt it are due to the fact that it consists of the study of social relations.

The survey will be used as a research technique and the instrument will be a questionnaire containing closed questions. The questionnaire will be useful to collect the data to be analyzed in this research. The population is that of Niefang (a district of Equatorial Guinea), and the selected sample is approximately 102 subjects, preferably of the Fang ethnic group.

5. Analysis and discussion of the results

The survey conducted in the city of Niefang had the purpose of knowing the degree of perception of the object of study, and it was necessary to conduct this phase of fieldwork for a better result. The starting point was the problem that the Fang culture is in full decadence nowadays. The thesis to be defended is summarized in the fact that the Fang culture must be protected and valued by them. After the survey carried out, the results are as follows.

		Frequency	Percentage	Valid percentage
Valid	**YES**	102	100%	100%
	NO	0	0%	0%
	TOTAL	102	100%	100%

Table 1 ¿Are you a Fang ethnic group?

The Fang ethnic group is one of those belonging to the Bantu culture. In Equatorial Guinea it is the majority ethnic group. For the fieldwork, it was necessary to direct the research questions to individuals preferably of Fang ethnicity. For this reason, 100% of the respondents answered yes to the question. It is necessary for the Fang to be the referents of the research so that the results obtained a posteriori will be highly efficient.

		Frequency	Percentage	Valid percentage
Valid	**YES**	78	76.47%	76.47%
	NO	24	23.53%	23.53%

		Frequency	Percentage	Valid percentage
	TOTAL	102	100%	100%

Table 2 ¿Do you know what it means to be fang?

76.47% of the respondents said that they do know what it means to be fang. For the respondents, the fang is an individual with his or her peculiar traits and characteristics, hence he or she identifies as such. For them, being fang consists first of having a cultural identity, that is, belonging to a clan. For example, to belong to the Esangui, Ndong, Esawong, Nsoomo, Obuk, etc. clan. It is worth mentioning that there are more than fifty tribes or clans in the Fang culture; secondly, being Fang consists of having a village where all the members of that clan reside; then to bear the names and surnames of the Fang, for example, Nguema, Mibuy, Ondo, Esono, Nchama, among others. Knowing that in the culture there are surnames that belong to women and others that belong to men.

There are other elements that allow the identification of a fang apart from those mentioned above. There is the case of the cultural elements such as marriage, family, etc. However, 23.53% of the respondents answered that they do not know what it is to be a fang, according to them the fang can deny their identity and take the other ethnicity. It is considered that everyone is free to choose the identity that favors him/her. From this perspective, it can be seen that this minority has an existentialist way of thinking based on the ideal that man is born first and then defines himself. Therefore, a Fang can become a Kombe, Bubi or Annobonese (these ethnic groups coexist in Equatorial Guinea with the Fang ethnic group).

		Frequency	Percentage	Valid percentage
Valid	**YES**	102	100%	100%
	NO	0	0%	0%
	TOTAL	102	100%	100%

Table 3 ¿Do you think the Fang culture influences the personal being of the Fang man?

All respondents believe that culture has an influence on the individual. It should be said that in the current context one cannot speak of a culture outside of a social group. In the case of the Fang, it is evident that their culture has a positive influence on the person. A Fang identifies himself as such through the cultural manifestations and practices that reside in his ethnicity despite the fact that there is currently a conflict of identity..

		Frequency	Percentage	Valid percentage
Valid	**YES**	102	100%	100%
	NO	0	0%	0%
	TOTAL	102	100%	100%

Table 4 ¿Do you know any cultural elements or manifestations in the Fang culture?

In response to this questioning, it was found that all the respondents know some or other Fang cultural manifestations. Thus, they gave us as examples of manifestations the ndong mba as a traditional dance, the alugan fang as a peculiar type of marriage, akerga (circumcision), ntonobe (choir) in the religious sphere, etc. Each manifestation has its respective processes and rituals that characterize it. It is important to point out that man manifests himself through the cultural elements that he himself has developed; it is a way of identifying himself before other social groups.

