



REVISTA

CÁTEDRA

September - December de 2021

Vol. 4 Núm. 3

Quito - Ecuador



Universidad Central del Ecuador
Facultad de Filosofía, Letras y Ciencias de la Educación






REVISTA

CÁTEDRA

Revista Cátedra, of the Facultad de Filosofía, Letras y Ciencias de la Educación of the Universidad Central del Ecuador is published every six months, the first month of each period from January-June, July-December. Director/Editors-in-Chief Ph.D. Sergio Lujan Mora, MSc. Verónica Simbaña Gallardo.

Location: Quito - Ecuador, belongs to the Faculty of Philosophy, Letters and Education Sciences of Universidad Central del Ecuador.

ISSN electrónico: 2631-2875

Digital Object identifier 

Web page: <http://revistadigital.uce.edu.ec/index.php/CATEDRA/index>

Revista Cátedra E-mail: revista.catedra@uce.edu.ec

Phone number: (+593) 2506-658 ext. 111 o 22904-760

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The editorial process is managed using OJS (Open Journal System).

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To disseminate multidisciplinary scientific unpublished articles, elaborated under the parameters of the research methodology, written with academic rigor and based on the teaching practice.

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national and international writers interested in contributing significantly to the solution of current educational problems.

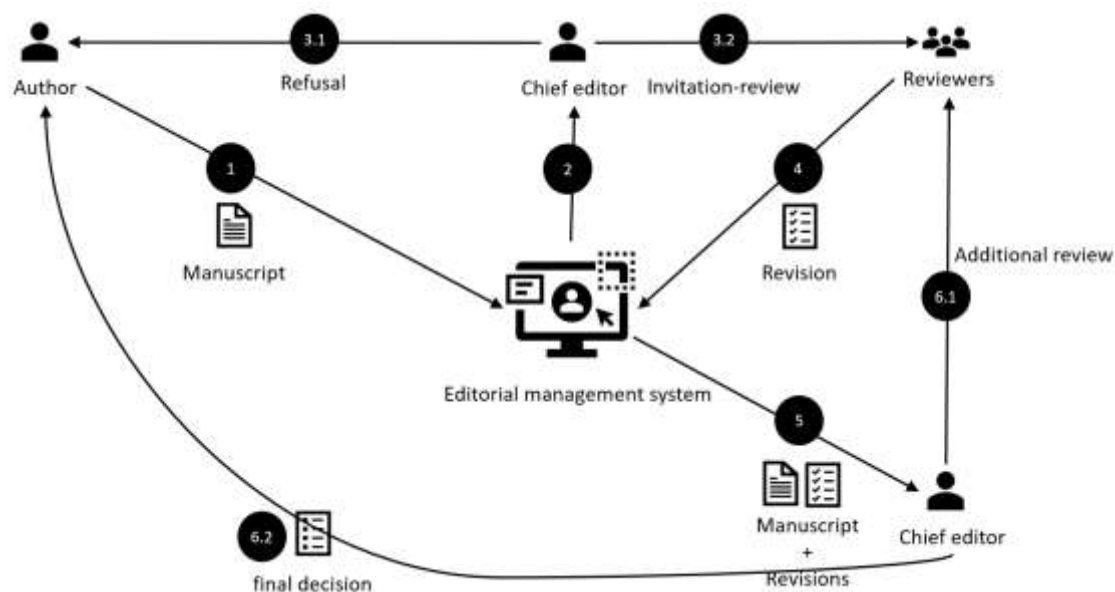
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EDITORIAL

It is a pleasure for the *Catedra Journal* to present volume four, number three in the electronic version. The thematic developed has its theoretical bases in the Educational Sciences in its different specialties and educational levels; this is how some relevant aspects are exposed, such as language and education.

The contents presented in this new issue are characterized by being elaborated under the parameters of research methodology. In addition, they are built with academic rigor and based on teaching practice.

The issue consists of five approved articles:

The first article entitled *Artistic languages and motor skills in the preparatory level of basic education* was written by Juan Bahamonde-Sola, Edison Cando-Vaca and Edwin Panchi-Culqui. The manuscript is the result of a quasi-experimental study with control group that proposes to implement playful experiences with different artistic languages for the development of motor skills in children between 5 and 6 years old, from six educational centers located in different urban and peri-urban sectors of the city of Quito. It is based on the evaluation with the basic functions test before and after the application of playful learning experiences that merge scenic, musical and plastic-visual arts, adequate to the learning objective in the experimental and control groups of each institution, in order to determine the differences in each group and in their contrast. The authors conclude that the proposal that combines art and games favors the development of gross and fine motor skills, necessary for the reading-writing process, also observing that this process promotes the free and spontaneous expression of infants for their better personal and social development.

The second article entitled *The decline of the indigenous languages of Equatorial Guinea: a manifestation of the loss of cultural identity*, authored by Pedro Bayeme Bituga-Nchama and Cruz Otu Nvé-Ndumu. The manuscript focuses on the analysis of the sociolinguistic situation in Equatorial Guinea. In this sense, it starts from the fact that the lack of learning of the country's indigenous languages has led to a loss of cultural identity, which has been aggravated by other factors such as globalization. Throughout this work, it is made clear that there can be no cultural policies without language policies, because people should know the indigenous languages of their culture. In fact, the main results of this research show the need to protect indigenous languages, since it is incoherent to promote Spanish to the detriment of the native languages that represent the identity of each ethnic group.

The third article entitled *The use of TransLanguage to improve oral reading proficiency in a foreign language classroom*, authored by Thalía Pánchez-Jiménez. The manuscript presents translanguage a scaffolding device for developing a foreign language, as it helps students clarify terms and make meaning. Pre- and post-tests were conducted at the beginning and end of a unit (lasting 6 weeks) in which students read a 300-word passage and words read correctly in one minute were counted. In addition, a Likert-scale survey was administered to the students and a



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teacher to learn about their experiences and perceptions after the implementation of translanguaging. A t-test was conducted and the results showed an improvement in students' oral reading proficiency (mean = 221.55 in the pre-test and mean = 243.22 in the post-test with a standard deviation of 42.20 and 30.20 respectively) after the use of this approach with a statistically significant difference ($p > 0.001$). The mean number of words read correctly increased at post-test ($M = 21.68$; $SD = 18.88$). The use of translanguage probably had a positive outcome on the skill studied and also on the students' and teacher's experiences of using such an approach.

The fourth article entitled *Self-regulation of learning in university students: a descriptive study*, was written by Pablo Burbano-Larrea, Mirian Basantes-Vásquez and Isabel Ruiz-Lapuerta. The manuscript determines the fundamental capabilities that a human being must have to achieve a successful personal, academic and professional development is the self-regulation of learning. The objective of the present work was to determine the self-regulation of learning in students of the Faculty of Philosophy, Letters and Educational Sciences of the Universidad Central del Ecuador. This research was developed from a quantitative approach and a descriptive level, being a cross-sectional study. When contrasting these results with other studies, coincidences and contradictions were observed, which points to the need for further research on this variable. The authors recommend that it is necessary to generate curricular innovations in university education that allow the development of self-regulation of learning throughout their professional training.

The fifth article entitled *Analyzing the transition from face-to-face to remote education: an experience in higher education during the COVID-19 pandemic*, authored by Christian Jaramillo-Baquerizo. The manuscript focuses on the experiences of graduate students and faculty who were forced to integrate ICT during the COVID-19 pandemic. In this study, the perceptions of students and teachers were collected through questionnaires and interviews analyzing their experience during the drastic transition from face-to-face to remote education. The results of this study suggest that, although ICTs are accepted as the best possible alternative during the transition period, students and teachers perceive a limited level of instructional design competencies. The author indicates that these results and their implications are discussed in view of establishing guidelines for future professional development initiatives.

Catedra Journal thanks all the authors and reviewers of the articles that have made possible the publication of this issue. It extends an invitation to the national and international academic community to submit their research papers related to Educational Sciences in its different specialties and educational levels.

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REVISTA

CÁTEDRA

Lenguajes artísticos y destrezas motoras en el nivel preparatoria de educación básica

Artistic languages and motor skills in the preparatory level of basic education

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(Received on: 27/07/2021; Accepted on: 30/07/2021; Final version received on: 25/08/2021)

Suggested citation: Bahamonde-Sola, J., Cando-Vaca, E., Panchi-Culqui, E. (2021). Artistic languages and motor skills in the preparatory level of basic education., *Revista Cátedra*, 4(3), 16-34.

Resumen

En el proceso de prácticas preprofesionales realizadas en los centros educativos de nivel preparatoria de la educación general básica ecuatoriana, se han evidenciado dificultades en el desarrollo de habilidades motrices básicas necesarias para el aprendizaje de la lecto-escritura. El artículo es el resultado de un estudio cuasi-experimental con grupo control que propone implementar experiencias lúdicas con diferentes lenguajes artísticos para el desarrollo de destrezas motoras en los niños y niñas entre 5 y 6 años, de seis centros educativos ubicados en diferentes sectores urbanos y periurbanos de la ciudad de Quito. Se basa en la evaluación con la prueba de funciones básicas antes y después de la aplicación de experiencias lúdicas de aprendizaje que fusionan artes escénicas, musicales y plásticas-visuales, adecuadas al objetivo de aprendizaje en los grupos de experimentación y control de cada institución, para determinar las diferencias en cada grupo y en su contraste. El



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diagnóstico inicial demuestra una prevalencia superior al 50% de estudiantes con déficit en las destrezas motoras. Luego del proceso aplicado y la evaluación postest, se observa una reducción de las áreas deficitarias y un mejor desarrollo en las destrezas de dominancia lateral, ritmo y coordinación visomotora en el grupo experimental frente al control. Se concluye que la propuesta que conjuga el arte y la lúdica favorece el desarrollo de la motricidad gruesa y fina, necesarias para el proceso de lecto-escritura, observándose, además, que este proceso promueve la expresión libre y espontánea de los infantes para su mejor desarrollo personal y social.

Palabras clave

Lenguajes artísticos, destrezas motoras, experiencias lúdico-artísticas, funciones básicas, educación básica preparatoria

Abstract

In the process of pre-professional practices carried out in Ecuadorian general basic education high schools, difficulties have been evidenced in the development of basic motor skills necessary for learning to read and write. The article is the result of a quasi-experimental study with a control group that proposes to implement playful experiences with different artistic languages for the development of motor skills in children between 5 and 6 years old, from six educational centers located in different urban and peri-urban sectors of the city of Quito. It is based on the evaluation with the basic functions test before and after the application of playful learning experiences that merge scenic, musical and plastic-visual arts, adequate to the learning objective in the experimentation and control groups of each institution, to determine the differences in each group and in their contrast. The initial diagnosis shows a prevalence of more than 50% of students with deficits in motor skills. After the applied process and the post-test evaluation, a reduction of the deficit areas and a better development in the skills of lateral dominance, rhythm and visual-motor coordination were observed in the experimental group compared to the control group. It is concluded that the proposal that combines art and games favors the development of gross and fine motor skills, necessary for the reading-writing process, also observing that this process promotes the free and spontaneous expression of infants for their better personal and social development.

Keywords

Artistic languages, motor skills, artistic playful experiences, basic functions, preparatory basic education.

1. Introduction

The general framework of the study refers to the curricular model of the Ecuadorian national education system, which defines three educational levels: Initial, Basic and High School. The General Basic Education (EGB) level is organized into four sub-levels that respond to epistemological, pedagogical and didactic criteria, conformed by reference age groups: Preparatory (around 5 years old), Elementary Basic (preferably from 6 to 8 years old), Middle Basic (9 to 11 years old) and Higher Basic (12 to 14 years old) (Ministry of Education, 2019, pp. 21-22).

One of the recurring problems in the first years of basic education has to do with difficulties in the acquisition of skills necessary for reading and writing, which has repercussions both



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in the learning processes in the school environment and in the interaction with the cultural and social environment.

Taking into account the objective of the curricular block of expressive-communicative body practices of the preparatory sub-level, the Ministry of Education (2019) proposes "to safely perform body practices (playful and expressive-communicative) that favor the development of basic motor skills and, specifically, gross and fine motor skills, according to their needs and those of the community" (p. 162). In this sense, the study is focused on the application of ludic strategies with the use of artistic languages to promote the development of motor skills of boys and girls in the preparatory sub-level of EGB, whose ages range between 5 and 6 years old, in which it corresponds to strengthen and enhance cognitive, motor and psychosocial skills and abilities. In this sense, teachers should continuously observe and evaluate the integral development of their students in order to design playful strategies, so that their start in compulsory schooling is pleasant and motivating.

According to the model of the integrative curriculum of the EGB Preparatory sub-level proposed by the Ministry of Education (2019), it is necessary to take into account all aspects related to the being, that is, the biological, physical, emotional, psychological and social, knowing that the human being is holistic; therefore, the learning of children is produced from the integral, from self-knowledge and interaction among peers, with adults and the social, natural and cultural environment (p. 48).

According to the above, the research problem revolves around the question: why do children in high school have a deficient development of motor skills? This question arises from the observation made by pre-professional practice tutors in child development centers. The recommendation they offer, from their expertise in the area of arts and culture, is the application of playful experiences with different artistic languages as an alternative strategy to enable motor skills based on epistemological, neuropsychological and pedagogical foundations.

In order to put this recommendation into practice, a quasi-experimental study with a control group was carried out, whose main objective was to demonstrate, methodologically, if the application of artistic languages, based on playful experiences, would allow the development of the motor area in the infants of the study population. The research consisted of testing, in the classroom, a proposal with didactic resources, elaborated with concrete material for the areas of scenic, music and visual plastic.

After a first application of the basic functions test, the methodological proposal was executed in several sessions with the experimental group, based on a planning and development of the didactic process with performance activities, shadow puppets, black light theater and plastic arts. In order to incorporate several criteria for the analysis of this process, classroom observation was carried out during the execution of the playful experiences and the educators and directors of the children's centers were interviewed. The research was carried out with the required permissions and informed consents; however, there were some limitations in terms of educational infrastructure and the time necessary for an adequate application of the programmed didactic activities.

Both the process and the results of the research are a current and pertinent proposal, since they orient towards new analyses, whose bases revolve around educational experiences that link the arts with playfulness to improve the development of motor skills for learning at early ages. The proposal is unprecedented and can be put into pedagogical practice in the first years of basic education, and can be improved with the use of alternative resources that



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Revista Cátedra, 4(3), pp. 16-34, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3151>

incorporate new playful experiences combined with different artistic techniques and languages.

This article is structured as follows: in section 2, a review of the literature and theoretical foundation related to artistic languages, play and motor skills is presented; in section 3, the methodological design and materials used in the quasi-experimental process are described; in section 4, the findings, descriptive analyses and the contrast of statistical hypotheses are detailed to demonstrate whether the differences in the enabled areas of the motor skills are statistically significant; Section 4 details the findings, descriptive analyses and the contrast of statistical hypotheses to demonstrate whether the differences in the enabled areas of motor skills between the control group and the experimental group are statistically significant; Section 5 includes the discussion of results; and Section 6 describes the conclusions derived from the research process..

2. Literature Review

This research is based on conceptual and theoretical elements from specialized sources related to motor skills and artistic languages which, in the case of infants, are communicative expressions that are developed through their oral and body language in a playful way.

2.1 Artistic languages

Artistic languages are an active part of children's daily lives and constitute a mechanism for creating, expressing and communicating feelings and emotions through artistic codes.

For Montaña (2020), "Artistic language refers to the communicative codes that an artist uses to convey his or her message. Part of that message is aesthetic, but it should also provoke feelings, reflection and other interpretations considered by the author" (p. 1).

In this sense, artistic language refers to a series of aesthetic codes, whose purpose is to transmit the oral and corporal message developed by the child in the different artistic manifestations supported by visual, gestural and sound signs, thus providing a space for free expression through art.

Regarding the natural expression of art in human beings, Azagra Solano & Giménez Chornet (2018) indicate that, "Among these expressions are contemplated drawing, painting, engraving and sculpture, and other more contemporary ones such as photography, video and digital media" (p. 73). In other words, visual and plastic expressions become a language of children's thoughts that are developed in appropriate learning environments of space and time, as a fundamental component that combines resources of dramatic expression, musical expression and scenic expression to favor the development of expression, appreciation and representation of ideas, spaces, emotions, sensations and, above all, of aesthetic sensibility.

Estévez and Rojas state that artistic languages are already present in the students' culture. It is shown, for example, that this is found in the memory of their communities, where the emotional and spiritual is lived in everyday life. This, in turn, allows them to develop creative behaviors according to their cultural and social diversity, which enables them to embrace nature, society and thought in three major spheres: knowledge, activity and education. Educating children with the arts from the earliest levels of training facilitates the psychophysical development that stands as a relevant condition of their future personality (Estévez and Rojas, 2017, p. 115).



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Reading Acurio et al, play is considered as a basic element in the life of an infant, since it is the first element of communication through their own body; due to the fact that, body language is expressed through movement that favors the development of psychomotor skills. In addition, infants need to be active to grow and develop their abilities through play and it allows them to relate and interact with others for their integral formation. (Acurio et al., 2016, p. 13).

2.2 Play

Play is a recreational activity for the development of learning, as it allows children to improve interpersonal relationships through enjoyment, capable of releasing the expressive, creative and affective force. Bonilla mentions that playfulness should be properly conceived as a dimension of human development, that is, it has the same value or representation as any other area of development, since it is a need that all people have, to feel pleasant emotions that are performed with spontaneity and optimism, which emerge in daily personal interactions. Infants constantly need to use actions that are related to them, things that motivate them and awaken their emotions. By executing playful activities, they seek interaction with other children, bringing into play cognitive, affective and social functions in a constant exchange of learning and knowledge from an early age. (Bonilla, 1999, p. 47).

In this way, we see how playful activity generates an important influence on learning in students, since it constitutes one of the most effective tools in students at the preparatory level. For Domínguez (2015), this activity allows "to test and learn new skills, abilities, experiences and concepts, so it is convenient the application of programs aimed at a compensatory education, which provide emotional balance to the evolutionary development of childhood" (p. 15).

The application of artistic languages in a playful way consolidates learning at an early age and facilitates the protagonism of children in the construction of their own knowledge. For this reason, it is necessary the accompaniment of early childhood educators to provide an optimal environment in which the different activities of artistic expressions are carried out. These actions should awaken the interest and curiosity of the students and, in turn, should provide them with various learning experiences that contribute to the development of their skills. All this should be done as an act of recreation that contributes to the realization of actions in a free and spontaneous way, for their personal and social development.

Gómez Roldán (2005) states: "playfulness encourages the personality; it influences the culture of decision making; it develops a conciliatory, negotiating and strategic spirit in the face of conflictive situations; it articulates socialization, as well as teamwork" (p. 114). Through playful activities, logical thinking and collaborative work are developed, allowing for problem solving, reaffirming the values of their culture and participating in decision making from an early age.

2.3 Motor skills

Motor skill is defined by Guthrie (1998) as "the ability, acquired by learning, to produce intended results with the maximum of certainty and often with the minimum expenditure of time, energy, or both" (p. 189). (p. 189). Therefore, skill transcends movement as a simple action, which is oriented to the achievement of a goal that implies a direction and orientation of motor actions with a determined sense and intention.

With respect to motor skills, Serrano and Correa mention that the study on the validation of the Bruininks Oseretsky-BOT2- motor skills test in children from 4 to 7 years of age states that the development of the human being progresses as an integral whole and is composed



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of mutually dependent areas, so that gross motor skills influence the child's ability to move actively. In the early years, the child acquires the maturation of basic postural and locomotor patterns and motor execution plans are developed that favor the improvement of movement (Serrano and Correa, 2014, p. 634).

Ruiz Pérez refers to basic motor skills, encompassing all possible actions in three sections or specific areas:

Locomotor. Their main characteristic is locomotion. Among them we have: walking, running, jumping, galloping, sliding, rolling, climbing, etc.

Non-locomotive. Their main characteristic is the management and control of the body in space. Examples of these skills are balancing, turning, backing up, hanging, etc.

Projection/perception. Characterized by the projection, manipulation and reception of mobiles and objects. They are present in tasks such as throwing, catching, batting, catching, etc. (Ruiz Pérez, 1987, p. 1).

The concept of basic functions or neurofunctions is used to designate, operationally, certain aspects that children must have acquired before entering a school system in order to adequately face any learning process. Espinosa (2010) proposes 17 areas of neurofunctions, of which 8 areas are related to motor skills. Motor skills are the capacities of human beings to achieve the coordination of the movements of the limbs or body segments, which allows, in the case of students at the initial level, to achieve a motor objective. It is worth mentioning that, this is mostly achieved during development in the infant stage. (p. 3). On the other hand, researchers consider that a motor area is enabled in a child when speed and precision at the level of gross and fine motor skills have been developed; while the disabled motor area is considered to be the difficulty in the development of speed and precision at the level of gross and fine motor skills.

From another perspective, Almeida (2009) affirms that:

Basic motor skills are those that allow us to change and develop the motor behavior of the human being through practice. It is necessary to reinforce the development and growth of gross motor skills for a better displacement of the body and in the future a better development of fine motor skills will be obtained (p. 1).

Taking into account that the research aims to demonstrate that the application of playful experiences with different artistic languages favors the development of motor skills, eight areas were selected from Espinosa's (2010) test of basic functions. In this regard, the Ministry of Education of Ecuador (2010) establishes the following conceptual definitions of the basic functions related to motor skills:

Body schema: perform multiple actions while maintaining their body structure as a unit.

Temporal orientation: location of the subject in time (hour, day, week, month and year).

Spatial orientation: ability to recognize right and left sides with respect to the body axis.

Dynamic coordination: wide movements with the gross parts of the body and harmonic and uniform movements of the hand.



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Manual expressive: the ability to couple body movements based on perceived auditory stimuli.

Visual-auditory-motor coordination (rhythm): harmonic motor response to a visual or auditory pattern.

Manual development: coordination of movements, directionality, sense of rotation, precision, continuity, prehension of the instrument.