		Frequency	Percentage	Valid percentage
Valid	**YES**	89	87.26%	87.3%
	NO	13	12.74%	12.7%
	TOTAL	102	100%	100%

Table 5 ¿Do you think Fang culture is in full decline?

For the majority of respondents, i.e. 87.26%, the Fang culture is in full decline, cultural values are being lost. To exemplify this, the use of the Fang vernacular language is inferiorly spoken by this social group. Thus, at home, both parents and children only speak Spanish with their children. On the other hand, there is a lack of knowledge of cultural elements such as ayong (tribe). It should be noted that the ayong is not a mere cultural element, but is part of the traditional values. Thus, no Fang can be identified apart from the ayong. One of the main causes of Fang decline is the cohabitation with other cultures and the negative influence of modernism on them. Many Fang are increasingly embracing the traditional values of the West to the detriment of their own. This is a generational problem in what sense? In the sense that these are cultural traits that gradually fade away and in the long run there would be no Fang cultural values left to inculcate in future generations.

12.74% of those surveyed consider that there is no decadence of the Fang culture because there are still traditions of this ethnic group today. It is thought that the Fang culture cannot fade away, because if that were the case, the ethnic group itself would also disappear. There is no culture without society and no society without culture. Based on this axiom, the minority of respondents thought the opposite with respect to the question of whether Fang culture has negative features or effects..

		Frequency	Percentage	Valid percentage
Valid	**YES**	102	100%	100%
	NO	0	0%	0%
	TOTAL	102	100%	100%

Table 6 ¿Does the Fang culture have negative traits or effects?

Many of those interviewed consider that the Fang culture, despite being indispensable, has negative traits. From the gender perspective, it is observed that women are the main victims of these negative aspects, for example, there are rites such as levirate where women's rights are violated and diminished.

6. Conclusion

In conclusion, the research work had as a problem the current decline of the Fang culture, and as a defense of the thesis that: Fang culture as a set of values, ways of thinking and living, customs and knowledge of the Fang ethnic group is their identity. Therefore, it must be protected and valued. This thesis has mainly developed three arguments on the concept of culture from philosophical and anthropological perspectives. This subsection highlights the fact that culture designates everything that man creates and that is added to his nature, and likewise that culture is a manifestation of ideas thought by man himself to accommodate and affirm himself in nature, thus respecting its essence. Secondly, three stages of Fang culture were observed: original, colonial and post-colonial. And finally, culture has been examined as a recognition of the Fang identity, with this argument has led to express that the identity of the Black African Bantu, in general, and of the Fang in particular, is externalized in its different cultural manifestations such as the name, dance, art, religion, etc.

Starting from the research questions namely, what is the impact of the Fang culture on their personal being, in other words, what does the culture contribute to the Fang being and why is it important to them; why is the Fang culture today in its decline; and according to the results of the fieldwork, the following conclusions have been reached:

First, culture has a positive impact, in the case of the Fang man it gives him recognition and identity before other social groups. The influence of culture on the personal being of the Fang is positive, since it strengthens their identity. The Fang, regardless of their geographic location, have the same cultural criteria. Thus, thanks to it, it can be affirmed at the social level, all are bearers of a culture that characterizes or identifies them. That is why culture is of vital importance for the Fang, as it has been highlighted in the commentary of table three, which, in the case of the Fang, it is evident that their culture has a positive influence on their person. A Fang identifies himself as such through the cultural manifestations that reside in his ethnicity. As for the case of the decline or collapse of identity, it should be said that there are several reasons that are fueling this decline. There is the case of globalization and/or modernism that are seriously affecting the Fang culture. Thus, it creates the loss of values, elements and customs.

It is emphasized that in this research we do not want to build a new theoretical framework, but to contribute some details to the sociocultural studies on the Fang. Many researchers from Equatorial Guinea have described the culture, and evidently it is added to this line of research. It should be added that the Fang culture is very ambiguous, reviewing many aspects that need careful analysis. For example, in the case of gender, Pedro Bayeme-Bituga Nchama has compiled studies on gender relations from the Fang culture. Like all research, it has presented limitations, as well as difficulties such as few primary sources. However, the results obtained are highlighted in the tables above.

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