Visual-motor coordination: coordination between movement, space and time (pp. 4-6).

In this context, the playful-artistic experiences for the development of motor skills in the first years of life are important, because they allow children to be managers of their own adventure, to explore the things around them, to live intensely a state of curiosity, alertness, interest and amazement, conjugating through sounds, movements, smells, flavors that act on them as stimuli and source of constant concerns for their learning.

3. Methods and materials

The research design with a quantitative approach is quasi-experimental with a non-equivalent control group and pretest-posttest measures. The application of ludic experiences with different artistic languages to favor the development of motor skills in intact non-randomized groups, already formed in the six educational institutions, was studied through the analysis and contrast of hypotheses verified with the data observed through the non-parametric tests of Wilcoxon, Mann-Whitney and McNemar ranges for the before-after differences between the experimental and control groups and between these groups.

The independent variable is defined as artistic languages with the dimensions of appreciation and expression; four playful learning experiences were structured that fuse scenic, musical and visual-visual arts, adapted to the subjects and objectives of the study. The dependent variable corresponds to motor skills with two dimensions: gross motor skills (body schema and general coordination) and fine motor skills (digital skills and hand-eye coordination), which are classified into the eight basic functions defined in section 2.3.

After formalizing the informed consent, the study was carried out in a total population of three hundred and twenty-four infants, between five and six years of age, from six educational institutions located in different urban and peri-urban sectors of the city of Quito, within the framework of the theoretical and methodological assumptions appropriate to the objective.

The study population detailed in Table 1 was determined by the research team under considerations of feasibility and research objective. The collection units are intact groups, already conformed and non-equivalent, randomly selected, an experimental parallel and a control parallel for each educational institution.



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Revista Cátedra, 4(3), pp. 16-34, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3151>

EDUCATIONAL INSTITUTION	RESEARCH GROUP		TOTAL
	EXPERIMENTAL	CONTROL	
1	31	29	60
2	33	27	60
3	20	25	45
4	17	19	36
5	30	28	58
6	31	34	65
	162	162	324

Table 1. Study population

The first analysis was based on the application of the basic functions test adopted by the Ministry of Education of Ecuador to diagnose in children the situational state of the seventeen perceptual-motor areas that determine the learning of reading and writing, namely: body schema, lateral dominance, temporal and spatial orientation, dynamic coordination, visual and auditory receptive, auditory association, manual expressive, auditory-vocal closure, pronunciation, auditory sequence memory, visual-auditory-motor coordination (rhythm), visual memory, auditory discrimination, visuomotor coordination, manual development, attention and fatigue. (Ministry of Education, 2010, pp. 4-6). This process made it possible to identify eight specific areas related to motor skills and to recognize whether or not they are enabled.

Each measurement phase, before-after (*pretest-posttest*) of the playful experiences with artistic languages, consists of the application of the basic functions test in the students of the control and experimental groups of the six educational institutions.

According to the design proposed in Table 2, in order to test the central statistical hypothesis of the study, it is proposed that there is a significant difference in the enabled areas of motor skills between the experimental and control groups, with a confidence level of 95%. Thus, the following analyses were proposed:

DESIGN	GROUPS	PRETEST	EXPERIMENT	POSTEST
	CONFORMED			
CUASI EXPERIMENTAL	EXPERIMENTAL	Measurement E1	Playful experience	Measurement E2
	CONTROL	Measurement C1	No intervention	Measurement C2

Cuadro 2. Diseño cuasi-experimental del método con lenguajes artísticos en los grupos de estudio

In the pretest phase, a first dichotomous distribution was determined, constituted by the results of each of the areas of basic functions evaluated -whether enabled (+) or disabled (-) -, and another distribution of the total of enabled and disabled areas that corresponds to the sum of the negative and positive areas with numerical values between 1 and 8, according to the total number of areas of the motor skills evaluated. To establish the baseline of the study, a descriptive analysis of frequencies was performed, determining the prevalence of enabled and disabled motor skills, both in the experimental and control groups of the six institutions.

According to the dichotomous distribution of the eight areas related to motor skills, to determine if there is a significant difference between the pretest and posttest measurement



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in each experimental and control group of each institution, McNemar's test with 5% significance was applied to test this hypothesis.

To select the statistical model for testing the hypotheses, whether parametric or non-parametric, and to carry out the comparative analysis of the pretest and posttest phases of each group independently, and between groups, in the analysis of the variables of total areas enabled and of the posttest-pretest differences of the total areas enabled, the Kolmogorov-Smirnov (K-S) normality test was applied and was complemented with the analysis of homogeneity of variance of the distributions of these three variables with the Levene test to determine homoscedasticity (Badii, et al. , 2012, p. 139). Both tests with 95% confidence.

For hypothesis testing of the non-dichotomous distributions corresponding to the pretest and posttest totals of enabled areas, as well as the posttest-pretest differences of the experimental and control groups, based on the study of normality and homoscedasticity, the Wilcoxon and Mann Whitney Ranks tests were applied (Badii, et al., 2012, pp. 144-152).

To complement the criteria for the analysis of the data collected, a structured observation was carried out during the application of the play experiences in the classroom and after this process was completed, a survey was administered to the participating teachers and authorities of each institution. These instruments were previously validated by experts from other universities in the country.

4. Results

Based on the collection of data through the application of the basic functions test of the students who make up the experimental and control groups of the six educational institutions, the study focuses on the enabled areas related to motor skills (gross and fine motor skills).

The statistical analysis of the data was carried out in two stages: the first analysis to identify the prevalence of children who have enabled or disabled basic function areas related to the eight motor skills, before and after the play experiences with artistic languages. The second analysis of hypothesis contrast to check if there is a statistically significant difference between the posttest and pretest phases of each group by motor skills area, as well as the contrast of the posttest-pretest differences of the experimental group with respect to the differences of the control group.

Tables 3 and 4 summarize the data from the pre- and post-test application of the basic functions test, as well as their differences with respect to the areas enabled in the experimental and control groups in the eight motor skill areas.



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MOTOR SKILLS AREAS	PRETEST				POSTEST				DIF-HABILIT.	
	DESHAB.	%	HABIL.	%	DESHAB.	%	HABIL.	%	POST-PRE	%
BODY SCHEMA	9	6	153	94	4	2	158	98	5	3
LATERAL DOMINANCE	143	88	19	12	119	73	43	2%	24	15
ORIENTATION	6	4	156	96	7	4	155	96	-1	-1
DYNAMIC COORDINATION	40	25	122	75	33	20	129	80	7	4
EXPRESSIVE-MANUAL	7	4	155	96	2	1	160	99	5	3
RHYTHM	144	89	18	11	114	70	48	30	30	19
VISUAL-MOTOR COORDINATION	112	69	50	31	79	49	83	51	33	20
MANUAL DEVELOPMENT	60	37	102	63	54	33	108	67	6	4

Table 3. Frequencies of enabled areas, disabled areas and posttest-pretest difference of the experimental group.

With respect to the areas of motor development that are disabled in the students of the experimental group (Table 3), the highest prevalence is presented in lateral dominance (88%), dynamic coordination (25%), rhythm (89%), visual-motor coordination (69%) and manual development (37%). With respect to the difference between posttest and pretest of habilitated areas, improvement is evidenced in all areas of the experimental group, except in orientation (-1%); but a greater increase is shown in the number of infants who have achieved habilitation in the areas of lateral dominance (15%), rhythm (19%) and visuomotor coordination (20%).

AREA-MOTOR SKILLS	PRETEST				POSTEST				DIF-HABILIT.	
	DESHAB.	%	HABIL.	%	DESHAB.	%	HABIL.	%	POST-PRE	%
BODY SCHEMA	5	3	157	97	2	1	160	99	3	2
LATERAL DOMINANCE	140	86	22	14	119	73	43	27	21	13
ORIENTATION	7	4	155	96	4	2	158	98	3	2
DYNAMIC COORDINATION	55	34	107	66	36	22	126	78	19	12
EXPRESSIVE-MANUAL	10	6	152	94	3	2	159	98	7	4
RHYTHM	135	83	27	17	122	75	40	25	13	8
VISUAL-MOTOR COORDINATION	107	66	55	34	104	64	58	36	3	2
MANUAL DEVELOPMENT	69	43	93	57	57	35	105	65	12	7

Table 4. Frequencies of enabled areas, disabled areas and post-test-pre-test difference of the control group.

In the control group (Table 4), the areas of disabled motor skills with the highest prevalence of students in the pretest coincided with those of the experimental group: lateral dominance (86%), dynamic coordination (34%), rhythm (83%), visual-motor coordination (66%) and manual development (43%). From the analysis of the difference between posttest-pretest of areas enabled in the control group, positive proportions are recorded in all areas of motor



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skills, with an increase in the prevalence of students who have managed to enable the areas of lateral dominance (13%) and dynamic coordination (12%). These increases are lower than those achieved by the experimental group in lateral dominance, rhythm and visual-motor coordination, but not in dynamic coordination, where the control group presents a higher prevalence.

As can be seen, both the control and experimental groups of the six institutions analyzed present deficiencies in the same areas evaluated. This suggests that, being non-random groups, the conditions of development of the basic functions are comparable among these groups. It is important to note that the basic functions test allowed the identification of other critical areas that show negative levels of development, which are not directly related to motor skills, but still require study.

Prior to the selection of the statistical tests to demonstrate whether the differences before and after in the experimental and control groups are significant, normality (Kolmogorov-Smirnov K-S) and homoscedasticity (Levene) tests were applied to the distributions of the three variables: pretest total of skilled areas, posttest total of skilled areas and the posttest-pretest difference of the total of areas. According to the asymptotic significance values of these distributions, it is concluded that all the distributions of these variables differ from normal, according to the K-S test. On the other hand, the distributions of the variables pretest total of enabled areas and the *posttest-pretest* difference of total enabled areas, have asymptotic significance values higher than 0.05 with Levene's test (0.663 and 0.912 respectively), which proves homogeneity of their variances.

As a consequence of the previous analysis, nonparametric statistics were applied to check if the differences are significant between pretest total enabled areas, posttest total enabled areas and the posttest-pretest difference of the total enabled areas of the experimental and control groups. According to McNemar's asymptotic significance values (Badii, et al., 2012, p. 143). seen in Table 5, the posttest-pretest differences of the experimental group are significant at 5% in the areas of lateral dominance, rhythm and visuomotor coordination. In the other areas analyzed, although positive differences are observed, they are not statistically significant.

POSTEST-PRETEST	Cases	Chi-square	Sig. Asymptotic	Exact significance (bilateral)	Exact significance (unilateral)
BODY SCHEMA	162			,267 ^{c,1d2}	,133 ^c
LATERAL DOMINANCE	162	11,021	0,001	,001 ^c	,000 ^c
ORIENTATION	162			1,000 ^{cd}	,500 ^c
DYNAMIC COORDINATION	162	0,8	0,371	,371 ^c	,186 ^c
EXPRESSIVE-MANUAL	162			,180 ^{cd}	,090 ^c
RHYTHM	162	18,283	0	,000 ^c	,000 ^c
VISUAL-MOTOR COORDINATION	162	18,618	0	,000 ^c	,000 ^c
MANUAL DEVELOPMENT	162	0,357	0,55	,550 ^c	,275 ^c

Table 5. McNemar hypothesis test for posttest differences for each area related to motor skills in group experimental

¹ c= Binomial distribution used.

² d= Continuity corrected.



The McNemar hypothesis test with the control group, summarized in Table 6, shows that the pretest-posttest differences of the control group are significant in the areas of lateral dominance and dynamic coordination with 95% confidence. In the other areas, the differences are not statistically significant.

POSTTEST-PRETEST	N	Chi-square ^{e3}	Asymptotic Sig.	Exact significance (bilateral)	Exact significance (unilateral)
BODY SCHEMA	162			,453 ^{c,4d5}	,227 ^c
LATERAL DOMINANCE	162	8,511	0,004	,003 ^c	,002 ^c
ORIENTATION	162			,508 ^{c,d}	,254 ^c
DYNAMIC COORDINATION	162	6,113	0,013	,013 ^c	,006 ^c
EXPRESSIVE-MANUAL	162			,092 ^{c,d}	,046 ^c
RHYTHM	162	2,717	0,099	,098 ^c	,049 ^c
VISUAL-MOTOR COORDINATION	162	0,056	0,812	,813 ^c	,406 ^c
MANUAL DEVELOPMENT	162	1,833	0,176	,175 ^c	,088 ^c

Table 6. McNemar hypothesis test for posttest-pretest differences for each area related to motor skills in the control group.

When comparing the post-test differences of the experimental group with the differences of the control group, positive percentage values are found that correspond to a significant increase in the proportion of students in the experimental group that have achieved the areas of visual-motor coordination (18.5%) and rhythm (10.5%), to a lesser degree, lateral dominance (1.9%) and body schema (1.2%), surpassing the control group. The negative differences indicate the areas in which the control group outperforms the experimental group, but values of lesser magnitude are evident, the most relevant increase being (7.4%) in dynamic coordination.

In accordance with the previous analysis, to determine the difference between the pretest and posttest related groups in the total of enabled areas, the Wilcoxon rank test at 5% significance was used.

POSTTEST TOTAL QUALIFIED AREAS - PRETEST TOTAL QUALIFIED AREAS	
Z	-5,628 ^{c6}
Asymptotic sign (bilateral)	,000

³ e= Continuity corrected

⁴ c= Exact results are provided for this test instead of Monte Carlo

⁵ d= Binomial distribution used

⁶ c= It is based on negative range



Table 7. Wilcoxon hypothesis test for the differences of the total enabled areas of the posttest and pretest of the experimental group

According to the results of Table 7, the asymptotic significance with the Wilcoxon rank test shows that there is a significant difference between the posttest and pretest of the total areas enabled. Since the total positive differences (53.64%) are higher than the negative ones (40%), it can be affirmed with 95% confidence that, in the experimental group, the areas of motor skills enabled in the posttest exceed the pretest by 13.64%.

	POSTEST TOTAL AREAS HABILITADAS - PRETEST TOTAL AREAS HABILITADAS
Z	-4,341 ^{c7}
Sig. asintótica (bilateral)	,000

Table 8. Wilcoxon hypothesis test for the differences of total enabled areas of the posttest and pretest of the control group.

The asymptotic significance of less than 0.05 shown in Table 8 with the Wilcoxon signed-rank test demonstrates that there is a significant difference between the posttest and pretest of the total enabled areas. Therefore, the total positive differences are higher (59.24%) compared to the negative ones (50.21%) and it can be affirmed that in the control group, the areas of motor skills enabled in the posttest exceed the pretest with a confidence level of 95%.

From the general analysis carried out with the data of the 324 students of the six institutions studied and according to the differences found, it is shown that the students of the experimental group achieve an increase of 13.64% in the total areas enabled with the applied ludic experiences, surpassing the control group that achieves 9.03% with the conventional method.

The Mann-Whitney test was applied to contrast the post-test differences between the experimental and control groups with 95% confidence.

The asymptotic significance of 0.359 obtained with the Mann-Whitney test (Table 9), confirms that there is no statistically significant difference in the differences in the total areas enabled between the experimental and control groups, with 5% significance.

	cPOST-PRE-TEST DIFFERENCE ENABLED
cMann-Whitney U	12373,000
cW de Wilcoxon	25576,000
Z	-,916
Asymptotic sig. (bilateral)	,359

Table 9. Mann-Whitney U hypothesis test for the difference of the control and experimental groups posttest-pretest corresponding to the enabled areas.

⁷ c= It is based on negative ranges



When compared with the result of the Wilcoxon rank test (Table 8), which showed an overall increase of 13.64% in the areas of motor skills enabled with the experimental method, which surpassed the control group that achieved 9.03%, this small difference of 4.61% in the total scores of the experimental and control groups is not significant, according to the results obtained with the Mann-Whitney test (Table 9).

Finally, with the analysis of the data obtained from the survey applied to the teachers who participated in the study, they state that they do not know the theory that supports the applied process and do not have the practical experience to carry out activities with artistic languages in playful environments. In some cases, they carry out activities only as a practice of art for art's sake.

Among the factors that may have influenced the results achieved, we can point out the lack of adequate spaces for the application of the artistic playful experiences, the number of children in each class, the participation of the teachers of the groups studied, as well as the preparation of the pre-professional practice students who supported the execution of the research in the different children's centers.

5. Discussion of results

The data obtained allowed the identification of the level of development of motor skills in the following areas in the population studied: lateral dominance, dynamic coordination, visual-motor coordination, visual-auditory-motor coordination (rhythm) and manual development. The prevalence of these deficit areas fluctuates between 25% and 89% of the study population. The starting point was the evaluation of the levels of development of the basic functions and specifically of the motor skills necessary for pre-writing and reading of the students. In this regard, Quiles-Ros (2013) states that the results of the motor skills tests as a function of academic performance confirm the hypothesis that students with high academic performance score in all motor tests above 4.40, while students with low academic performance at most reach 3.75 out of 10 points. These data indicate that there could be a relationship between motor skills and learning (p.12).

Da Fonseca (1996), in his study explains the basis of motor development and the neuropsychological explanation of movement. He states that the relationship between motor skills and movement and their quality reflects the maturity of the central nervous system, concluding that, if movements stimulate the maturation of the central nervous system, children who do not have adequate or good quality motor skills will therefore have an immature central nervous system, which will undoubtedly interfere in their learning process. In turn, this will lead to poor academic performance (p.12). In this sense, the study of artistic languages promotes movement and rhythm by stimulating the nervous system in order to develop in children the motor skills necessary for reading and writing, aesthetic sensitivity and creative thinking.

The study by Díaz and Vargas (2009) suggests that participating in a motor intervention program, structured with a pedagogical style that stimulates physical activity, benefits gross motor development, both in the locomotion component and in the manipulation component. Although this does not have a significant effect on academic performance and creative thinking in preschool children (p.13). In this regard, the development of artistic experiences through play allowed not only motor development, but also stimulated creative thinking with the manipulation of concrete material for a staging.

The teachers of the different educational institutions that took part in the study stated that, during the process, different activities were carried out that combined playfulness with



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artistic languages, which allowed them to merge the different activities with movement, that is, with free body expression -or performance-, through rhythm and song melodies. Also through the development of plastic activities, shadow theater activities and black light theater, where children expressed their creativity playfully. All this results in fun and, therefore, a more dynamic and harmonious motor development, which allows children to approach aesthetic sensitivity and creative thinking.

The didactic programming of the proposal was based on the conjugation of artistic playful experiences with an art for all approach, oriented to the development of the motor skills that make up the basic functions necessary for the learning of reading and writing. These experiences aroused the interest of the participating teachers to put them into practice with their students, taking into account that micro-curricular planning, the design and elaboration of resources and didactic materials in a participatory way, as well as the plastic, musical and scenic expression of children, are key and catalyzing elements in the remedial sub-level of basic general education.

6. Conclusions

The initial finding has to do with the diagnosis of the level of development of the basic functions essential for learning to read and write, and refers that more than 50% of students are not enabled in the areas of auditory discrimination, visual memory, visual-motor coordination and pronunciation. In addition, visual-auditory-motor coordination (rhythm), lateral dominance and auditory sequence memory exceed 80% of students aged around 5 years, which prove to be disabled. These results suggest analyzing the particularities of the urban and peri-urban children's centers studied, as well as the development of learning in the initial sub-level, which precedes the preparatory level.

Considering that the diagnostic test or pretest was applied in the middle of the school cycle, it is inferred that, at least during the first trimester, the high school teachers developed the teaching and learning process with conventional methods, which allowed them to reach a certain degree of development of the basic functions of their students, according to the figures of the initial diagnosis.

The basic functions associated with the development of motor skills that the students, both in the experimental and control groups before the research process, did not have in the greatest proportion, were lateral dominance, dynamic coordination, visual-motor coordination, visual-auditory-motor coordination (rhythm) and manual development. The prevalence of these deficit areas fluctuates between 25% and 89% of the study population.

When considering the total scores of the basic function areas that are enabled (positive) and disabled (negative), the statistical distributions of the experimental and control groups are asymmetric or skewed, and do not meet the characteristics of a normal distribution, according to the Kolmogorov-Smirnov normality test and Levene homoscedasticity; therefore, this allowed defining the application of non-parametric models for the hypothesis testing of the study.

It was demonstrated that the differences between posttest and pretest of the control group are significant in the areas of lateral dominance and dynamic coordination. In the experimental group, the differences were found to be significant in the areas of lateral dominance, rhythm and visuomotor coordination, with McNemar's test at 5% significance.

From the general analysis carried out with the 324 high school students from the six institutions studied and according to the post-test differences found, an increase of 13.6%



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in the prevalence of students in the experimental group that have the areas of motor skills enabled compared to the control group that achieves 9%, showing that the play activities with artistic languages favor the development of gross and fine motor skills, necessary for the reading-writing process, also observing that this process promotes the free and spontaneous expression of the children for their better personal and social development.

The general difference of 4.6% found between the experimental and control groups of the six educational institutions, according to the analysis performed with the Mann-Whitney test, is not statistically significant with 95% confidence, however, there is evidence of a variation in the differences between institutions, which suggests an analysis of other associated factors.

In general, it was statistically proven that, with the application of playful experiences with artistic languages in the experimental groups, a better development of motor skills is achieved in the areas of lateral dominance, visual-auditory-motor coordination (rhythm) and visual-motor coordination, compared to the control groups in the high schools.

Acknowledgments

It is important to highlight the collaboration of six practicum students from the Early Childhood Education program at UCE, who helped in the preparation of the didactic resources and execution of the experimental process of the study.



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REVISTA

CÁTEDRA

La decadencia de las lenguas autóctonas de Guinea Ecuatorial: una manifestación de la pérdida de identidad cultural

The decline of the indigenous languages of Equatorial Guinea: a manifestation of the loss of cultural identity

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(Received on: 06/06/2021; Accepted on: 15/06/2021; Final version received on: 15/08/2021)

Suggested citation: Bituga-Nchama, P. y Nvé-Ndumu, C. (2021). The decline of the indigenous languages of Equatorial Guinea: a manifestation of the loss of cultural identity. *Revista Cátedra*, 4(3), 34-56.

Resumen

El presente estudio se centra en el análisis de la situación sociolingüística de Guinea Ecuatorial. En este sentido, se parte del hecho de que la falta de aprendizaje de las lenguas autóctonas del país ha derivado en una pérdida de identidad cultural, la cual se ha visto agravada por otros factores como la globalización. La poca importancia que se presta a las lenguas autóctonas, hace que todas ellas estén sufriendo cambios que provocarían su decadencia y posterior desaparición. Se debe invertir en políticas lingüísticas que puedan contrarrestar este efecto porque cuando desaparece una lengua lo hace también una parte de la misma cultura. Es importante remarcar que esta investigación no se ancla en el relativismo lingüístico por cuanto reconoce que potenciar las lenguas autóctonas no es una manera de vetar las lenguas oficiales del país.



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Revista Cátedra, 4(3), pp. 34-56, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3147>

En la actualidad existe una pérdida de identidad cultural motivada porque no se enseña a los niños las lenguas autóctonas, pretenden que sean políglotas o bilingües sin una base lingüística propia: nos referimos a sus lenguas autóctonas que les identifican como parte de un grupo o comunidad. A lo largo de este trabajo, se pone de manifiesto que no puede haber políticas culturales sin políticas lingüísticas, porque las personas deberían conocer las lenguas autóctonas de su cultura. De hecho, los principales resultados de esta investigación evidencian la necesidad proteger las lenguas autóctonas, es incoherente potenciar el español en detrimento de las lenguas autóctonas que representan la identidad de cada grupo étnico.

Palabras clave

Autóctono, cultura, decadencia, identidad, lengua.

Abstract

This study focuses on the analysis of the sociolinguistic situation in Equatorial Guinea. In this sense, we start from the fact that the lack of learning of the country's indigenous languages has led to a loss of cultural identity, which has been aggravated by other factors such as globalization. The lack of importance given to indigenous languages means that all of them are undergoing changes that could lead to their decline and subsequent disappearance. It is necessary to invest in linguistic policies that can counteract this effect because when a language disappears, so does a part of the same culture. It is important to note that this research is not anchored in linguistic relativism because it recognizes that promoting indigenous languages is not a way of vetoing the country's official languages.

At present, there is a loss of cultural identity because children are not taught native languages, and they are expected to be polyglots or bilingual without a linguistic base of their own: we are referring to their native languages that identify them as part of a group or community. Throughout this work, it becomes clear that there can be no cultural policies without linguistic policies, because people should know the indigenous languages of their culture. In fact, the main results of this research show the need to protect indigenous languages; it is incoherent to promote Spanish to the detriment of the indigenous languages that represent the identity of each ethnic group.

Keywords

Native, culture, decadence, identity, language.

1. Introduction

The present research constitutes an analysis of the indigenous languages of Equatorial Guinea, because there is an unprecedented loss of these indigenous or vernacular languages, which opens a gap that leads to an anthropological crisis in our cultural context. The purpose that leads us to study this reality lies in the importance of teaching and using indigenous languages to maintain the cultural identity of the peoples of Equatorial Guinea.

Therefore, it is evident that language confers cultural identity to its speakers. Before stating the thesis defended in this paper, it is useful to better justify why we maintain that language is part of a person's identity or why the loss of language implies a loss of cultural identity. First of all, we must start from the fact that language is one of the elements of a culture, and therefore confers an identity on those who speak it. In this sense, to lose a language is to lose cultural identity, because language is a communication system that contains the



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thoughts, experiences and even the history of human beings. It is important that it be used and taught, regardless of whether the language has a spelling or not.

Consequently, the thesis of this research is that, if native languages are lost, man becomes a being unknown to his own being. In other words, language is inextricably linked to culture because it constitutes an element of belonging for those who use it. The theoretical support for this statement can be found in the fact that "culture and language are indivisible aspects of the total existence of the human being" (Pozzo & Soloviev, 2011, pp. 178-179). Of course, it could be deduced that, if the learning of indigenous languages is taught or potentiated, children would know better the anthropological reality of their own culture, which is distributed through the different indigenous languages. Thus, language constitutes the anthropological reality of a culture and is a catalyst for social cohesion.

In the light of the above thesis, we have proposed to answer the following questions: Do indigenous languages contribute to the dissemination of culture? How does the lack of knowledge of an indigenous language affect human beings? Can the crisis of cultural identity be overcome through the teaching of indigenous languages? Is there a language policy in Equatorial Guinea?

This research presents as a fundamental problem the loss of indigenous languages due to the lack of language learning, caused mainly by the impact of globalization and by the many languages that are recognized as official languages in Equatorial Guinea. This constant leads to a crisis of cultural identity, where it is observed that currently the new generations of the Equatoguinean society do not speak their vernacular languages such as Fang, Ndowe, Bisio, etc. This fact puts at risk one of the cultural aspects of the ethnic groups that make up this country, we are referring to the cultural identity.

On this basis, we are motivated by the question of whether the loss of indigenous languages implies the loss of cultural identity. It is appropriate to focus on the impact of globalization on the indigenous languages of the world's cultures. This is the objection from which we start in this paper, because we consider that globalization is not an isolated fact when it is considered that the cultural identity of an ethnic group is lost, as is the case of language. It is not a sociolinguistic relativism, but rather the need for each human group to preserve its culture, and language, which provides cultural identity, is part of it.

At the outset, we would like to clarify some issues related to language and the cultural identity of people. It should be taken into account that beyond the culture that each person has, we use languages as linguistic signs to communicate, both with people of our own culture (ethnicity, nationality, etc.), as well as with people from other cultures. Thus, a speaker of Fang from Equatorial Guinea will use his language to communicate with people who also speak this language; but the same person may use French, Spanish or English to communicate with other people who have other languages, cultures or origins. In other words, languages, by facilitating communication, favor the exchange in society, whether it is familiar, local, regional, national or international. Speaking other languages does not necessarily mean renouncing the culture of origin; we use one language or another in order to meet the needs we have at any given moment.

"Language is intimately linked to thought, to the expression of ideas, to creativity and to cognition in general through a coarticulated and coevolutionarily developed relationship" (Piedra, 2010, p. 17). And in order to learn this thinking, it is necessary for each culture to preserve its language. What is also not a normal praxis is the fact that language is an instrument of communication, some languages are abandoned to opt for others that are apparently attractive. This is, in other words, to annihilate culture, because without



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language as a linguistic sign, it would be difficult to carry out something that is vital for human beings, the transmission of the culture of peoples, that which characterizes them and in some way forms part of their vital essence. In this sense, it is important to bring up the thought of an outstanding researcher who considers that:

[...] Language is but a part of language, albeit an essential one. It is both a social product of the faculty of language and a set of necessary conventions adopted by the social body to permit the exercise of this faculty in individuals (De Saussure, 1945, p.33).

In this assertion, De Saussure shows that there is a very compact relationship between language and language, just as there is between language and culture. Speaking gives identity and creates or maintains the human being within a structure. Therefore, language is what is human, that which allows us to use our reasoning and to be able to articulate it. In this sense, language is a natural advantage of Homo Sapiens.

Therefore, when we insist that when a person loses his language, he becomes a being unknown of his own being, it is to point out that without the language that gives identity to a human being, he is in albis, because he does not know his anthropological or contextual reality of the environment in which he develops, thus depriving himself of the thought of this culture.

2. State of the art

Addressing the question of the indigenous languages of Equatoguinean society is a task that presents major challenges for any researcher. The first and most fundamental problem has to do with the scarcity of sociolinguistic or ethnolinguistic studies. Therefore, this research had to face this great difficulty. The theme linked to the study of languages is always of great importance, due to the fact that it analyzes an important dimension of human beings such as language. The decline of the indigenous languages of Equatorial Guinea is a phenomenon in which many factors are involved. There are many arguments by which the loss of a language can be considered to imply a substantial anthropological crisis.

One of these arguments focuses on the fact that:

[...] the attitude towards language and its use becomes especially attractive when the fact that languages are not only bearers of certain linguistic forms and attributes, but are also capable of conveying social meanings or connotations, as well as sentimental values, is appreciated in its proper magnitude. The norms and cultural marks of a group are transmitted or emphasized through language (Fernández, 1990, p. 178).

As you can see, our language is in this sense linked to the way we are. It is not only to speak well, but to speak to be understood and to understand what you are talking about.

The learning to which the individual is subjected since childhood is nothing more than training in subjects that have to do with his culture. However, the aspects that mark above all human language. In an ever-changing world, with globalization as the main factor, it is more important than ever to reopen or evoke a debate that is sometimes avoided at the international level, and that is about languages. First of all, it must be understood that all languages are equally important, so none is more important than the other regardless of their nature. Chinese is not more important than French or English, just as Portuguese is not more important than the Bubi language spoken in Equatorial Guinea. We cannot fall into linguistic ethnocentrism.



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It is important to point out that even if language is not the only thing that gives cultural identity to a person, it is an important "support of cultural identity" (Fyle 1983, pp. 6-7). On the discussion of languages, we must stay away from any ethnocentric pretension, as this could obfuscate or mislead the researcher, mainly because "[...] ethnocentrism orders social reality in a hierarchical manner and establishes criteria of superiority and inferiority with respect to one's own and others' lifestyles" (Giner, 1998, p. 277). The best way to proceed could be to recognize that any people has its own language and that 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 it is better to safeguard because it contains the essence of the human being.

We do not mean to say that it is bad to learn other languages, what strikes us is that when you learn another language, at the same time you learn another culture, and it is assimilated as such, which is why the phenomenon of globalization is so powerful, since it sweeps away local languages, imposing another one that ends up absorbing the native language of the place. In other words, globalization has affected people's lives in different ways. "In the case of linguistics, this phenomenon has caused hybridization, evolution and in an extreme case, the disappearance of languages and their cultural values that have historically been in contact with others." (Villalobos Graillet, 2015, p. 5).

This fact is currently abysmal, which is a danger for small countries or small communities, which see how their languages end up disappearing. In this sense, language is presented as "the reflection of the spirit of a people and is, therefore, subject to the vicissitudes that the people suffer" (Alvar, 1982, p. 39). When a language disappears, so does the culture, because language is part of the culture, it is identity, and without this identity, it is worth the redundancy, anthropologically, man becomes a being unknown to his own being. In this regard, some research authors maintain that:

Languages, as is well known, distinguish peoples, are bearers of their system of cultural values, constitute an important element of nationality as a concept, and are a unifying factor [...] If globalization continues on its current predominant course [...] it would be that of the universal language so often dreamed of by philosophers and thinkers (Odio Zamora, 2001, pp.136-41).

Language is what each one of us is, so we must speak it and teach it to our children so that they in turn can teach it to their children. Linguistic diversity is a very important aspect that must be taken into account, for the same reason that cultures and people are different, it is necessary to create a mechanism that prevents or serves as an obstacle to globalization that indiscriminately devours the languages of small communities, simply because national policies have not been able to design the necessary means to prevent it.

The very concept of culture, as a product of human creation, is inextricably linked to that of cultural identity. We do not wish to go back over the definition of what culture is, because, at least from a sociological perspective, we find that:

It refers to the way of life of the members of a given society-their habits and customs, along with the material goods they produce. Society refers to the systems of interactions that bring into contact individuals who share a common culture. No culture can exist without society. But, by the same token, there can be no society without culture (Guiddens, 1991, p. 65).



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Therefore, when one feels linked to a place where he/she was born or grew up, he/she identifies with it, that is, with the customs and behavioral patterns of the place, which makes him/her identify with or feel that he/she belongs to that group, because he/she shares with it, certain traits that may be beliefs or simply cultural values. Accordingly, Olga Lucia Molano maintains that:

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, value and belief systems (...) A characteristic feature of these elements of cultural identity is their immaterial and anonymous character, as they are the product of the community (Molano, 2008, pp. 69-84).

In this definition of Gonzales Varas, cultural identity is imprinted from the culture. In other words, in order to identify with an ethnic group, you must first be or know this culture. When the aforementioned author speaks of language as one of the aspects of culture, he does so knowing that it is the instrument of communication. However, it must be specified that what is communicated is culture, we say communicate because it is passed on from generation to generation. If there is no language that identifies an ethnic group or if the members of this ethnic group do not give so much importance to their language, then we are or could be facing a crisis of cultural identity as is happening with the ethnic groups of Equatorial Guinea, each one of them as far as possible is losing its native language.

The abandonment of the learning and teaching of indigenous languages is due to multiple factors, although as we have highlighted above, it is mainly due to the disdain for the languages themselves, because they are considered poor. This is probably due to the fact that each ethnic group uses and does what it wants with its own language. However, there is a real danger that a great cultural legacy is being lost. In this sense, it is important to strengthen cultural identity, which, as has been mentioned, refers to the feeling of belonging to a place or group.

It is possible to affirm that a people has an identity when its individuals share representations around traditions, histories, common roots, ways of life, motivations, beliefs, values, customs, attitudes and traits. They must also be aware of being a people with characteristics different from those of other peoples (Pérez et al., 1999, pp. 251-279).

In this sense, when all these things fail, then there is an unprecedented cultural identity crisis. Indigenous languages imprint the identity of each of their individuals. If these languages are not taught, this identity is in great danger for the mere reason of not being able to coexist with the official languages, although we cannot argue that there is a linguistic purge in the country, but rather that the role of these languages in cultural identity must be revalued. There is a great deal of literature on sociolinguistics, but at the level of national academic literature, there is hardly any research on our object of study. This is one of the reasons why it has been necessary to use a theoretical framework of what has been said at the academic level in general, about the relationship between language and culture, and above all, the way in which the loss of language, as one of the aspects of culture, affects cultural identity.



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Revista Cátedra, 4(3), pp. 34-56, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3147>

3. Defense of the thesis

The outlook for the languages of Equatorial Guinea is not very encouraging. Each of the languages of this country represents the different ethnic groups that can be found there. Language is part of the cultural identity of a society. The problem in Equatorial Guinea is not the official languages recognized in the constitution, such as Spanish, French and Portuguese, etc. The problem lies in the attitude of rejection or disdain with which the indigenous languages are conceived, which have gone from being a sign of cultural identity to a symbol of low social or economic status, even taken as a lack of universal culture.

It is not unreasonable to think that indigenous languages are discriminated against by Equatoguineans themselves. Moreover, everyone wants their children not to speak these languages because they consider them primitive or obsolete. It is this very negative attitude towards indigenous languages that is a cause for concern. It is not in vain that Sanguinetti has argued that "language is the house of being and in its dwelling man dwells" (Sanguinetti, 2006, pp. 59-72).

When we speak of autochthonous languages here, we are referring above all to those that are distinctly native to the country. That is, those languages spoken by the natives of Equatorial Guinea before the arrival of the Europeans, and which survived colonization. At present, to cite a few indigenous languages in Equatorial Guinea:

Seven indigenous languages [Bubi, Fang, Benga, Kombe, Baseke, Balengue, Bujeba] of the Bantu family, a Portuguese Creole [Annobonese], an English pidgin [Pichío Pichinglis] and Spanish, as the general language of Coine, are spoken. It is not a monolingual territory, not even bilingual, but, as we have seen above, it is a melting pot of languages, where Spanish is not the mother tongue of any of its speakers (Quilis and Casado-Fresnillo, 1995, pp. 27-35).

The most striking aspect is the disappearance of indigenous languages. Today, in Equatorial Guinea, there are more speakers of the official languages than of the indigenous languages. This equation is probably not taken into account, but the truth is that one in three Equatoguineans express themselves in the country's official languages, especially Spanish. We say they express themselves because the fact that they speak these languages does not mean that they all speak them well, that is, that they master the linguistic or grammatical codes of these official languages.

Furthermore, education also plays a very important role in the overlapping of native languages. In 90% of the country's educational centers, Spanish is taught in Spanish, which means that young people speak more Spanish and force their tutors or parents to express themselves to them in these languages. This asymmetry that exists at the national level is extremely worrying. The agony suffered by the indigenous languages of Equatorial Guinea only reflects the crisis of cultural identity. In an interview with Justo Bolekia Boleká, Álvarez-Feáns, in an interview with Justo Bolekia Boleká, points out that:

One of the clearest manifestations of enculturation is through language, and the percentage of people who do not speak the native languages is increasing. The presence of the colonizer's language in the most important contexts of society, such as the school, the church, the media, makes the people there identify it as the language that will provide them with what they need, the language of development, of prestige, of wealth,



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and this turns the native languages into cloistered languages, limited to the family context [...] When an African does not have any language that identifies him/her, the language of development, of prestige, of wealth. [...] When an African has no language that identifies him as such, only speaks French, English, Spanish, Portuguese or German, he ceases to be African, because language is the support of our identity (Álvarez-Feáns, 2008, p. 35).

Boleká's explicit arguments are only truths that, in the light of this research, we emphatically share. We do not say that foreign languages should be eliminated, but that the linguistic cultural legacy of our peoples should be protected. In addition, direct observation of the linguistic context of Equatorial Guinea forces us to be sensible and admit that there is an anthropological crisis, which can be understood and explained from the point of view of linguistic anthropology or philological anthropology. The indigenous languages of Equatorial Guinea are in need of a lot of oxygen, in the sense that none of the languages spoken by the natives of this country can be considered exempt.

The cultural identity crisis caused by the loss of indigenous languages is largely due to weak language policies. To avoid this type of situation we must first start from the knowledge that "culture is language and language is culture; it is a particular symbolic construction of social reality; it specifies our understanding of the world and, by the same token, categorizes and values our actions" (Teillier et al., 2016, pp. 137-161). Clearly, it is not possible to establish a dependent relationship between language and culture if there is no language. Therefore, the learning of national languages must be promoted so that culture continues to grow. The general characteristics that can be extracted from the indigenous languages of Equatorial Guinea are as follows:

- a) a) They are all Bantu-derived languages, except Annobonese, because it is a creole language of Portuguese origin. By Bantu we refer to the great linguistic family of languages spoken in Africa.
- b) b) Each of these languages gives a cultural identity to its speakers, so that by the mere fact of speaking a certain language, one knows directly to which ethnic group one belongs.
- c) They are ungrammatical languages. So far, there is no evidence that there has ever been a spelling in the indigenous languages of Equatorial Guinea. However, there is a linguist who has even published a dictionary in one of the indigenous languages of the country's ethnic groups. He is the writer Julian Bibang Oyé.

The problem with the dictionary of the Fang language published by the aforementioned author is that it does not seem to us that a culture should be forced to have a spelling and impose it on the speakers, as we have seen in this case. It is best to reach a consensus with several philologists, ethnolinguists, anthropologists, etc., in order to dare to establish a spelling; the impertinent thing is to do it unilaterally. As we have seen, language can be verbal or written. In the case of African peoples, most of the languages are unwritten, that is to say, they have no writing.

Roughly speaking, we consider that these are some of the characteristics that we can point out about the indigenous languages. Bear in mind that we are moving between linguistic anthropology and philosophical anthropology, which is why we do not want to focus so much on the linguistic aspect alone, even though it is somewhat unavoidable. Among the characteristics announced above, we can only say that there is a linguistic plurality depending on the different ethnic groups of the country. However, in spite of this linguistic



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plurality, it is also worth mentioning a nuance that we think is important. If we look at the issue geographically, we can say that the indigenous languages of Equatorial Guinea suffer more from decadence in urban than in rural areas. However, this does not mean that rural areas are exempt from this problem, since the official languages, especially Spanish, are widely spoken in rural areas, which endangers the indigenous languages. There is currently no cohabitation between these languages, rather we see that cohabitation is disappearing little by little, because the indigenous languages are no longer being taught and spoken.

The different languages that we are going to develop do not fully represent the linguistic panorama of the country. The reason for focusing our attention on them is mainly due to the fact that they are the most widely spoken.

3.1 Fang language

As the language with the largest number of speakers, it is the one most affected by the loss or decadence of the language. One of the main moments of the loss of the Fang language is found in the acculturation suffered by its members due to the Spanish colonization. However, with the passage of time, it has not been possible to recover part of what was lost.

The concern to emphasize that language confers cultural identity to those who speak it has not always gone unnoticed in Equatorial Guinea. In fact, President Francisco Macías Nguema, the country's first president, when he saw that Fang culture was in danger due to the invasion of European culture, imposed Fang as the country's official language because it had the most speakers.

Nationalist sentiment was one of the main motivations that led the president to impose Fang as the language of instruction, thus blocking Spanish, because he thought that it went against the cultural values of the people of Equatorial Guinea in general, but particularly of the Fang. In fact, he forbade Spanish to be spoken any more, something that could not be enforced as such. The loss of the cultural identity of the Fang, meaning the fact of being Fang, is subject to several factors, each of which has a very considerable impact on this language. Although the Fang language is the most widely spoken language in the country, it should be mentioned that it is gradually being completely invaded by Spanish, which is increasingly endangering the cultural vestiges of this ethnic group.

3.2 Bubi Language

After Fang, Bubi is the second most widely spoken indigenous language in Equatorial Guinea. Most of its members are located in the insular region of the country. Bubi is not an endangered language, but it is possible that it is on the way to extinction, as it is nowadays known that most of them speak more pidgin, which is a different English than the one we are used to, which they learned during the stay of the British colonists on the island of Santa Isabel, today, Malabo, capital of Equatorial Guinea. On the use of English pidgin on the island of Bioko, Lipski points out that:

It is considered a vulgar language, of low social class, poorly spoken [...] where individuals make daily use in oral communication, especially informal, of Pichinglish rather than Bubi, Kombe or Annoboneses, but the government refuses to recognize it in its records. Its use is located especially in the capital Malabo, and less so in Bata (Lipski, 2004, pp.116-119).



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In Guinea, Pichi or Pichinglis is part of the linguistic reality, especially on the island of Bioko, and serves as a communication tool with Nigerians and Cameroonians, who share this English-based pidgin. Apart from pidgin, they also speak Spanish, which may even be the mother tongue of many of them. There are Bubi who have never expressed themselves in this language, since they do not know it and cannot use it, so it is in disuse. At present, people of senile age are the ones who continue to be the guarantors of the language of this culture, because they use it for everything, it is their language, therefore, their culture, and it is not that they do not want to teach it, but there is, as we have made clear when speaking of the Fang language, a rejection of the learning of vernacular languages by young people, although it must be said that there are no great attempts to improve this situation. Aware of the cultural loss of having no indigenous language to safeguard, Professor Bolekia Boleká has made several attempts to present formulas to get young people interested in learning the Bubi language.

3.3 Annobonesa Language

The Annobonese language is, above all, the fusion of a Creole language, a product of Portuguese colonization. In this sense, we cannot say that the Annobonese originally have a linguistic unit. Rather, they have developed a vernacular language known as Ambo, which unites all Annoboneses, since it is a sign of cultural identity for them. In addition, the geographic location of Annobon may be playing a major role in the fact that the Annobonese language remains robust. While Spanish is the official language of the country, and all citizens residing in the country must use this language as the language of social cohesion, on the island of Annobon, F-Dambo, which is the indigenous language of the area, is the preferred language of Annobon, and is spoken by the Annobonese.

3.4 Ndowe Language

The Ndowe language is the fourth most widely spoken indigenous language in the country. However, it has not been spared the loss of cultural identity caused mainly by ignorance or refusal to disseminate and learn the language. This language is mainly used by the Ndowe, but it should be noted that it is a language spoken by the beach people, i.e. the ethnic groups found along the country's coastline. It is an ethnic group made up of the Combe, the Baseques, etc. On the other hand, it should be noted that the Ndowe have long been in contact with Western languages, which have introduced cultural changes in this ethnic group. Many Ndowe, such as the Combe, now speak more Spanish than their indigenous language. So how can the Ndowe think that their identity can be preserved if the language that characterizes this language is in disuse?

For our part, we believe that language is culture, therefore, identity, without it, it is inconceivable that there are ethnic groups that claim to be of a particular ethnicity when they do not really express themselves in their indigenous language. The causes of the rejection or lack of interest felt by the Ndowe to inculcate it in their children are due to multiple factors. The linguistic and cultural policies are the tools that the State must make available to all, in order to avoid this crisis of cultural identity that affects all the ethnic groups of the country, and that if it is not stopped, there is a risk that globalization will end up taking everything in its path, being disastrous for the ungrammatical languages like ours.

3.5 Bisio language

Of all the ethnic groups described above, the Bisio are one of the least numerous, making them, first and foremost, an ethnic group whose culture may disappear. If we say culture, it is because the language will also disappear. The vitality of a language is probably due to the



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number of speakers it has. By linguistic vitality we refer to "the actual use of the variety by a community of native speakers" (Mounin, 1979, p. 89). In the case of the Bisio, it cannot boast of being a culture whose cultural identity has several members that constitute the same cultural identity. In this sense, the Bisio language may disappear over time. In fact, if we take stock of all the indigenous languages of Equatorial Guinea, the Bisio language is very likely to decline. But why is this happening?

Undoubtedly, this is due to the lack of diffusion of the language itself. The fact that there are few speakers using a language is not a necessary condition, although it may be sufficient for its disappearance. Even if a language has few speakers, if they try to use and safeguard it, there will not be many problems. With this approach there is something that may perhaps lead to misunderstandings in this research. The thinking of a cultural group resides in the language they use. Therefore, linguistic and cultural identity go hand in hand. The autochthonous languages of Equatorial Guinea possess the reality of the cultural thought of each of these ethnic groups. This legacy must be safeguarded, however, the cultural identity of these ethnic groups is threatened, as we have been emphasizing.

Globalization profoundly affects indigenous languages because all of them have largely lost their cultural values. It is very important to redefine cultural, and especially linguistic, identity. It is urgent that cultural measures be adopted to prevent indigenous languages from being absorbed by various factors. The loss of cultural or linguistic identity, caused by the lack of teaching and learning of indigenous languages, must be halted. Culture unites people or communities, it is like an umbrella under which we shelter ourselves, therefore, it is important to know one's own language.

We continue to insist that the issue in this work is not that national languages should be eliminated, since they are already part of our heritage. We understand that the indigenous languages of the country are all unwritten and unwritten, so to try to eliminate the languages that are considered official so that some of the indigenous languages such as Fang or Bubi become official would be very conflictive, since a spelling would have to be investigated.

Indigenous languages imprint the identity of each of their members, those who use them. If these languages are not taught, cultural identity is compromised because they cannot coexist with the official languages, although we cannot argue that there is a linguistic purge in the country, but rather that the role of these languages in cultural identity should be revalued.

The impact of foreign languages on native or local languages in this sense is extremely devastating, since the impact is not only linguistic, but also sociocultural. The coexistence of foreign languages with indigenous languages is not at all harmonious, because as the former are more widely used, many of the indigenous languages are disappearing, because they increasingly have very few speakers. For this reason, UNESCO maintains that:

Many indigenous peoples, associating their disadvantaged social status with their culture, have come to believe that their languages are not worth safeguarding. They abandon their language and culture in the hope of overcoming discrimination, securing a livelihood and improving their social mobility or integrating into the world market (UNESCO, 2003, p. 2).



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This does not mean that this process is irreversible, because it is not. What is missing is the design of linguistic policies that allow or help inculcate in young people the importance of learning native languages, since they are the ones that allow these people to share with others in their environment, some of the features that characterize their community or ethnic group to which they belong.

When a language is abandoned, it is because the local people probably value the official languages more, even though these same languages are foreign, and therefore contribute to the decline of cultural identity. Children who do not know their own language are at a crossroads because they would know nothing of their own thinking that forms their own worldview of the world. Children who do not know the languages of their parents and grandparents have serious problems of inclusion and interaction with the community that should instruct them in all the cultural values of their people. In this process, the vernacular language plays an extremely important role because it shapes the very identity of the human being. Learning our languages is a benefit for our own experience throughout life, it is to be and to belong to something.

One of the problems that a priori is observed with respect to the loss of cultural identity is undoubtedly the lack of national educational policies aimed at promoting the learning of indigenous languages as part of the cultural heritage of the different peoples or ethnic groups that make up what is Equatorial Guinea. This way of proceeding is the one that, from our perspective, makes bilingualism even preferable. To clarify what bilingualism is, we use it in this work understanding that it is "the disposition that people have to handle at least two different languages; which they are able to manipulate and mix to achieve their discourse needs, and express their multicultural identity" (Araujo-Quiroz, 2013, pp. 189-204).

Bilingualism is one of the aspects that is currently taking place in our society as more and more children are being educated in this type of education. Equatoguinean children must currently speak Spanish, French, English and Portuguese, which would perhaps be a new way of expressing their multicultural identity, but not with the same cultural identity. As a result of all the theoretical body exposed, the objection we raise goes against those who point out the following: it is better for each person to speak the languages he/she wants because this way he/she is more educated and has better job possibilities.

As a counterargument to this objection, we must recognize that it is good to be polyglot or bilingual, that is, to be fluent in several languages. However, in my personal opinion, the best thing would be to start first with the learning of the native languages, since it is not possible to speak many languages to the detriment of the native ones, those spoken in the place where one was born.

The solution is not to be bilingual but rather to first have a cradle education that implies knowing the native language, the language of our parents, and then learning another. Before adopting any language policy, indigenous languages must be preserved and taught so that children can learn their culture through the speech of their mother tongue. All this, because "language can be the vehicle by which, in the diverse profiles that life presents, we can collaborate to establish a communicative level in the social and cultural spheres" (Habermas, 1987, pp. 351-432). In general terms, our position is that those who do not know the language of their parents or grandparents suffer a real identity crisis, since they cannot be located in a given culture or region.



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Revista Cátedra, 4(3), pp. 34-56, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3147>

The learning of indigenous languages is of utmost importance because this is how human beings connect with their environment. Today, the indigenous languages of Equatorial Guinea have disappeared or are disappearing due to the influence of foreign languages and globalization. In this way, a real anthropological crisis has been created in the life of Equatoguineans. When a Fang or Annobonese speaks a foreign language, which we are not saying is something diabolical, it can be observed that he or she does so as a person trying to adapt to another way of seeing or conceiving the world, because language is life. To teach children a language is to make them learn a certain culture. If we want children to know their culture and not be in this anthropological crisis, they must necessarily learn their language, and therefore their culture. In this regard, we have to take into account a fact that is not isolated, and that is:

When people communicate in a language that, at least for one of them, is foreign, it is not possible to ensure that the shared meanings and values with which they are imbued are the same, which can be assumed when speakers express themselves in languages that share similar characteristics. The task of acquiring a language as spoken by a particular group means learning the meanings, values and practices of that group, expressed through the language (Byram and Fleming, 1998, p. 12).

With this, it is evident that if we want children to speak their parents' own languages, we must begin by valuing our own culture first. Today, it seems a necessity to implement the bilingualism mentioned in one of the chapters of this research.

4. Methodology

Since this research deals with a sociocultural issue such as the loss of native languages, a qualitative methodology has been used. The reasons that led to the choice of this methodology are due to the fact that "qualitative research has specific relevance for the study of social relations, due to the fact of the pluralization of life worlds" (Flick, 2004, p. 15). However, even if it is a qualitative research, it is susceptible to quantification, which helps us, thanks to research instruments and techniques, to know the reasons for this loss of cultural identity caused by the loss of native languages. Furthermore, it should be noted that "qualitative methodology has an exponential value in social studies, in that it brings together a series of characteristics that make the research go beyond the mere sum of data collection techniques" (Taylor and Bogdan, 1994, p. 20).

Although languages are not the only cultural manifestations of peoples, it should be known that they are linked to human thought. As a research technique, the survey was used and the instrument was a mixed questionnaire, containing closed and open questions, which was important for the collection of the data analyzed in this research. The survey has been chosen because it is the best technique that fits this research and because thanks to it, information has been obtained from the selected sample on the subject under analysis. Based on the research problem and the questions formulated, it was possible to carry out a survey of the Equatoguinean population. The questions asked were based on the assumption that all respondents speak the country's ancestral languages. The sample selected is 402 citizens, who are located in the two main cities of the country, namely the cities of Malabo and Bata.

Analysis and discussion of the results

The results presented below are the result of the survey conducted on a very select population, which is composed of the main ethnic groups of Equatorial Guinea, which we



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have mentioned throughout our argumentation. We believe that these data are important, since it is a part of this research that has made it possible to verify or verify the objectives set out in this research. To analyze the data, we used the Statistical Package for the Social Sciences (SPSS) to measure the closed questions.

		Frecuency	Percentage	Valid percentage	Cumulative percentage
valid	They are disappearing	104	25,9	25,9	25,9
	They are less spoken compared to the official languages	173	43,0	43,0	68,9
	They are considered part of each culture, but there are no linguistic policies to promote them.	125	31,1	31,1	100,0
	Total	402	100,0	100,0	

Table 1. ¿What is the current situation you find in the indigenous languages?

According to this question, 43% of respondents say that the situation of indigenous languages is worrisome because they are less spoken than official languages such as Spanish or French. This is clearly seen in the percentages of question number one of this questionnaire where it is observed that more and more the different ethnic groups of the country speak very little of their native languages, choosing to express themselves in Spanish, French or English, which is why native languages are disappearing and because there are no more consolidated linguistic policies to avoid this fact.

		Frecuency	Percentage	Valid percentage	Cumulative percentage
Válido	Yes	223	55,5	55,5	55,5
	No	178	44,3	44,3	99,8
	3	1	,2	,2	100,0
	Total	402	100,0	100,0	

Table 2 ¿Should indigenous languages also be official?

One of the things that is noticeable in many African countries is the demand of the natives and of some ethnolinguists for the possibility of making African indigenous languages official. This is the case that we observe in the response given by our respondents, where 55.5% agree that indigenous languages should be official, possibly because they give value and importance to indigenous languages, as is the case with languages that are official in many African countries, but which can also be considered as foreign languages. However, in the light of this research it must be recognized that, for the indigenous languages of countries to be official as such, they must also have a spelling, something that is not present in many of them. All indigenous languages should also be official, although this may entail other social difficulties.



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		Frecuency	Percentage	Valid percentage	Cumulative percentage
Valid	Globalization	111	27,6	27,6	27,6
	Lack of interest in culture	214	53,2	53,2	80,8
	Anthropological poverty	77	19,2	19,2	100,0
	Total	402	100,0	100,0	

Table 3 ¿Which of the following reasons contribute to the loss of cultural identity?

The loss of cultural identity alluded to in this work and evidenced by the different ethnic groups in the country, leads people to affirm that 53.2% is due to a lack of interest in culture. The reasons for this lack of interest in culture may be due to several not isolated facts, such as globalization that imposes in a direct way, which must be adopted especially by those minority cultures and that usually end up absorbing the culture of other peoples.

		Frecuency	Percentage	Valid percentage	Cumulative percentage
Valid	Ndowe	97	24,1	24,1	24,1
	Bubi	113	28,1	28,1	52,2
	Fang	83	20,6	20,6	72,9
	Annoboneses	109	27,1	27,1	100,0
	Total	402	100,0	100,0	

Table 4 ¿Which of the following ethnic groups speak little of their native language?

According to the analysis of this table, we can see that of all the ethnic groups that appear in this question asked to our respondent, the Annobonesa ethnic group is the one that speaks little of their native language, probably because they are a very small group of speakers or because of their historical past, which we have described in this work. Apart from this, the data we have here show that the Bubis are the second ethnic group that speaks little of their language, also because Spanish or Pichinglis is more widely spoken on the island of Bioko. There are also the Ndowe, who express themselves more in Spanish than in their native languages. The picture we see with that, is that the Fang are the only ethnic group that speaks more of their language, although that does not mean that it is not being lost.



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		Frecuency	Percentage	Valid percentage	Cumulative percentage
Valid	It is helping to strengthen Equatoguinean culture.	42	10,4	10,4	10,4
	It is absorbing the indigenous languages and contributing to their disappearance.	291	72,4	72,4	82,8
	It is coexisting with the indigenous languages without altering them.	69	17,2	17,2	100,0
	Total	402	100,0	100,0	

Table 5 ¿What do you think is the relationship between Spanish and the indigenous languages?

Since Spanish is the language most widely spoken by the inhabitants of Equatorial Guinea, we asked this question to find out how the citizens see the situation of Spanish in relation to the indigenous languages. For 72.4%, the Spanish language is absorbing the indigenous languages, which is accelerating their disappearance, since the number of speakers of Spanish in Equatoguinean society is increasing compared to the past, however, this Spanish has its peculiarities, since it is a Spanish spoken in Africa, from the African culture and has its own manifestations. In this way, what we can call Guinean Spanish emerges, which is the fusion of the indigenous languages of the country with the Spanish language itself.

		Frecuency	Percentage	Valid percentage	Cumulative percentage
Valid	Through inclusive language policies	69	17,2	17,2	17,2
	Through an educational system	182	45,3	45,3	62,4
	Through the family itself	151	37,6	37,6	100,0
	Total	402	100,0	100,0	

Table 6 ¿How can the learning of indigenous languages in Equatorial Guinea be promoted?

It is evident that indigenous languages must be empowered, and to this end, the National Education System must reorient itself to safeguard our languages. It is a danger that our native languages are not recognized in the current General Education Law as languages of instruction, but rather Spanish, French, English or Portuguese. One of the results obtained



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with this type of policies is that the foreign languages that are official in this country end up or lead to the equipment of the native languages, because if they are not spoken at school, in the family or in interpersonal relationships, they fall into disuse and end up disappearing, since they cannot adapt with the other languages, because there are no mechanisms created for this purpose.

Just as there are official State institutions such as the Equatoguinean Academy of the Spanish Language (AEGLE), there should also urgently be an institution to safeguard the cultural legacy of the indigenous languages, which is impregnated in the different indigenous languages. On the other hand, it should be taken into account that for the indigenous languages, there must be a confluence of many factors, but although the educational system has been pointed out as shown in the table, the weight of the family must also be notorious. For the education of parents is extremely important, if they do not teach their own children to speak Fang or Bubi, neither will they teach their children to speak Fang or Bubi. If such a scenario occurs, this language will undoubtedly disappear.

		Frecuency	Percentage	Valid percentage	Cumulative percentage
Valid	Yes	205	51,0	51,0	51,0
	No	197	49,0	49,0	100,0
	Total	402	100,0	100,0	

Table 7 ¿Can bilingualism help the loss of cultural identity?

Among all the questions posed, the answer obtained here from our respondents, where 51.0% have indicated that bilingualism can help the loss of cultural identity, is a challenge for us. This answer can be considered valid, because if we understand that speaking many languages to the detriment of others, especially those that are not used or recognized internationally or globally, this means that many of them would disappear and, therefore, there would be an acute anthropological crisis. Therefore, mastering more than two foreign languages is a good thing, as long as it does not mean ignoring one's own language, which gives one a sense of identity and belonging to a specific place.

Considering that the world is becoming more and more interconnected and it is a global requirement, indirectly, that people speak more than two languages, those who express themselves in only one language may be considered as the illiterates of modern times. However, we insist unceasingly that to the extent that one becomes bilingual, it should always be on the basis of knowledge of the language of one's culture.

It is highly praiseworthy that our children speak or express themselves in many languages, as this would mean that they are very up-to-date citizens and can easily integrate into other cultures different from their own. However, it is worth the redundancy, a bilingualism that is made at the expense of avoiding the learning of the native languages that allow one to identify oneself, is an empty or null bilingualism because it threatens the very essentiality of the people.



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6. Conclusion

Language has an inexorable relationship with culture; therefore, it is important to identify with it. Throughout this research, it has become clear that language gives a certain identity to those who speak it. However, in view of the fact that indigenous languages are rarely spoken, which means that they are gradually disappearing, a crisis of anthropological identity is thus being generated.

All languages have the same importance, since they are part of the reality of each people. They contain the entire legacy that has been forged from the most remote times to the present day. The language of the people can be considered alive as long as it is being used by its speakers. If they do not use this language, which should be passed on from generation to generation, it will disappear. In this sense, the linguistic situation of the country is extremely worrying. Hence, there is an anthropological crisis caused fundamentally by the loss or lack of interest shown in learning indigenous languages.

It has been seen that when one does not know the language of one's progenitors or one's social reality, one also does not know oneself. With this research work, we have not said that Equatoguinean children should not learn the official languages of the country, but rather our argument is that they should first learn their native language, which can be Fang, Bubi or Annobonese, simply because they constitute their own anthropological basis.

This research has revealed results that alert us to the danger in which these languages find themselves. Practically, without exception, all the indigenous languages of Equatorial Guinea are less spoken in the country, although it must be recognized that there are ethnic groups where the impact of language loss is more noticeable than in others, the evidence is that none of them is safe from this identity crisis.

There is no cohabitation between the indigenous languages and those that are official in the country. No indigenous language is official, so they are banned from being used in public spheres, with the argument that this prevents any ethnic group from being discriminated against by a linguistic supremacy exercised by another ethnic group that feels it has the authority to do so. As long as foreign languages such as French, Spanish, English or Portuguese continue to be the official languages and overlap with the indigenous languages, it is clear that the disappearance of these languages will become much more notorious. Therefore, if these languages cannot be made official as an effect to prevent them from disappearing, at least these languages should be declared as part of the cultural reality.

It may be that making native languages official is not the solution to the problem of the cultural identity crisis, but this path must be explored to see if it is feasible or not, therefore, it is imperative that serious linguistic policies be designed. Whether we want to admit it or not, globalization is affecting many of the country's native languages. In this sense, it is time to promote the teaching of these languages as it has never been done before. Children from an early age have the right to know the languages of their country, the one spoken by their parents, but we are referring to the one they learned from their parents.

For modern times, bilingualism comes in handy, as it allows people to have more possibilities to be able to speak one or more languages. However, in this process of learning multiple languages, native languages should not be left behind. Before learning a foreign language, one must know the base language. We should not have polyglots who know French, English, Chinese or German, but do not know their base language, such as Fang, Quechua or Catalan, to cite examples.



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Language policies are needed to encourage the learning and use of the indigenous languages of Equatorial Guinea. The textbooks used in the country's education system are in Spanish. This means that the only place where children can learn the indigenous language of their parents is in the family. However, this is not the case either, because even in the family more Spanish is spoken.

One of the limitations of this research lies in the lack of national studies on the status of these indigenous languages. At the academic level, this problem has not been given as much importance. Most of the research, such as that cited in this study, focuses on the Spanish spoken in Equatorial Guinea.



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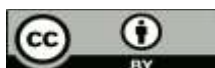
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Revista Cátedra, 4(3), pp. 34-56, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3147>



REVISTA

CÁTEDRA

The use of TransLanguage to improve oral reading proficiency in a foreign language classroom

El uso de Translenguaje para mejorar la competencia de lectura oral en un aula de lengua extranjera

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(Received on: 10/08/2021; Accepted on: 15/08/2021; Final version received on: 06/09/2021)

Suggested citation: Pánchez, T. (2021). The use of TransLanguage to improve oral reading proficiency in a foreign language classroom. *Revista Cátedra*, 4(3), 57-72.

Resumen

El translenguaje es un enfoque que no ve fronteras entre las lenguas y permite su uso simultáneo cuando se enseña y se aprende una nueva lengua, por lo tanto, puede ser utilizado como un dispositivo de andamiaje para desarrollar una lengua extranjera, ya que ayuda a los estudiantes a aclarar los términos y a hacer el significado. Sin embargo, es un término relativamente reciente en América Latina y las investigaciones relacionadas con él son escasas. El objetivo principal que guió este estudio fue aplicar el translenguaje durante las clases de inglés en una escuela secundaria privada para mejorar la competencia lectora oral de los estudiantes. Se realizaron pruebas previas y posteriores al principio y al final de una unidad (que duró 6 semanas) en las que los estudiantes leyeron un pasaje de 300 palabras y se contaron las palabras leídas correctamente en un minuto. Además, se aplicó una encuesta en escala Likert a los alumnos y a un profesor para conocer sus experiencias y percepciones tras la aplicación del translenguaje. Se llevó a cabo una prueba t y los resultados mostraron una mejora en la competencia lectora oral de los estudiantes (media = 221,55 en la preprueba y media = 243,22 en la posprueba con una desviación estándar de 42,20 y 30,20 respectivamente) tras el uso de este enfoque con una diferencia estadísticamente significativa ($p > 0,001$). La media de palabras leídas correctamente aumentó en el post-test ($M = 21,68$; $SD = 18,88$). El uso del translenguaje probablemente



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Revista Cátedra, 4(3), pp. 57-72, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3041>

tuvo un resultado positivo en la habilidad estudiada y también en las experiencias de los alumnos y del profesor al utilizar el translenguaje.

Palabras clave

Competencia en lectura oral, lengua extranjera, translenguaje

Abstract

Translanguaging is an approach that sees no boundaries between languages and allows their simultaneous use when teaching and learning a new language, therefore, it can be used as a scaffold device to develop a foreign language since it helps students clarify terms and make meaning. Nevertheless, it is a relatively recent term in Latin America, and investigations related to it are scarce. The main objective that guided this study was to apply translanguaging during English classes in a private High School to improve the students' oral reading proficiency. A pre and post-tests were taken at the beginning and the end of one unit (which lasted 6 weeks) where students read a 300-word passage and words read correctly within a minute were counted. Also, a Likert-scale survey was applied to students and a teacher to know their experiences and perceptions after the application of translanguaging. A t-test was carried out and the results showed an improvement in the students' oral reading proficiency (Mean = 221.55 in the pre-test and Mean = 243.22 in the post-test with a standard deviation of 42.20 and 30.20 respectively) after the usage of this approach with a difference statistically significant ($p > 0.001$). The mean of words read correctly increased in the post-test (M = 21.68; SD = 18.88). The use of translanguaging probably had a positive result on the skill studied and also in the students and teacher's experiences when using translanguaging.

Key words

Foreign classroom, oral reading proficiency, translanguaging.

1. Introduction

The use of the mother tongue tends to be discouraged in foreign language classrooms (Adinolfi & Astruc, 2017, p. 186); however, according to Wei (2017) this practice is "like tying one of their hands behind their back or blindfolding one of their eyes and still expecting them to do and see things as others do and see with both hands free and both eyes open" (p. 2). Furthermore, when learners have a low level of proficiency in the language of learning, they are unable to make meanings through the language of instruction, and translanguaging serves as a relevant scaffolding device that assists learners as they add the required features or meanings to the developing language (Garcia & Wei, 2018, p. 4).

In the context of Ecuador, when "students graduate, they must have a B1 proficiency level. However, this is not always achieved" (Machado, 2019, p. 1). Teachers apply many approaches and methodologies and may have particularly strong views on the best or worst, and use them according to the contexts of their students. In addition, some of the learners have limited access to the language of learning in their everyday environment (Wei, 2017, p. 1), and translanguaging practices tend to provide "a learning space in which language skills are considered primarily communicative competencies and in which monolingual language methods are considered guidelines rather than the only acceptable norm" (Nagy, 2018, p. 50).

Translingualism allows the use of the L1 to make meaning in the L2. According to Pacheco and Miller (2016, p. 533), students achieve better academic outcomes when using



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translanguage. This approach implies a continuous flow between languages and fluently integrates the different skills to convey and make meaning (Adinolfi & Astruc, 2017, p. 187; Lasagabaster & García, 2014, p. 559). It considers languages as a whole and not as something separate. That is why it is applied in multiple situations, both inside and outside learning contexts, pedagogically and also spontaneously. Translanguaging is a “flexible view that fosters the synergies of the languages in contact, rather than penalizes their simultaneous use” (Lasagabaster & García, 2014, p. 559). It means translanguaging does not consider different languages as competing because when it is implemented correctly, does not harm the language skills in the learning language (Nagy, 2018, p. 50).

There are different methods and approaches to teaching a foreign language. Some of them state the exclusive use of the target language. However, translanguaging represents a change from traditional monolingual methods which can be limiting and inhibit creative expressions (Makalela, 2015a, p. 203). This relatively new approach allows students to use all their linguistic skills, experience, and competences in L1 for meaning-making purposes (Nagy, 2018, p. 42). Despite these benefits, translanguage pedagogical practices are still the subject of research in foreign language instructional settings, whether face-to-face or online (Adinolfi & Astruc, 2017, p. 185), and have not yet been investigated in depth in Latin America (Nielsen, 2018, p. 54). More studies are needed to analyze the effects of translanguaging in different contexts. For the reasons mentioned above, it is fundamental and pertinent to carry out a study about translanguaging in an English foreign language classroom, since it will not only be focused on the formal aspect of students’ learning but it will also take into account their experiences and perceptions. This research will also support the existent evidence about translanguaging in order to develop further investigations and place translanguaging as an important strategy that can be used at schools.

The research will be carried out in a private school in Quito - Calderón, where the students have a low level of English, therefore, it is complicated to manage a monolingual approach since most of the students do not understand most of the target language. The question that guided this research was to understand the usefulness of the use of translanguage and therefore, the main objective is to apply this approach during English classes in a private high school to improve students' oral reading proficiency. The article is divided into six sections, in the literature review a theoretical framework supporting the application of translanguage in a foreign language context is presented; the methodology and procedures that were followed and used are described in "Methods and Materials". The main results are presented in the following section, followed by an analysis and interpretation found in the Discussion section. The conclusions answer the main question of this study and a large number of references are presented in the last section.

2. Literature Review

2.1 Definition of Bilingualism

Bilingualism has many definitions (Yilmaz, 2019, p. 2), one of which is the mastery of two distinct and separate languages (Flores & Garcia, 2013, p. 243). On the other hand, there is a holistic view towards bilingualism that states "the fluent use of linguistic resources" (Yilmaz, 2019, p. 4). A rigid separation of languages does not fit this concept. Furthermore, emergent bilinguals are defined as people who are developing a new language (English, for example) and who "are at the beginning points of the bilingualism continuum" (Celic & Seltzer, 2013, p. 5).



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2.2 Difference between code-switching and translanguaging

Sometimes these terms are confused. The latter expresses an alternation between two language systems and separate linguistic codes, which means, two languages of bilinguals are two separate monolingual codes (Celic & Seltzer, 2013, p. 1); and translanguaging goes beyond language boundaries (Nagy, 2018, p. 43). This approach sees languages as a whole and not as separate entities. It is a heteroglossic viewpoint that indicates the existence of one linguistic repertoire (García & Wei, 2014, p. 120).

2.3 Definition and types of translanguaging

Translanguaging is a term that was first used in 1994 by Cen Williams in Wales in a context where Welsh and English were used for teaching and learning (Williams, 1996 cited by Lewis, Jones & Baker, 2012, p. 641). Over the years, various concepts and categories about translanguaging have been developed. Nagy (2018, p. 43) cites Garcia and Lin (2016, p. 124) and they suggest two versions of translanguaging: the "strong" and the "weak". On the one hand, the strong version states that there is a linguistic system and grammar, and language speakers choose the feature they need to interact. On the other hand, the weak version of translanguaging maintains traditional linguistic boundaries but promotes the softening of these boundaries, and allows fluidity between them.

On the pedagogical side, translanguaging keeps the two senses of language visible: the external (named language that is the medium of instruction), and the internal (the learners' linguistic repertoire) (García & Wei, 2018, p. 4). It maximizes all linguistic, cognitive, semiotic, and sociocultural resources in the construction of teachers' and learners' knowledge (Wei, 2017, p. 3). According to Licona and Gregory (2019, p. 486), the use of translanguaging as a pedagogical strategy facilitates teacher framing and student participation. Generally speaking, this approach "gives teachers and students opportunities to build on their strengths and to recognize and use a range of language practices to enhance teaching and learning" (Esquinca, Araujo, & de la Pierda, 2014, p. 168). Translanguaging helps to clarify the meaning of terms, connect students' prior knowledge to the topic at hand, and engage students in various practices (Esquinca et al., 2014, p. 173), and provides participants with affective and social advantages as well as a deep understanding of the content (Makalela, 2015a, p. 200).

In regard to the language proficiency of the speakers, one-way and two-way translanguaging distinctions can be made as well as between dependent and independent translanguaging (García & Wei, 2014, p. 48). Emergent bilinguals who lack proficiency in a second language often show a one-way translanguaging and also a dependent form. In this case, learners use their dominant language as a scaffolding device (Nagy, 2018, p. 45). According to García and Wei (2014) "there are two types of translanguaging strategies: the first one is a 'teacher-directed translanguaging' to give voice, clarity, reinforce, manage the classroom and ask questions and the second is a 'student-directed translanguaging' to participate, to elaborate ideas, to raise questions" (p. 141). Furthermore, Lewis et al. (2012) also classify translanguaging into three categories:

- (a) Classroom Translanguaging (planned and serendipitous) with a pedagogic emphasis;
- (b) Universal Translanguaging with cognitive, contextual, and cultural aspects. While Universal Translanguaging includes the classroom as one context among many, retaining "classroom translanguaging" enables a discussion about learning and teaching style and curriculum planning.
- (c) Neurolinguistic Translanguaging is a new field that researches brain activity modulations when both languages are activated and holds much for the future. (p. 650)



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Finally, there is a spontaneous translanguaging and the pedagogical one. The former refers to the reality of bilingual usage in natural contexts where boundaries between languages are fluid and constantly shifting, and the latter is a pedagogic theory and practice that refer to instructional strategies that integrate two or more languages (García, 2009 quoted by Cenoz & Gorter, 2017, p. 4). Pedagogical translanguaging serves as a linking element that closes the gap between participants with different linguistic backgrounds, and also as a scaffolding device that helps emergent bilinguals to improve their linguistic skills and abilities (Nagy, 2018, p. 47). It implies a transformation in comparison to traditional ideologies of language separation (Cenoz & Gorter, 2020, p. 11).

2.4 Translanguaging in multilingual or bilingual contexts

In this field, many investigations have been carried out. Most of them have been done in bilingual or multilingual contexts. For instance, Dahlberg (2017, p. 5) developed research in an ESL class on basic adult education. The students were free to use all of their language capacity in order to learn the target language and translanguaging was a strategy to develop supportive learning structures.

Makalela (2015a, p. 204) carried out an experimental study for one year and worked on receptive and productive skills. It showed that translanguaging strategies are effective in increasing the vocabulary pool of multilingual speakers, getting a positive schooling experience, and affirming students' identities. Furthermore, a study by Nagy (2018, p. 48) presents the outcomes in reading comprehension using translanguaging activities between English and Hungarian (L1). Translanguaging leads to a more relaxed atmosphere, where the learning process is a creative one, based on the language skills of each individual who creates and negotiates meaning.

Hungwe (2019, p. 3) conducted a study at a university in South Africa, where most students are multilingual and English is not yet adequately developed. The use of two languages shows that they can be used interchangeably and fluently by students for a thorough understanding of texts, and a monolingual classroom may not solve the problem of poor comprehension.

2.5 Translanguaging in languages in foreign contexts

In terms of foreign language translanguage studies, Adinolfi and Astruc (2017, p. 190) conducted an initial exploration of translanguage pedagogical practices within a synchronous online foreign language classroom. They observed an adult beginner Spanish course at a distance learning university in the United Kingdom. They found that translanguage practices are present and concluded by suggesting increased translanguage opportunities. Wang (2016, p. 142) analyzed classroom participants' attitudes toward language choice through a questionnaire and observation. The study found that students' and teachers' attitudes toward translanguage and their practices have demonstrated scaffolding techniques that could improve communication and teacher-student relationships.

Translanguage in foreign language classrooms has contributed to giving students a voice in negotiating meanings at different levels. Nielsen (2018) observed Spanish classes for 7 months and concludes that "translanguaging is a phenomenon that greatly influences foreign language development" (p. 53). Furthermore, Ortega (2019) used a classroom experience in Colombia and states that students felt more empowered and motivated to learn more English after using translanguaging. They used it as a tool to create social tasks. This approach has shown that it is possible to "remove barriers to learning by creating an



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enabling and inclusive environment that validates first language identities and allows students to use Spanish to create meaning" (p. 164).

In general, plurilingual pedagogies and translanguaging approaches in EFL classrooms in Latin America have been minimally explored in the academic literature (Ortega, 2019, p. 160). Also, Wang (2016) establishes that adapting translanguaging in "foreign language education requires the reconstitution of teachers' knowledge of language and language teaching" (p. 148). Finally, online context studies have been scarcely investigated so far (Adinolfi & Astruc, 2017, p. 188).

3. Methods and Materials

This study was quasi-experimental, correlational and longitudinal in which students were taught using translanguage strategies during the second unit of the 2020 - 2021 course. It had a duration of 6 weeks and two synchronous sessions of 40 minutes and two asynchronous sessions per week were conducted, except in third year of high school where one synchronous session per week and no asynchronous sessions were conducted. The data were primary and a mixed method approach (quantitative and qualitative) was used.

The participants belonged to a private school located in Calderón, a rural parish of Quito, Ecuador. Five teachers taught various subjects and one teacher was in charge of English for all grades (eighth through third high school). There were 27 students in total (each grade had 1 to 10 students), consequently, it was not possible to have a control group during the study. The sample (N = 22) did not match the population due to the constant non-attendance of students while the study was being conducted. The students were first speakers of Spanish and had a low level of English. Nine girls and 13 boys participated in this research with an average age of 14.95 years. For the application of the aforementioned approach and the use of the data obtained, the authorization of the high school principal and the informed consent of the students' parents and those over 18 years of age were requested.

Regarding translanguage, the following strategies were used: the use of cognates and false cognates (there was a class exclusively to review this topic), comparisons and contrasts of grammatical structures between the students' mother tongue and the foreign language they are learning, there were weekly vocabulary entries in both languages, translation of terms and explanation of theory, important activities, instructions or tasks using the L1. The strategies have been used in other studies and suggested by people who have used translanguaging in pedagogical settings (Celic & Seltzer, 2016, p. 16; Esquinca et al., 2014, p. 176; Dahlberg, 2017, p. 8; Palmer et al, 2014, p. 760; Pacheco & Miller, 2016, p. 536; Creese & Blackledge, 2010, p. 106; Cenoz & Groter, 2017, p. 4; Nikula & Moore, 2016, p. 239; Cummins, 2007, p. 231; Nagy, 2018, p. 49; Valdiviezo, 2019, p. 52).

The chosen skill was oral reading proficiency due to the accuracy in its measurement (quantitative data) during the online classes. To determine the oral reading proficiency, pre and post-tests were taken by students at the beginning and the end of the second unit (October - December 2020). They read a 300-word passage (these were unpracticed for students). Those passages were designed by the researcher and validated by a peer before students read them. The oral proficiency level was analyzed according to a study carried out by Makalela (2015a, p. 207) who adopted the guidelines from Shinn (1989), to determine which words were counted as correct:

- Words read correctly. These include self-corrections within 3 seconds.
- Words read incorrectly. These include the following types of errors: mispronunciation, substitutions, and omissions.



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Revista Cátedra, 4(3), pp. 57-72, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3041>

- If a student was struggling to pronounce a word or hesitated for three seconds, the student was told the word and it was counted as an error (p. 207).

At the end of each test, errors were subtracted from the total number of words students read within a minute to get the number of words correctly read. Furthermore, with the aim to take into account the students' and teacher's experiences and perceptions on the used approach, a survey with 10 questions was applied at the end of the second unit.

The survey was designed by the researcher in Google Forms. It was anonymous and questions were close-ended so as to reflect on their experiences. It was also validated before students took it by two peers (one expert in Linguistics and a B2 proficient expert) to determine the correctness of the vocabulary used. Classes and pre and post-tests were recorded by using Zoom application and videos served to analyze the oral reading proficiency in students.

The scores of the oral reading achievement were analyzed using descriptive statistical approaches to gauge measures of central tendencies and dispersion. A paired t-test was calculated on the pre and post-test means to assess statistical significance levels that were pitched at 0.05 (Makalela, 2015a, p. 207; Makalela, 2015b, p. 20) by using the SPSS program. Answers from the surveys were analyzed with a descriptive and qualitative approach by using Excel. An inter-rate reliability coefficient was calculated and the scores obtained by two observers regarding the oral reading proficiency were compared with a Pearson correlation test.

4. Results

After analyzing the data, the information was compared and some tests were used to get the results. The first scores presented are related to the reliability of the study, specifically to the data concerning the students' oral reading proficiency. Table 1 shows a Pearson Correlation test which values go from 0 to 1. It presents the number of students (22) who participated in the research. The total number of correct words per student analyzed by the two observers in the pre and post-tests was compared in order to get the reliability.

		Obs1Pre	Obs2Pre	Obs1Pos	Obs2Pos
Obs1Pre/ Pos	Pearson Correlation	1	.990**	1	.989**
	Sig. (2-tailed)		.000		.000
	N	22	22	22	22
Obs2Pre/ Pos	Pearson Correlation	.990**	1	.989**	1
	Sig. (2-tailed)	.000		.000	
	N	22	22	22	22

** . Correlation is significant at the 0.01 level (2-tailed).

Table 1. Correlation Pre-test and Post-test

The analyzed data have a normal distribution ($p > 0.05$). It can be observed that data from both observers in the pre-test and post-test have a high correlation ($r = 0.99$; $p < 0.001$ and



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$r = 0.989$; $p < 0.001$ respectively). It means the data obtained seems to be considerably reliable. Regarding the oral reading proficiency, in table 2, the following data can be found: the mean of the increased words between the pre and post-test, the standard deviation, and the significance of this difference.

		Mean	Paired Differences				t	d	Sig. (2-tailed)
			Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pa	Total	-	18.881	4.025	-	-	-	2	.000
ir	Pre	21.681	55	56	30.053	13.310	5.3	1	
1	Total	82			43	21	86		
	Pos								

Table 2. Paired Samples Test

The total data in the pre and post-tests were normally distributed ($p = 0.20$). Based on this, a T-test was carried out and results indicated the mean of words read correctly from the total of students ($N = 22$) (Mean = 221.55 in the pre-test and Mean = 243.22 in the post-test) with a standard deviation of 42.20 and 30.20 respectively. There was a difference statistically significant ($p > 0.001$) after comparing those data (table 2). The mean of words read correctly that increased in the post-test ($M = 21.68$; $SD = 18.88$) could be observed.

In Figure 1 it can be observed the frequency of the students' responses in relation to the survey about translanguaging. There were 10 Likert-scale questions and 9 of the 10 questions were related to the use of translanguaging and how students felt when applying it. One question (the second one) was about the exclusive use of English during classes.

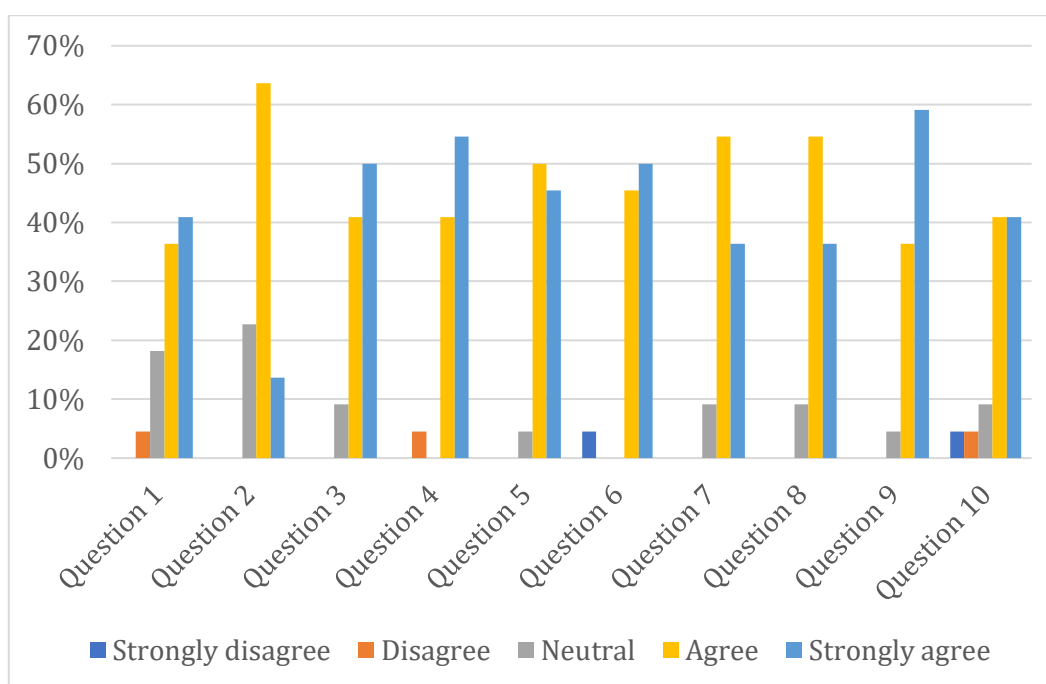


Figure 1. Students' survey



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Revista Cátedra, 4(3), pp. 57-72, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3041>

Most students agreed and strongly agreed with the usefulness of translinguaging and its positive use. The mean of 8 questions is 4 (agree) and the mean of 2 questions is 5 (strongly agree). This showed a contradiction since the second question was related to the exclusive use of English during classes. This information will be discussed in the next section.

Figure 2, on the other hand, shows the English teacher's answers regarding the survey. Similar to the students' survey, 8 questions were related to translinguaging, specifically her perception about students' motivation, participation, and confidence, and how useful she considers translinguaging was during her English classes. The first 2 questions were dichotomic (yes/no) concerning the knowledge of the term "translinguaging" and its use in her foreign language class.

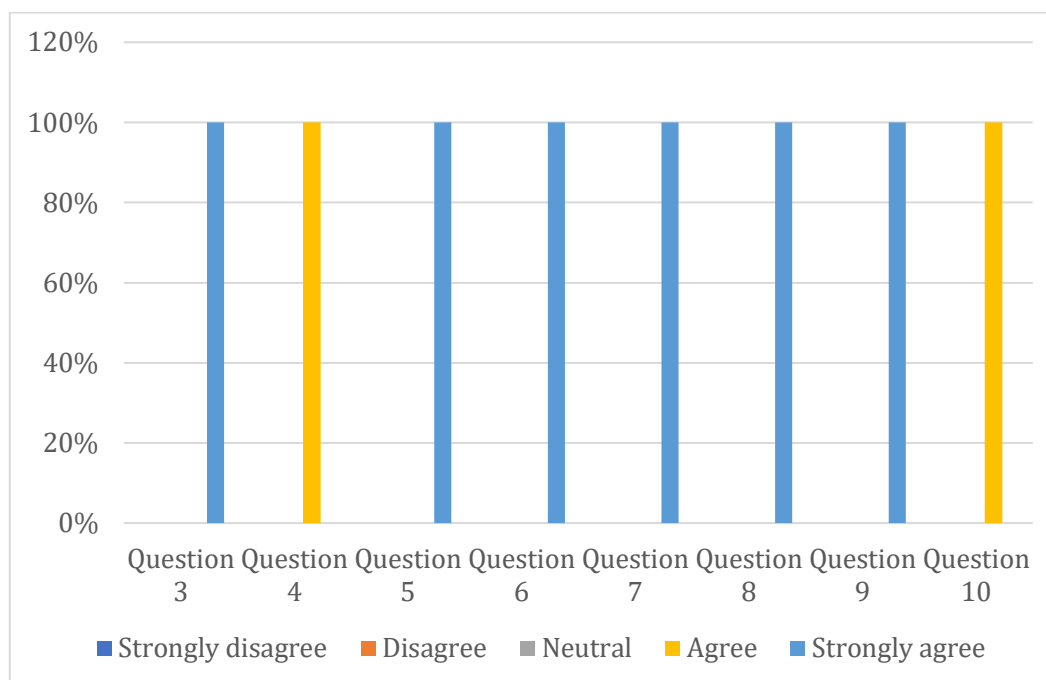


Figure 2. Teacher's survey

Regarding the teacher's survey, she states that she does know and uses translinguaging in her classes (2 first questions, not shown in figure 2). Eight questions were about how the teacher perceived her students when applying translinguaging. Six questions show the teacher's total agreement about translinguaging and 2 questions show an agreement about this approach.

5. Discussion

The results showed a significant improvement in students' oral reading proficiency, which probably indicates the usefulness of applying translanguage during English classes in a foreign language context. Makalela (2015a, p. 204) conducted a similar study in which there was a control and an experimental group, but the difference in students' oral reading proficiency after applying translanguage was not statistically significant. Consequently, the author stated that these results were inconclusive. Despite the non-existence of other studies based on translingualism and oral reading proficiency (in Ecuador and other countries), some research focused on reading ability. For example, a study conducted at a university in Azuay-Ecuador found a decrease in this ability after the application of



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translanguage for one month. The author stated that it could be due to the "attention and/or immersion of the student during the reading exercises or because of the reading itself that could have been more challenging" (Valdiviezo, 2019, p. 105). However, this study shows opposite results indicating the probable benefits of the approach used.

In addition, Garcia (2020) determined that the use of translanguage is a resource for reading in depth about history and other content as "the class begins to understand that how they use language and what they know is the most important thing to make sense of reading any text" (p. 561). In addition, Hungwe (2019) used translanguage during college classes and students were able to understand and convey the meaning of texts by allowing for language fluency, so the author recommended "employing a translanguage strategy in their classrooms to help students understand texts" (p. 8). According to what students reported in this study, they also strongly agree with a better understanding of content when translanguage is used (see Figure 1, question 6).

Another study that can corroborate this result when using translanguage to teach reading comprehension in elementary school and to teach an indigenous language in an institution of higher education is one that used various strategies such as alternating languages in vocabulary induction exercises, reading the text silently, aloud, etc., and showed a gain in reading comprehension concluding that translanguage is a pedagogical strategy that can deepen content comprehension (Makalela, 2015b, p. 23). Carroll and Sambolin (2016, p. 253) conducted a study focused on vocabulary and grammar building strategies, with a secondary focus on reading and writing for academic purposes. The translanguage approach was implemented to increase student engagement and provide a meaningful literacy experience. Its use had several benefits, one being that it allowed students to focus on demonstrating their reading comprehension by not limiting their responses as a result of their language proficiency and made "instruction more meaningful for students" (Carroll & Sambolin, 2016, p. 259).

There is also a significant number of studies whose results show the positive effect of using this approach in pedagogical contexts. For example, a study that emphasized the writing skill shows that "translanguaging probably creates more engaged reading than monolingual writing" (Canagarajah, 2011, p. 16). On the other hand, a science classroom with emergent bilinguals used translanguaging with different purposes. It helped students engage in meaning-making, and it resulted in greater opportunities to access the scientific content (Infante & Licona, 2018, p. 10). However, one of the studies which have been carried out in foreign language classrooms states that students do not have much exposure to English outside the school, therefore, they do not have opportunities to practice English. In this scenario, the teacher used translanguaging as a scaffold device so that students can make meaning (Ortega, 2019, p. 165). The same happens in this educational context, where students receive limited English classes (40 or 80 minutes per week), and additionally, they have a low English level; thus, it is challenging to manage an English-only method. That is why translanguaging could be seen as a useful approach not only to teach content but also to engage students in their learning.

Regarding the translanguaging strategies applied, Celic and Seltzer (2016, p. 2) express that cognates tables are useful tools for emergent bilinguals because these words illustrate linguistic connections through different languages. About comparisons of grammar, Galante et al., (2020) explain "students can reflect on whether the same grammatical form exists in their languages and how similar or different it is" (p.983). Likewise, Celic and Seltzer (2016, p. 5) state that it is important to make learners aware of how syntax is similar to or different from their native language so that the use of the target language can be more transparent.



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Revista Cátedra, 4(3), pp. 57-72, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3041>

Instead of teaching them exclusively English, using both languages could help make connections, transfer understanding, and notice important differences. In addition, using prior knowledge and languages that learners are already proficient in can be a powerful tool for developing a language and this is considered an advantage (Cummins, 2007, p. 234; Galante et al., 2020, p. 993).

Adopting a translanguage pedagogy allows to deepen the explanations to the students of some specific topics (García & Wei, 2014, p. 65), it allows "to make language teaching more flexible and to move away the stress that EFL teachers may experience when thinking rigidly about the exclusive use of English in the classroom" (Ortega, 2019, p. 160). In this study, the previous advantages exposed by different authors could be confirmed, since according to the perceptions and experiences of the students and the teacher, they agree and strongly agree with the usefulness of translanguage to compare and contrast the structures of both languages, and to clarify various explanations, contents and meanings (see Figure 1 and 2, questions 7, 8 and 9).

The rest of the results of the surveys applied to the students and the teacher show that the translanguage helped the students to feel motivated, to be more confident, to participate more and to feel that their knowledge increased (see Figure 1, questions 3, 4, 5 and 10). For the teacher, the situation was similar. She felt that the students were more motivated, participated more, understood more and felt more comfortable during the lessons when their mother tongue was taken into account (see Figure 2, questions 4, 5, 6 and 10). There are similar results regarding students' perceptions and attitudes towards translanguage in the study conducted by Valdiviezo (2019, p. 40) where the majority of students (80 %) are in favor of the use of the mother tongue during English classes as they use it for various purposes.

On the question related to the exclusive use of English and the contradiction found, an oral clarification was made to the students and most of them (20) said that they had misunderstood the question and that they agreed with the positive use of the translanguage. This occurred despite the validation of the questions. Therefore, the results confirm the quantitative data on the possible usefulness of translanguage in students' oral reading proficiency and during English lessons in general. However, contrary attitudes may exist when translanguage is used during classes, e.g., Fallas and Dillard-Paltrineri (2015) conducted a search in a foreign language context. It found that most participants believed that translanguage is an ineffective approach, as it "creates a habit of laziness on the part of learners, and consists only of translating back and forth from L1 to L2" (p. 324). However, they also acknowledged that mixing L1 and L2 is a natural process.

As Yilmaz (2019) expresses, translanguage enables "teachers to increase learners' comprehension and engagement by creating rich developmental zones" (p. 9). Furthermore, the use of translanguage as a strategy produces "positive experiences that would not have been possible through traditional language teaching approaches" (Makalela, 2015b, p. 21). This is also confirmed by Makalela (2015a, p. 215), who found that breaking down the boundaries between languages provides learners with positive school experience. All in all, it can be expressed that translanguaging could be a useful tool that can be used in a foreign language context since it can help to improve students' skills, and students and a teacher had positive experiences when using it in classes. Students are not empty vessels, they are not learning from scratch, and when translanguaging is used with a purpose, it likely has beneficial effects on students' learning and experiences. As stated by Cenoz & Gorter (2020), "the key idea is that there is no replacement of one language by another. Pedagogical translanguaging aims at the development of school languages and academic content" (p. 8).



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The purpose of pedagogic translanguaging is to serve as a scaffold device to “help students during a transition phase while they are adding and appropriating the necessary features that are required to complete the academic task in one or more named languages” (García & Wei, 2018, p. 4). Additionally, some authors declare that “the alternation, integration and flexible use of languages have proven beneficial for language learning, especially in the initial stages” (Portolés & Martí, 2016, p. 66; García & Wei, 2014, p. 36). “Translanguaging is practised as a co-constructed strategy to empower, and shakes the monoglossic stereotype of foreign language teaching” (Wang, 2016, p. 148). It facilitates comprehension and allows emergent bilinguals to tackle challenging academic tasks in a language they are yet developing (Celic & Seltzer, 2013, p. 5).

Nevertheless, one of the limitations of this study was time since it was carried out during one unit, and in the ideal situation, a whole school year would be studied as other studies have done like in Makalela’s study (2015a, p. 205). Another limitation was the absence of a control group and the impossibility to take into account different variables that could have also influenced the results. The online classes represent also a limitation since it is the first time this modality is being carried out in Ecuadorian educational institutions because of the Covid-19 pandemic.

6. Conclusions

After determining the reliability of the obtained data regarding the students’ oral reading proficiency, it is liable translanguaging improved this skill in students after applying it for 6 weeks. Furthermore, learners and the teacher who participated in this study had positive experiences and perceptions after the application of this approach. As stated by Wei (2017), translanguaging “is powerful and transformative when we are aware that what we do is enabling and empowering our students. With this awareness, we can then begin to do it consciously, purposefully, as an effective pedagogical tool for learning” (p.3). Translanguaging can serve as a useful tool during classes because it not only focuses on learning content, but also takes into consideration the students’ prior knowledge, values it, and uses it to learn a new language.

Besides, the approach teachers decide to apply in classes should be strongly influenced by the specific contexts, not only of the educational setting and institution but also on students’ contexts and their knowledge. There is not an ideal strategy to teach, however, several methodologies have been tested and they have proved their efficacy, one of them could be translanguaging since, as stated before, it does not harm the language skills when learning a language if it is implemented correctly (Nagy, 2018, p. 50).

Other studies could incorporate a control group and an experimental group to obtain more valid results on the usefulness of translanguaging and take into account variables such as the economic level of the students, teacher training or the geographic location of the center, which can influence the results. To obtain external validity, more participants should be included in the study in order to generalize the results. Also, more research could focus on different skills, as “translanguaging can be implemented in a wide range of activities for practicing various language skills such as speaking, writing, reading, or listening” (Nagy, 2018, p. 47). There should be more studies on translanguaging that focus on foreign language classrooms.



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Revista Cátedra, 4(3), pp. 57-72, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3041>

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Revista Cátedra, 4(3), pp. 57-72, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3041>



REVISTA

CÁTEDRA

Autorregulación del aprendizaje en estudiantes universitarios: un estudio descriptivo

Self-regulation of learning in university students: A descriptive study

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(Received on: 09/06/2021; Accepted on: 15/06/2021/Final version received on: 15/08/2021)

Suggested citation: Burbano-Larrea, P., Basantes-Vásquez, M. y Ruiz-Lapuerta, I. (2021). Self-regulation of learning in university students: A descriptive study. *Revista Cátedra*, 4(3), 73-90.

Resumen

Entre las capacidades fundamentales con las que debe contar el ser humano para alcanzar un desarrollo exitoso a nivel personal, académico y profesional se encuentra la autorregulación del aprendizaje. Gestionar los recursos y estrategias en los procesos de construcción del conocimiento resulta indispensable. Solo de esa manera se puede planificar, ejecutar, monitorear y evaluar los desempeños y los resultados formativos orientados a las metas. El objetivo del presente trabajo fue determinar la autorregulación del aprendizaje en los estudiantes de la Facultad de Filosofía, Letras y Ciencias de la



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Revista Cátedra, 4(3), pp. 73-90, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3048>

Educación, de la Universidad Central del Ecuador. Esta investigación se desarrolló desde un enfoque cuantitativo y un nivel descriptivo, siendo un estudio de tipo trasversal. Los hallazgos encontrados permitieron concluir que dicho grupo de investigación presentan en su mayoría niveles bajos y medio bajos de autorregulación general. La autorregulación del aprendizaje presenta los siguientes factores: planificación, gestión de la cognición, gestión de la motivación, evaluación de la comprensión y gestión del contexto. En cada uno de ellos se pudo identificar niveles: bajos y medios bajos entre los estudiantes. Se encontraron resultados similares en el análisis por sexo y por nivel de formación. Al contrastar estos resultados con otros estudios se observó coincidencias y contradicciones. Lo cual señala la necesidad de profundizar la investigación de esta variable. Se sugiere generar innovaciones curriculares en la educación universitaria que permitan el desarrollo de la autorregulación de los aprendizajes a lo largo de su formación profesional.

Palabras clave

Autorregulación del aprendizaje, gestión de la cognición, gestión del contexto, estudiantes universitarios, evaluación de la comprensión, planificación, gestión de la motivación.

Abstract

Among the fundamental capabilities that human beings must have in order to achieve a successful personal, academic and professional development is self-regulation of learning. It is essential to manage resources and strategies in the knowledge construction processes. This is the only way to plan, execute, monitor and evaluate performance and goal-oriented training results. The objective of the present work was to determine the self-regulation of learning in students of the Faculty of Philosophy, Letters and Educational Sciences of the Universidad Central del Ecuador. This research was developed from a quantitative approach and a descriptive level, being a cross-sectional study. The findings allowed us to conclude that this research group presents mostly low and medium-low levels of general self-regulation. Self-regulation of learning presents the following factors: planning, cognition management, motivation management, comprehension evaluation and context management. In each of them it was possible to identify low and medium-low levels among students. Similar results were found in the analysis by gender and by level of education. When contrasting these results with other studies, coincidences and contradictions were observed. This points to the need for further research on this variable. It is suggested to generate curricular innovations in university education that allow the development of self-regulation of learning throughout their professional training.

Keywords

Self-regulation of learning, cognitive management, context management, university students, comprehension assessment, planning, motivation management.

1. Introduction

Undoubtedly, in any academic process the main protagonist is and should be the student. The construction and acquisition of knowledge by the learner is the *raison d'être* of education. Hence the importance of studying the variables involved in the achievement of learning goals. In higher or university education, research interest is focused on the same aspects. Even more, considering the importance of achieving a solid learning that will be reflected in the professional practice. "The current challenges demanded to training in higher education require placing the focus on the evidence of learning achievement in students" (García-Gajardo, Fonseca-Grandón & Concha-Gfell, 2015, p. 2).



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Rosário and collaborators (2014, pp. 782-783) point out that differences in student learning outcomes cannot be attributed to intelligence. Cognitive, motivational and behavioral factors are identified. It is increasingly clear that the student has a fundamental role in his or her own learning process. The study of self-regulation in relation to other variables is fundamental to understand the learning phenomenon. In this context and as one of the key elements involved in the student's educational process is self-regulation of learning.

This construct is defined as the set of strategies that the subject possesses that allow him/her to plan, monitor and evaluate his/her learning process. The present study aims to establish self-regulation of learning in higher education students.

The academic performance and the consolidation of learning of students in teacher training is a constant concern of higher education institutions. This motivates the investigation of the dimensions of self-regulation of learning, and to describe the levels that students have in each of them.

The theory indicates that self-regulation of learning is an important mechanism that makes it possible to anticipate academic success among students. As mentioned by Hernández-Barrios and Camargo-Urbe (2017) "its relevance lies in the fact that it constitutes one of the best predictor variables of academic performance" (p. 147). Students who have high levels in the use of various self-regulation strategies obtain better results. Gaeta-González (2006) point out that "students being active participants in their own learning and being able to learn in an autonomous and self-regulated way is considered a fundamental aspect of optimal learning" (p. 2).

Another important motivation of both authorities and teachers is to offer a comprehensive training that equips future professionals not only with knowledge but also with multiple competencies. It is important to consider "the demands of the national and international context to train human resources that are prepared to face the new needs of the labor market and the globalized and multicultural context of our societies, imply a comprehensive education" (Luy-Montejo, 2019, p. 354). Among them, the ability to manage their learning processes will be key to success in the workplace, in an environment that demands to be permanently updated. Having self-regulation of learning is evidence of discipline and control of behavior and cognition, this is characteristic of responsible and committed professionals.

Addressing this research topic allows enriching scientific knowledge based on evidence in university students. Identifying what level of self-regulation of learning do students have, are there differences in this variable between men and women, and what levels do the five factors of self-regulation of learning present, will allow orienting efforts to strengthen the training plans of future teachers. As stated by Hernández-Barrios and Camargo-Urbe (2017) "this information is of central importance when designing and implementing plans, programs and actions in training scenarios that contribute to the advancement of students in their academic studies" (p. 156).

There is little information on self-regulation in higher education in the Ecuadorian context. The Pandemic caused by COVID-19, with the consequent confinement and the lack of instruments adapted to the Ecuadorian context, are identified as obstacles in this study. These challenges were overcome with institutional and participant support.

This article is structured as follows: in section 2, the literature review; that is, the contents related to self-regulation of learning. Section 3 refers to the methods and materials used in the present research, in addition, it was contrasted with research conducted by other



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authors. Section 4 details the findings found after the application of the respective instrument. Section 5 details the discussion of results and section 6 describes the pertinent conclusions.

2. Literature review

2.1 The apprenticeship

Learning has been defined from different theories, for example from Behaviorism "learning is understood as those changes that occur in the behavior of people in response to the environment" (Prados, Reyna and Rey, 2014, p. 21). Thus, from social constructivism, it is considered as "the internalization of knowledge or skills through experience, exercise or study, and constitutes an essential process to integrate into society from the first years of life" (Catuara, 2018, p. 73).

Learning is a permanent process in human beings, it does not develop only in childhood, but is present throughout the life cycle. In the evolutionary course, the person makes important changes that allow him/her to integrate into the context in which he/she develops.

2.2 Self-regulation

Self-regulation is the capacity of an individual to control and manage his or her own behavior. Thus, it "implies the modulation of thought, motivation, attention and behavior, through the deliberate or automated use of specific mechanisms and support strategies" (González, 2001, p. 1). Thus, it enables the person to guide his or her goal-oriented actions over time and in different contexts.

The person, at each moment of his life, plans, executes and evaluates actions that help him to fulfill certain objectives in an efficient manner. This process is known as self-regulation.

Self-regulation is, according to Panadero and Alonso-Tapia (2014) "the control that a person executes over his or her thoughts, actions, emotions and motivation through personal strategies to achieve an established learning objective" (p. 451). In other words, all human beings can perform actions at the cognitive, attitudinal and behavioral levels to achieve the objectives they have set themselves.

2.3 Self-regulation of learning

The educational action assumes the educability of the student, his teaching and guidance towards the acquisition of skills and competencies that guarantee his adequate development, personal and professional self-realization. In this regard, López (1992) indicates that "it is important to provide the student with strategies and methods that develop self-regulation and self-control" (p. 111). The development of such capacities provides coherence between behavior and thought; that is, the person has the faculties that allow him to reflect on his actions, and in the event of requiring improvement, he has the necessary actions to correct it.

The term self-regulation of learning dates back to "the early sixties" (González, 2001, p. 4). It emerges through questions about the acquisition, appropriation of knowledge, and the autonomy that students have in their learning process. According to Kauffman et. al. (2006), it has its "beginnings in cognitive psychology, whose origin goes back to the social cognitive learning theory proposed by Bandura, assigns relevance to Reciprocal Determinism" suggesting that learning is the result of personal, environmental and behavioral factors (p. 1063).



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Kaufmann et. al (2006) points out "in 1980 Albert Bandura, in his Social Learning Theory, introduces the concept of self-regulated learning, which is applied in all human activities, but specifically in the educational context" (p. 1063). The author supports Bandura's position and considers that self-regulation is a socially influenced process. It is from several investigations that the current conceptions of self-regulation in learning emerge.

González points out that Bandura's initial interest focused on self-control, understood as the capacity to exercise mastery over one's own actions in the absence of immediate external limitations. Later the author introduced the term self-regulation. This implied the establishment of a prior goal, the presence of self-evaluation and the administration of self-reinforcement, in addition to the execution of the learned response. Finally, he highlighted the role of self-efficacy defined as the self-conviction that one can successfully execute the behavior required to produce certain results. (González, 2011, pp. 3-4).

Zimmerman and Martinez-Pons (1998) expressed that self-regulation of learning derives from the metacognitive, motivated and behaviorally active activity of students as participants in their own learning processes. These authors pointed out that:

In terms of metacognitive processes, self-regulated learners plan and organize their learning activities and self-evaluate themselves during this process. From a motivational point of view, they perceive themselves as self-efficacious, autonomous and intrinsically motivated. From a behavioral perspective, they select, structure, and create social and physical environments that enhance their learning process. (p. 284).

That is, self-regulated students make decisions and use the necessary methods to achieve the learning objectives that are established. When students are motivated, they are effective in accomplishing a task until they reach the goals, they have set for themselves.

From a broad perspective, self-regulation is the process that allows developing strategies for the achievement of goals or tasks, in fact, Zimmerman (2008), considers that "it is a proactive process that students use to acquire academic skills, such as setting goals, selecting and implementing strategies and self-monitoring one's effectiveness" (p. 166). Thus, it is affirmed that the learner develops cognitive processes to achieve academic success.

Castro-Pereira points out that the capacity for self-regulation is not innate, it must be developed. The subject must be empowered with means that allow the identification of maturity, motivation, psycho-social factors or intrapersonal and interpersonal processes that influence his or her behavior. (Castro-Pereira, 1989, pp. 92-93). A self-regulated student who participates in his own learning is considered a competent student.

Certainly, the subject of education is in a constant interaction with the context and information that surrounds him. Hence, Pintrich assumes that:

Learners are assumed to actively construct their own meanings, goals, and strategies from the information available in the external environment as well as information in their own minds (the internal environment). Learners are not just passive recipients of information from teachers, parents, or other adults, but rather active, constructive meaning makers as they go about learning. [Se supone que los alumnos construyen activamente sus propios significados, objetivos y estrategias a partir de la información disponible en el entorno externo, así como de la



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información en sus propias mentes (el entorno interno). Los alumnos no son meros receptores pasivos de la información de los profesores, los padres u otros adultos, sino que son creadores activos y constructivos de significados a medida que van aprendiendo] (Pintrich, 2000, p. 452).

Thus, self-regulation of learning is an active process, in which "the subjects establish the objectives that guide their learning, trying to monitor, regulate and control their cognition, motivation and behavior with the intention of achieving them" (Rosário, et al, 2010, p. 829). (Rosário, et al, 2010, p. 829). Biggs points out that students learn more easily when they are influenced by what they want to learn. The motives for performing a particular learning task determine the strategies to be used, and these determine the learning outcomes (Biggs, 1993, pp. 5-8).

In this regard, Boekaerts and Corno state that "there are no direct linkages between achievement and personal or contextual characteristics; achievement effects are mediated by the self-regulatory activities that students engage in to reach learning and performance goals". [There are no direct linkages between achievement and personal or contextual characteristics; achievement effects are mediated by the self-regulatory activities that students engage in to reach learning and performance goals".] (Boekaerts and Corno, 2005, p. 201). So, learners seek to complete a task by planning what strategies they will use.

However, the learner is not a born regulator of their learning or an expert in strategies so their academic success could be thwarted. "What identifies an individual as a self-regulator of his or her learning is not so much the isolated use of learning strategies, but his or her personal initiative, perseverance on task, and the competencies exhibited, regardless of the learning context." (Bandura, et al, 2001, p. 187).

Self-regulated academic learning emerged, according to Zimmerman (2001) in the mid-1980s. With the purpose of answering the question of how students come to master their own learning processes. Self-regulation of learning refers to the "self-directive process by which students transform their mental abilities into academic skills related to learning tasks" (p. 12).

Zimmerman and Schunk refer to the process by which students personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward achieving learning goals (Zimmerman & Schunk, 2011, p. 11). By setting learning goals, students create a cyclical process of self-direction by which they monitor the effectiveness of strategies and adapt their work according to their outcomes.

For the purposes of this research, self-regulation of learning is understood as a cognitive process. It facilitates the acquisition of knowledge through the intentional application of metacognitive strategies, the purpose of which is to form autonomous and motivated students in their learning process.

Panadero and Alonso-Tapia emphasize the importance of the phases of self-regulation of learning proposed by Zimmerman. These phases are planning, execution and self-reflection. (Panadero and Alonso-Tapia, 2014, pp. 451-452).

Zimmerman and Schunk point out that self-regulated learning is an effective means to improve student performance, in addition to the fact that students self-regulate in processes that consolidate their learning effectively. Thus, it is assumed that students:

Implement effective learning strategies such as organizing material, taking notes, or reviewing;



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They set clear learning objectives;
 Monitor and evaluate their learning progress in relation to established objectives;
 They change the environments where they study so that they provide a favorable and productive environment for learning;
 Are able to maintain a sense of self-efficacy for learning;
 Seek help or assistance when needed;
 They exert effort and persistence during the learning process;
 Adjust their strategies when necessary; and
 Set new goals when they achieve any of them. (Zimmerman and Schunk, 2011, pp. 10-12).

In this review it can be seen that a critical aspect of self-regulated learning is that students have options available to make decisions about the task. Tasks require that part of their components be regulated externally (by the teacher or another more advanced student) and others by themselves. Similarly, Pintrich postulates a socio-cognitive perspective that proposes a structure of self-regulation of learning, which he systematizes in four phases (planning, supervision, review and assessment) and, at the same time, in five areas (cognitive, affective-motivational, behavioral and contextual). Helping the integration of the sub-processes involved in self-regulation that interrelate with each other and are executed differentially according to the four moments of the learning process (Pintrich, 2000, pp. 451-453).

The phases mentioned, represent for Pintrich a general sequence, but according to Cruz, et al. (2017), he states that "they do not necessarily occur in that order, but such phases can manifest themselves dynamically or simultaneously" (p. 1). The different models of learning self-regulation propose different assessment tools on learning self-regulation, one of them the ARATEX-R. Which aims to determine the "general strategies of self-regulation, the questionnaire is focused on reading texts, one of the most frequent activities in the life of university students." (Nuñez et. al, 2015, p. 10). The instrument encompasses first-order factors; in charge of addressing the intrinsic and extrinsic of the person.

The ARATEX-R presents five factors of self-regulation of learning: 1) management of planning, 2) management of cognition, 3) management of motivation, 4) assessment of understanding, and 5) management of context. Although there are different models to explain and conceptualize this process, all of them have similar features and characteristics, the factors presented below keep the substance of the postulates expressed by Pintrich and Zimmerman.

The first factor, planning management, according to Pintrich, "establishes the goals, as well as the activation of perceptions and knowledge of the task and the context of the self in relation to the task" (Pintrich, 2000, p. 3). The second factor cognition management or monitoring refers to various "monitoring processes that represent metacognitive awareness of different aspects of the self or task and context" (Pintrich, 2000, p. 3). That is, this factor seeks to have higher cognitive processes arranged in operation for a better outcome in task performance.

The third factor motivation management or control-regulation according to Pintrich alludes that the subject must make efforts to control and regulate different aspects of the self or the task and the context. Zimmerman includes the motivational factor within the planning stage. Although this factor is found in different stages, the authors agree on the importance of the subject's motivation for the achievement of the objectives proposed at the beginning of the task.



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Finally, factors four and five, called: evaluation of understanding and context management, are immersed in the reaction and reflection stage according to Pintrich and self-reflection postulated by Zimmerman. These deal with the "various types of reactions and reflections on the self and the task or context." (Pintrich, 2000, p.3) in these the learner must analyze the results obtained and the possible improvements he/she can make in the future in case he/she does not achieve his/her initial goal.

3. Methods and materials

This study was framed within a quantitative research approach, considering that both the ARATEX-R data collection instrument presents the results in numerical values. The data were processed and analyzed using statistical procedures. The sampling technique was intended to generalize the results to the entire population of students of the Faculty of Philosophy, Letters and Educational Sciences of the Universidad Central del Ecuador.

The level of this research corresponded to the descriptive level, presenting the general level of self-regulation of learning, the levels in each of the five factors of this variable, as well as the distribution by sex and by training unit. The results were presented through frequencies and percentages, comparing them with the findings of other studies. The study was of a cross-sectional type, in this case the application of the instrument was carried out between June and July 2020.

The study population corresponded to 4199 students of the presential modality legally enrolled between the first and ninth semester of ten careers of the Philosophy Faculty of the Universidad Central del Ecuador. By means of simple random probability sampling, giving the possibility of participation to all elements of the population, reducing the intervention of extraneous variables that could affect the results.

The corresponding formula was applied and the execution of the operations indicated in equation 1, with a 5% error rate and 95% reliability, resulted in the need for 352 participants. Considering the quarantine situation caused by the health crisis caused by Covid-19, the instrument was applied virtually, which resulted in a significant increase in the final number of participants. After filtering the data and stratification analysis, in order to maintain a constant distribution of results by race, sex and training unit. Finally, we worked with a participant sample of 1576 students, who agreed to give the corresponding informed consent.

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

Ecuación 1

Where:

K: Corresponds to the 95% confidence level, 1.96.

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

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

e: the acceptable error 5%.

N: is the size of the population or universe, 4199.



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Revista Cátedra, 4(3), pp. 73-90, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3048>

The technique used was the survey through the application of the ARATEX-R questionnaire, this instrument presents 20 items that allow establishing 5 factors of self-regulation of learning and a general score of this variable. The instrument was redesigned digitally and its application was carried out through the Google forms tool, sending the link to the students' institutional e-mails. To establish the reliability of this instrument, a pilot study was carried out and the results were subjected to Cronbach's alpha statistic, from which a score of 0.931 was obtained, indicating high reliability.

The results obtained were automatically tabulated in the same computer tool and then exported to an Excel spreadsheet. After an initial debugging, the required statistical analyses were finally performed in SPSS.

Considering that the asymmetry coefficient where the values in all cases are lower and distant from zero. And the differences between the mean, mode and median are greater, the distribution does not conform to normality. Consequently, it was not possible to categorize the scores by z values, generating cut-off points based on standard deviations.

The direct scores were transformed into percentiles, and five cut-off points were determined in the distribution of each of the factors. The following levels were established: low, medium-low, medium, medium-high and high, in four of the factors of the variable (planning, cognition management, motivation management and comprehension assessment), as well as in the general score of the variable. In the context management factor, due to the characteristics of the distribution of results, it was only possible to generate three levels: low, medium and high.

4. Results

On the self-regulation of learning in general. It was found that 27.0 %, equivalent to 425 students are located in the low level. 20.4 %, that is, 321 students at the medium-low level. 29.8%, corresponding to 470 students at the medium level. 14.8%, or 233 students at the medium-high level. And only 8.1% or 127 students are in the high level. Most of the students do not have a set of adequately developed strategies that allow them to plan, monitor and evaluate their training processes for the achievement of academic goals. Evidencing limitations in the motivation in the achievement of tasks and management of the elements of the learning context.

The results in the levels of self-regulation of learning by sex. It was found among women that 26.7%, equivalent to 278 students are located in the low level. 20.6 %, that is, 214 students at the medium-low level. 29.7%, corresponding to 309 students at the medium level. 14.8%, that is, 154 students at the upper middle level. And only 8.3% or 86 students are in the high level. This gives a total of 1041 women.

Among the men, 27.5%, equivalent to 147 students, were found to be at the low level. 20 %, that is 107 students in the medium-low level. 30.1%, corresponding to 161 students at the medium level. 14.8%, or 79 students at the medium-high level. And only 7.7% or 41 students are in the high level. This gives a total of 535 men. There is no difference in the results of males and females among the participating students in relation to the general group results.

Table 1 presents the results of self-regulation of learning by training units of the education careers. The basic unit is made up of students between the first and third semesters, where 46% of them present low or medium-low levels. The professional unit is made up of students between the fourth and eighth semesters, in which 48% of the participants are between low and medium-low levels. Ninth semester students are part of the degree unit,



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where 49 % are located in the low and medium-low levels. These findings show coincidence in that the majority of the sample is located at this level, regardless of the training unit to which they belong.

LEVEL	BASIC		PROFESSIONAL		QUALIFICATION	
	fi	hi%	fi	hi%	fi	hi%
Low	155	25	212	28	58	30
Medium	128	21	157	20	36	19
Low	197	32	227	30	46	24
Medium	89	14	115	15	29	15
High	46	7	56	7	25	13
Total	615	100	767	100	194	100

Table 1. Level of Self-Regulation of Learning by Training Unit. ARATEX-R Questionnaire

In relation to planning as a factor of self-regulation of learning, Table 2 shows that 20.9% present levels: medium high and high. Observing skills of establishing objectives and structuring a plan of action to achieve the learning results and the acquisition of knowledge in the different subjects in their training process. 32.7 % of the participants present medium level in the planning factor of the studied variable. 46.3 % are grouped between the medium-low and low levels, showing that they have limited skills in organizing sequences of actions and procedures that allow them to achieve specific learning objectives.

LEVEL	fi	hi %
Low	492	31.2
Medium Low	238	15.1
Medium	516	32.7
Medium High	169	10.7
High	161	10.2
Total	1576	100.0

Table 2. Level of Planning. ARATEX-R Questionnaire

Regarding the management of cognition, as shown in Table 3, 28.3% of the students obtained levels between medium-high and high. Where the use of repetition strategies, elaboration and organization of information to achieve learning is observed. The 36.4 % are located between low and medium-low levels. This allows inferring deficiencies in the use of cognitive strategies, relating new knowledge with previous knowledge. As well as metacognition guiding in a conscious way the decision making in their study processes in order to encode, store, relate and evoke information.



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LEVEL	fi	hi %
Low	402	25.5
Medium Low	171	10.9
Medium	558	35.4
Medium High	129	8.2
High	316	20.1
Total	1576	100.0

Table 3. Level of Cognition Management. ARATEX-R Questionnaire

In reference to motivation management, the findings presented in Table 4 indicate that 21.6% of the student's present levels between medium high and high. Showing interest, expectations and satisfaction both in the learning itself and in the academic process and products. 53.2 % are between low and medium-low levels, showing deficiency in their intrinsic and extrinsic motivation.

LEVEL	fi	hi %
Low	499	31.7
Medium Low	339	21.5
Medium	398	25.3
Medium High	181	11.5
High	159	10.1
Total	1576	100.0

Table 4. Level of Motivation Management. ARATEX-R Questionnaire

Regarding the evaluation of comprehension, the findings shown in Table 5 show that when adding the high and medium-high levels, 25.4% of the students can be considered self-regulated in this dimension. However, adding the percentages of the low and medium-low levels, 51% are obtained. More than half of the students surveyed present deficiencies in the processes of self-evaluation of the tasks performed when analyzing texts, which limits the decision making that allows them to achieve the comprehension of these texts.

LEVEL	fi	Hi
Low	549	34.8
Medium Low	256	16.2
Medium	371	23.5
Medium High	187	11.9
High	213	13.5
Total	1576	100.0

Table 5. Level of comprehension evaluation. ARATEX-R Questionnaire

In relation to context management, it is observed in Table 6 that 45.7% of the surveyed students present a low level. This allows us to conclude that they do not plan actions in relation to the context before analyzing a text. 25.3 % have a medium level, which means that their skills to identify and control the environmental factors that may intervene in the execution of the task are in the process of development. 28.9% are at a high level, which



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means that they efficiently use strategies for managing individual resources and the context when analyzing a text.

LEVEL	fi	hi %
Low	721	45.7
Medium	399	25.3
High	456	28.9
Total	1576	100.0

Table 6. Context management level. ARATEX-R Questionnaire

5. Discussion of results

According to the results obtained, it is established that most of the students have a medium-low and low level of self-regulation of learning. A fact that evidences their shortcomings in planning, monitoring and evaluation activities of their training processes and achievement of academic goals. Results that agree with the findings of Hernandez and Camargo, (2017) who state that "only a quarter of the participants (24.9 %) presented high levels in the global test." (p. 14). However, these results differ from what was found by Gravini, Ortiz and Campo (2016) who mention that "the overall results indicate that students mostly possess above average levels in their metacognitive strategies, although some differences are found by programs." (p. 326). This evidences a good level of self-regulation, an adequate active and constructive process in students to establish goals in their learning. By monitoring, regulating and controlling their cognition, motivation and behaviors.

In relation to the levels of self-regulation of learning by sex, there is no significant difference in the results obtained between male and female students. A fact that agrees with the study conducted by Chan and León, (2017) who in general terms mention that "it is neither the gender nor the language of the learners; which led to the development of a level of learning self-regulation" (p. 109). However, these results contradict what was found by Ozan, et al. who found significant differences between female and male students at the general level in self-regulation skills (Ozan, et al. 2012, p. 1810).

In relation to self-regulation of learning by training unit, no significant differences are evident, with the majority of students presenting low and medium-low levels. These results agree with Hendrie and Bastacini, (2020) who mention that: "there are no statistically significant differences in general in the average scores of learning strategies (evaluated with the LASSI) as a function of age" (p. 8).

Regarding planning as a factor in the self-regulation of learning, it is evident that most students do not possess skills related to the organization of activities. Results that coincide with Escorcía, (2010) who states that "less frequently, students evoke objectives in relation to planning (27%) and revision (18%) of writings" (p. 271).

Regarding the management of cognition, it was found that students have deficiencies in the use of cognitive and metacognitive strategies. Results that contradict what was exposed by Ozan, et al. (2012) in their research. Where the study showed that "university students' perceptions of metacognitive self-regulation, time management skills and study environment, and self-efficacy are at an average level" (Ozan, et al. 2012, p. 1810).

In reference to motivation management, the findings obtained indicate that students demonstrate levels: low and medium low in their intrinsic as well as extrinsic motivation. These results contradict those presented by Gravini, Ortiz and Campo (2016) in their study.



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Where "it was found that all students in the evaluated programs scored at a high level in both intrinsic and extrinsic motivation" (p. 336).

Regarding the evaluation of comprehension, the findings indicate that adding the percentages of the low and medium-low levels, half of the students surveyed show deficiencies in comprehension when analyzing texts. These results coincide with those presented by Pardo (2015). Where he refers that before, during and after reading, students do not establish adequate processes of exploration, inspection, anticipation and evaluation of their reading process. In this sense, if the student does not use these types of strategies, the effectiveness of the comprehension and learning process through reading will not be determined (Pardo, 2015, pp. 33-36).

In the context management factor, the results evidence that most of the students surveyed do not plan actions, do not monitor, and do not reflect on the reading of a text. Findings that support what was found by Gravini, Ortiz and Campo (2016) who point out that "all the evaluated programs demonstrated a medium level, which means that only in some occasions they program and plan the moments of study by specifically determining a work place." (p. 339)

6. Conclusions

The students of the Faculty of Philosophy, Letters and Educational Sciences of the Universidad Central del Ecuador present different levels of self-regulation of learning in general, finding that most of them are located in the low and medium-low levels. This allows determining that students present deficiencies in the processes of planning, control and self-evaluation of their learning strategies to achieve their academic goals.

It was found that there are no significant differences in the levels of self-regulation of learning by sex. The majority of both male and female students present low and medium-low levels of the variable studied. The results by sex also coincide in the other levels. Coherence was found with the general levels, showing a lack of skills in the students to establish learning objectives, execute actions and monitor academic results.

No differences were found in the levels of self-regulation by training unit. The largest number of students in the basic unit, the professional unit and the degree unit presented low and medium-low levels. These results show that self-regulation is not acquired spontaneously throughout professional training. It is therefore essential to implement educational programs that promote the development of self-regulation strategies for learning.

In the planning factor, an exercise of integration with the scores: low and medium-low, it was found that most of the students are located in this segment. This evidences that they do not have an acceptable capacity to anticipate their actions and to stick them to a program that allows them to achieve their training goals. They fail to establish objectives that guide the execution of effective actions for self-learning.

Most students are located in low and medium-low levels, in the use of cognitive and metacognitive strategies in their study processes and in the achievement of learning. They present a limited capacity to relate contents, use information organization strategies and little use of knowledge construction techniques.

Of the factors of self-regulation of learning studied, the one that presents more deficiencies in the participants is the management of motivation. Most of them clearly have low and medium-low levels. The students lack willingness to make extra efforts in the learning



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processes promoted both by internal stimuli and by gratifications. They do not find interest in guiding their actions oriented to internal goals or external benefits.

It was found that most of the students have low and medium-low levels in the use of self-evaluation strategies and evaluation of text comprehension. This points to the difficulties presented by the participants in critically observing their own performance and checking how much they have understood of a reading. This is replicated in the limitations in identifying and analyzing the results of the strategies used for learning.

Most of the students present low and medium-low levels in context management as a factor in self-regulation of learning. The findings indicate that students do not organize the environment, time, resources or supports that would be significant in their learning achievements.

After contrasting these results with those reviewed in similar studies, it was found that there are important coincidences, as well as contradictory results. Both in the general level, distribution by sex, level of education, as well as in each of the factors of self-regulation of learning.

Based on these findings, it is necessary to generate innovations in the training process of university students. Including in the curriculum programs aimed at the development of self-regulation of learning. Thus, contributing to the achievement of their academic and professional objectives. It is also suggested to deepen the relationship between this variable and others that participate in the learning process. For example, the association between the teaching styles of the teachers of this academic unit and the level of self-regulation of learning in the students.

Acknowledgements

The authors would like to thank the Coordination of Formative Research (CIF) and seed projects of the Universidad Central del Ecuador who supported the development of this research, as well as the authorities and teachers of the Faculty of Philosophy, Letters and Educational Sciences of the UCE who facilitated and participated in this study.

Special thanks to Ms. Alvarado León Michelle Katherine, Ms. Quisi Quishpi Paula Johana, Ms. León Cabezas Katherine Lizeth, and Mr. Zurita Pacheco Ariel Omar, students of the Psychopedagogy Career at UCE who were members of the research team that developed this study, for their outstanding work and collaboration.



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Revista Cátedra, 4(3), pp. 73-90, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3048>

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REVISTA

CÁTEDRA

Analyzing the transition from face-to-face to remote education: an experience in higher education during the COVID-19 pandemic

Analizando la transición de una educación presencial a una educación remota: una experiencia en la educación superior durante la pandemia de la COVID-19

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(Received on: 27/07/2021; Accepted on: 30/07/2021; Final Version received on: 12/08/2021)

Suggested citation: Jaramillo-Baquerizo, C. (2021). Analyzing the transition from face-to-face to remote education: an experience in higher education during the COVID-19 pandemic. *Revista Cátedra*, 4(3), 91-106.

Resumen

La integración de las TIC se ha convertido en una de las áreas de investigación más cruciales en el campo de la educación, especialmente durante la pandemia de COVID-19. Como sugiere la literatura especializada, su integración depende en gran medida del nivel de competencia y la voluntad de uso, ya que es el individuo quien finalmente decide integrar las TIC en sus actividades de aprendizaje. La presente investigación se centra en las experiencias de estudiantes y docentes de posgrado que se vieron forzados a integrar las TIC durante la pandemia de COVID-19. Comprender la experiencia de estos actores puede brindar información sobre las mejores formas de fortalecer el diseño y la implementación de iniciativas de desarrollo profesional que faciliten la integración de las TIC. En este estudio, se recogieron las percepciones de estudiantes y docentes a través de cuestionarios y entrevistas analizando su experiencia durante la drástica transición de una educación presencial a una educación remota. Los resultados de este estudio sugieren que, si bien las TIC son aceptado como la mejor alternativa posible durante el período de la transición, los estudiantes y docentes perciben un nivel limitado de competencias en diseño instruccional.



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Revista Cátedra, 4(3), pp. 91-106, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3173>

Estos resultados y sus implicaciones se discuten en vista de establecer pautas para futuras iniciativas de desarrollo profesional.

Palabras clave

Educación superior; COVID-19; integración de las TIC; desarrollo profesional, teoría de la autodeterminación.

Abstract

ICT integration has become one of the most crucial areas of research in education especially during the COVID-19 pandemic. As research suggests, its integration is highly dependent on the level of competence and willingness of usage, for it is the individual who ultimately decides to integrate ICT into their learning activities. The present study focuses on graduate students and teachers' experiences of integrating ICT during the COVID-19 pandemic. Understanding the experience of these actors can bring insight into better ways to improve the design and implementation of professional development initiatives focused on ICT integration. In this study, the perceptions from students and teachers were collected through questionnaires and interviews analyzing their experience during the drastic transition from face-to-face sessions to remote learning. Results of this study suggest that, while ICT is accepted as the best possible alternative during the first period of the transition, students and teachers perceive a limited level of competence in instructional design. These results and its implications are discussed in view of guidelines for professional development initiatives.

Keywords

Higher education, COVID-19, ICT integration, professional development, self-determination theory.

1. Introduction

The specialized literature suggests that ICT integration is highly linked with the individual's perception and level of competence who ultimately decides whether or not to integrate them in the classroom experience. Among the key actors, the literature highlights the role of the teacher as a key factor in ICT integration and the inclusion of innovative strategies (Farjon et al., 2019; Hattie, 2009). Despite the widespread use of technologies in everyday activities, including the educational context, institutions struggle to successfully witness how ICT improves the quality of education (Straub, 2009; Tondeur et al., 2016). Concretely, institutions face the challenging task of fostering the free and conscious adoption of technology by the main actors, that is, students and teachers (Scherer et al., 2019).

To foster ICT integration, models and frameworks such as the Technological Pedagogical Content Knowledge (TPACK) of Koehler et al. (2013) are used to provide insight into the type of knowledge and competence teachers need to successfully foster student learning. The TPACK framework highlights the importance of teachers' knowledge of the foundations of pedagogy, comprehension of the discipline they teach, a high level of competence to use specific technologies, and, more importantly, knowledge and ability on how to incorporate these three aspects into their teaching. However, for these models to work, and therefore to successfully integrate ICT, individuals need to first accept them and be convinced of their utility. In this line, there is a lot of debate on what variables determine the acceptance of ICT in an educational setting (Scherer et al., 2019). This debate has seen the rise of the Technology Acceptance Model (TAM), a commonly used framework based primarily on the



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Revista Cátedra, 4(3), pp. 91-106, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3173>

Theory of Planned Behavior (Ajzen, 1991) that analyzes individuals' motivational variables, namely: perceived usefulness (how I conceive it to be useful in my job), perceived ease of use (how I conceive it to be learned without much effort), and general attitudes towards technology (how I evaluate the use of technology in education); as well as outcome variables, i.e., behavioral intentions, technology use (see Schepers & Wetzels, 2007).

The literature suggests that among the variables analyzed in the TAM, individuals' perceived usefulness and perceived ease of use are the most crucial for ICT integration. This is in line with the literature that suggests fostering teachers' motivation to better integrate ICT over strategies of coercion (Jaramillo-Baquerizo et al., 2019). It seems logical, therefore, to carry out studies that analyze current experiences with ICT before designing professional development initiatives that aim at integrating ICT in the classroom, especially during the drastic transition to remote education due to the COVID-19 pandemic.

The present study applies one of the most authoritative motivational theories, The Self-Determination Theory (SDT) of Deci and Ryan (2000) to analyze the experience of students and teachers during the drastic transition of ICT integration due to the COVID-19 emergency. This macro-theory of motivation allows the study of individuals' natural capacity to experience fulfillment and wellbeing especially in a pressuring context of an emergency and a rapid transition to a new modality of learning. SDT suggests that individuals will experience fulfillment and wellbeing when their Basic Psychological Needs of autonomy, competence, and relatedness are satisfied (Ryan & Deci, 2000).

The psychological need of autonomy refers to the natural inclination an individual has to understand the fundamental reasons behind an activity and to act freely and consciously (Ryan & Deci, 2000). In an educational context, this translates into activities that would allow students to suggest the way to hand in a project or choose their topic of interest. Other aspects include fostering understanding and providing the reasons behind the class activities. The basic psychological need of competence refers to the inner desire to dominate our environment (Ryan & Deci, 2000). That is, an individual experiences wellbeing when they are capable of acting with a minimal amount of proficiency, thus providing the individual with a sense of satisfaction. This means that a teacher or student should be capable of using ICT with a level of confidence that provides security and satisfaction. Finally, the psychological need of relatedness is the natural desire every individual has of feeling loved, cared for, and supported by others, particularly during challenging times (Ryan & Deci, 2000). In the educational context, this translates into opportunities to share experiences, receive feedback and support from others. This framework of analysis allows for a thorough examination of the state of students' and teachers' wellbeing during this transition as well as their general attitudes towards ICT. Hence, in view of fostering ICT integration is imperative to analyze the current state of affairs of ICT, specifically the perception of the main actors, students and teachers. A comprehension of their experience may facilitate initiatives that strengthen ICT integration in higher education.

The main research objective of the present study is to analyze the experience of transition from face-to-face to remote teaching due to the COVID-19 pandemic. To fulfill this objective, the following specific objectives were formulated:

Research objective 1 (RQ1). Identify students and teachers' experience of the transition to remote learning

Research objective 2 (RQ2). Analyze students and teachers' perceived satisfaction of their basic psychological needs



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Research objective 3 (RQ3). Design guidelines for professional development initiatives aimed at fostering ICT integration in higher education

2. Methodology

To fulfill the research objectives of this study, a mixed-methods approach was selected. That is, online questionnaires and semi-structured interviews were carried out by the author of this study during the months of January-November 2020, at Universidad Andina Simon Bolivar-Ecuador.

2.1 Participants

Participants for this study were graduate students and university teachers from the Department of Education of Universidad Andina Simon Bolivar - Ecuador. On a voluntary basis, participants were asked to fill out the questionnaire and to express a desire to take part in an interview to further understand their experiences. In total, 136 students took part in the questionnaire, and 2 interviews were carried out. On the other hand, 7 university teachers took part in the questionnaire, meanwhile, 5 university teachers participated in the interviews.

2.2 Quantitative instruments

To measure participants' need satisfaction a quantitative instrument was designed based on the theoretical framework of SDT. This questionnaire measures participants' need satisfaction through the constructs based on the SDT's micro-theory of the Basic Psychological Needs of autonomy, competence and relatedness (Ryan & Deci, 2000). The questionnaire comprised of 31 items using a Likert scale ranging from 1 (totally disagree) to 5 (totally agree). Additional items aimed at gathering data regarding student access to infrastructure (3 items) and one item collected data about the students' perception regarding their teachers' skills (My teachers had the necessary skills and abilities to teach in virtual environments). Sample items were: "I felt free to express my opinions to my teachers during this emergency period." (autonomy); "I felt capable of learning in online environments" (competence); "I felt support from my university during the period of online learning" (relatedness); "I had easy access to the internet" (access).

2.3 Qualitative instruments

To collect qualitative data, semi-structured interviews were designed using a deductive approach creating guiding questions that stem from the theoretical foundation of SDT (Cresswell, 2009). The interviews were comprised of two main parts. In the first part participants were asked a general question about their experience transitioning to remote learning allowing respondents to present their main ideas, i.e., "Could you please describe your overall experience of transition to remote learning?". The second part was based on the SDT framework with questions, i.e., "In which way did you feel free to choose and act according to your beliefs during this period of transition?" (autonomy); "Would you describe how you perceive your capacity to use ICT in education? (competence); "Please describe your experience regarding feeling support from others during this period of transition to remote learning" (relatedness). Additionally, an overall final question regarding their experience was asked so participants could add any ideas they may consider important: "Please describe the main challenges you have faced during this period of emergency".

2.4 Data collection

The questionnaire was administered online on a voluntary basis. Participants were required to have imparted at least one online lesson during the period of emergency.



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Regarding the interviews, they were carried out online by the researcher of this study. Interviews were recorded lasting approximately one hour. Also, notes were taken during the interviews. In all instances, anonymity was guaranteed to all participants of this study as well as the academic program they were enrolled in.

2.5 Data analysis

The quantitative data were analyzed using SPSS V19. Data was first screened for any missing values. The few missing values (n=3) were treated using mean substitution (Kang, 2013). Being descriptive statistical research, score identification for each variable was carried out. The qualitative data were analyzed using a deductive content analysis based on the theoretical framework of SDT. That is, using the predetermined constructs of autonomy competence and relatedness, a process of codification was carried out considering a complete idea expressed by a participant as a unit of analysis in the codification process (Cresswell, 2009).

3. Results

3.1 Student quantitative results

A total of 136 graduate students responded to the questionnaire (compared to only 7 teachers, thus impeding a statistical analysis to be carried out). The mean age of respondents was 34.5 years (61.7 % female and 38.3 % male). Among the categories analyzed, items belonging to the constructs of needs of autonomy, relatedness, and access to infrastructure show comparatively low scores, as shown on Table 1, which presents the items and their scores.

AUTONOMY			
ITEM	Female	Male	All
1. I prefer to learn in a face-to-face environment (R)	2.4	2.7	2.5
2. I felt that my learning was evaluated satisfactorily in online learning environments	4.3	4.4	4.4
3. I trust the education in online learning environments	4.3	4.4	4.3
4. I felt free to express my opinions to my teachers during this emergency period.	4.5	4.5	4.5
5. I believe that education in online environments is the best option in a period of emergency	4.6	4.4	4.5
6. I felt obliged to use virtual learning environments (R)	3.1	3.1	3.1
7. I feel that my university gives me the freedom to decide how to organize my classes in this period of emergency	4.0	3.9	4.0
8. I felt that the authorities at my university trusted the work I was doing during my online classes	4.5	4.4	4.4
COMPETENCE			
9. I felt capable of learning in online environments	4.4	4.4	4.4
10. I felt able to carry out my learning activities in online environments	4.5	4.4	4.4
11. I felt able to use the tools in online learning environments	4.5	4.6	4.6
12. I felt able to cope with internet connectivity difficulties	4.4	4.4	4.4
13. I feel like I need training in education in online environments (R)	2.0	2.4	2.2
RELATEDNESS			
14. I felt supported by my university during the period classes in online environments	4.3	4.4	4.4
15. I felt supported by my classmates during this period	4.3	4.2	4.2
16. I felt support and understanding from my teachers during this emergency period	4.5	4.6	4.6



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17	I felt that the authorities of my university understood the situation in which I was living	4.3	4.4	4.4
18	I felt difficulties interacting with my teachers in online environments (R)	3.2	3.2	3.2
19	I felt confident in my university during this emergency period	4.6	4.5	4.5
ACCESS TO INFRASTRUCTURE				
20	I had easy access to the internet from my home	4.4	4.3	4.41
21	I have an adequate infrastructure in my home to learn in online environments	4.2	4.1	4.1
22	My teachers had an adequate infrastructure in their homes for education in online environments	4.6	4.6	4.6
23	My teachers had the necessary skills and abilities to teach in online environments	4.4	4.5	4.50

Table 1. Scores for each item of the student questionnaire

*Scores lower than 4.4 are highlighted in red, except for the reverse scores. Among the categories analyzed, items belonging to the needs of autonomy, relatedness, and access to infrastructure show scores worth noting.

Regarding student trust in online education, the results show a comparatively low score (4.3). Related to this, female students' perceptions of the way their learning was evaluated in an online learning environment (4.3) raises a concern suggesting a certain distrust on behalf of students regarding the way their learning is evaluated. Additionally, students' response (2.5) when asked whether they prefer to learn in face-to-face settings, suggests a preference to continue in remote learning. Additionally, their response suggests a comparatively low perception (4.0) of feeling freedom from the university to organize their lessons during this period. In the same way, the need for relatedness shows relative low scores in comparison to the other items. Students reported a partially satisfying perception of feeling supported by their peers (4.2). Finally, their access to the internet suggests a comparatively low score of 4.1, raising concerns for the type of strategies best suited during this period of emergency.

3.2 Student qualitative results

The content analysis of the interviews suggests the following results which are now presented by each construct highlighting the main findings of students' and teachers' responses.

Respondents expressed an overall satisfaction regarding the academic experience during the transition to remote learning. In particular, they noticed teachers were understanding and considerate of the many challenges faced by the students. On the other hand, they also expressed their concerns. For example, they mentioned that although remote learning has its advantages, they miss the experience of relating with their peers and teachers, as one quote expresses this feeling: "it is stressful to see my friends only as a small square on the screen". Additionally, one of the biggest challenges was to constantly remain sitting in front of a computer for prolonged periods. As one participant mentioned: "biologically speaking this is the most stressful part. Before I was at least able to run to fetch the bus to arrive to class on time". The physical requirement of remote learning combined with telecommuting (working from home) which forces individuals to sit in front of a screen for long working periods, seems to influence the experience of remote learning.

Regarding the need of autonomy, respondents did not express feeling obliged to behave in any particular way. By their responses, it seems as it was "the only option available". They



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Revista Cátedra, 4(3), pp. 91-106, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3173>

seemed to consider the transition to online learning environments as an unavoidable option.

Regarding the need of competence, students seemed to feel comfortable using ICT, since in some cases, due to their background as specialists in this field or because they are also teachers in this modality, they expressed comfort and a willingness to strengthen their knowledge and skills through the participation on training programs.

Regarding the need of relatedness, respondents emphasized the importance of fostering professional relationships among peers as a key aspect while facing the challenges of remote learning. Respondents mentioned that groups, which were naturally formed by affinity, continued during the period of emergency. Although in their classes, teachers may also encourage them to form groups, respondents expressed that the groups which were developed naturally by the daily interaction, established before the transition to remote learning, were maintained during this period. These small groups provide participants not only encouragement, but also support in areas related to academic activities such as reminders to hand in assignments, exchanging material, and collaborative construction of documents. On the other hand, the relation with teachers was limited to the classroom work, with almost no opportunity to relate when compared to the face-to-face setting when teachers seemed “more approachable to interact”.

Regarding the challenges faced by students during the transition to remote learning, they mentioned the noticeable need to strengthen teachers’ digital competence, especially in instructional design. Although teachers show a willingness to help students during these challenging times, it is evident to the respondents the difference in the level of digital competence among teachers. In the same line, the limited skills are evident in the difficulty to engage in direct communication between students and teachers. In other words, when teachers can engage in digital environments, the communication and understanding of expected outcomes are much easier to grasp when compared with the learning experience with teachers who lack digital competence. As one student mentioned: “some teachers impart the class in online environments in the same way as they teach a face-to-face lesson”.

Concretely, the gap in digital competence among teachers translates into drastic differences in the learning experience of students. As one respondent mentioned the “passivity” in learning when receiving a class with a teacher whose digital competence is limited, compared with the “active” and “engaging” approach to learning when the class is imparted by a teacher whose digital competence is evident. Furthermore, a respondent mentioned how time management is highly effective when a teacher’s instructional design translates into a well-organized online learning environment. In other words, time is easily managed when the online environment provides clear instructions, the syllabus is followed as a map route, and expectations are presented from the beginning of the course. Moreover, a participant appreciated the experience of a teacher allowing them to work on the assignments during the classroom time, preventing an overlap with other responsibilities, e.g., professional and domestic duties. This modality seems to be preferred rather than an approach where assignments are given outside classroom time, conflicting with other duties that accompany the life of students during this period of emergency, as shown in the following statement: “teachers need to learn more about methodology...I don’t like assignments such as ‘go read and do a conceptual map’ or ‘just listen to the class that I will give you’. In the same line, “I don’t like debates that turn into a soap opera where people tell their sad stories ... then you lose the focus and purpose of the class”. As for recommendations to the institution, students mentioned that continuous formation in ICT methodologies and instructional design for both students and teachers are needed.



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3.3 Teachers' qualitative results

3.3.1 Autonomy

One participant mentioned that during this period they felt “forced, by the circumstances to use the online learning environment”. However, this mandatory transition is seen with a positive attitude for it has become an opportunity for teachers to learn new teaching strategies. As one respondent mentioned: “before the pandemic, I seldom used the online learning environment”.

Another participant mentioned that since the emergency started there is a feeling of not being part of the process of decision-making. Thus, resulting in a perceived alienation due to a “top-down” structure at the university limiting teachers to receive instructions from the authorities regarding the changes made in response to the pandemic. In the same way, the same participant expressed feeling a “great deal of uncertainty” due to the pandemic. This also translates to tensions inside the classroom experience in online learning environments, suggesting the difficulty to interact with students compared to the face-to-face settings before the pandemic. Overall, participants expressed feeling obliged not by the institution or by any individual, but by the circumstances to be enclosed and isolated, promoting a sense of stress and uncertainty.

3.3.2 Competence

Respondents did acknowledge that their limited digital competence became evident during this period, mentioning their proclivity to give the online lecture in the same way as in face-to-face, recognizing that this is not considered an eLearning strategy. Nonetheless, respondents recognized that this period has fostered their professional learning thanks to their participation in training programs, which have helped them during this transition, as the following quote suggests: “Now I feel more comfortable (in online learning environments), before receiving training I used to give the lecture just as in the face-to-face environments”. Additionally, participants report that now they prepare their classes more diligently because of the nature of the modality. They report that remote education requires more effort, planning, and organization compared with face-to-face scenarios. As for challenges, besides the natural inclination to limit the online class to a lecture, participants mentioned the inability to foster a debate among students and to successfully form groups to work on a project.

3.3.3 Relatedness

Teachers did express difficulties when relating with students through online learning environments, stating that certain aspects, such as tutoring, were highly affected. In this line, teachers mentioned that students' own initiative and motivation are determinant factors. In other words, highly capable and committed students showed interest in the class, finding ways to relate and maintain channels of communication via online learning environments, suggesting that students' attitudes towards learning are essential regardless of the modality.

Another interesting aspect highlighted by respondents is the difference in the support given to students. During this period, teachers found it challenging to identify and address students who struggle during online classes. On the other hand, during the face-to-face environments, these difficulties became visible and therefore were addressed on site. Nonetheless, a participant suggested that by using online learning environments, tutoring became “more organized, for there are no students that just pop-up (without appointments)”.



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Regarding the relationships with colleagues, respondents mentioned missing the “causal chat in the hallway”. Evidently, the lack of physical presence in the university has affected the relations among colleagues. However, the administrative aspect seems not to be affected by the use of online environments. A particular case of a respondent, an adjunct professor, is worth mentioning. The responses of this case suggest an appreciation for the online learning experience not only for the practical convenience of mobility but for the possibility to give students individual support thanks to the virtual environments, a challenging task before the pandemic.

3.3.4 Challenges

Regarding the challenges, they faced, teachers reported their lack of knowledge of all the potential aspects of online learning. They reported a basic comprehension of the vast possibilities to enrich the learning experience of students via online learning. However, they still report challenges such as “not knowing how to operate the blackboard” to its full potential or to be able to “relate with students in the same way as before the pandemic”. Infrastructure on behalf of students seems to be another challenge for teachers. Respondents reported losing connectivity while lecturing, resulting in difficulties not encountered during the face-to-face sessions. A participant reported that students evaluated teacher’s performance with a lower score compared to the evaluations received before the pandemic. Despite this negative effect, the participant complemented this experience expressing that the amount of work has not decreased, on the contrary, it has increased due to the steep learning curve the new modality of education demands from teachers. Another participant mentioned the challenging task of getting students to do the work outside of classroom hours. It seems that students arrive “unprepared, i.e., without having done the reading assignments”. This connects to a response by another participant who expressed their concern for students “who are not able to cope with various responsibilities at the same time”, i.e., family responsibilities, work, school, and others.

As an overall learning experience, teachers reported not only the need to learn specific ICT to integrate into the classrooms but as one participant mentioned: “I need to learn how to plan my classes better and to relate my classes to concrete and real scenarios”. In the same line, a participant mentioned the pleasant feeling of accomplishing much despite the challenges faced during this period. It seems as if learning how to cope with this situation brings a feeling of satisfaction once the job is done, as the following quote suggests: “you do feel nervous but then you feel pleased with yourself”. Additionally, the participant suggested the importance of taking care of oneself during this period of emergency to perform better and take care of any negative influences on teaching performance.

4. Discussion and guidelines for professional development initiatives

The present study analyzed the experience of transition from face-to-face to online education due to the COVID-19 pandemic in a graduate university of Ecuador. Applying the theoretical framework of SDT, students and teachers participated in a mixed-methods study suggesting important implications for research, institutional policy, and practice. The results of this study suggest that both students and teachers did feel pressure, not by an individual or the institution, but by the circumstances to behave in ways contrary to their inclinations. This apparent feeling of autonomy frustration is highlighted in the SDT literature to lead individuals to frustration, emptiness, and stress (Ryan & Deci, 2000). This state of affairs calls for institutions of higher education to design strategies that address this feeling of frustration to prevent teachers from feeling “alienation from the decision-making



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process". As the literature in higher education suggests, vertical approaches to decision-making in terms of professional learning are highly questioned by university teachers (De Rijdt et al., 2016). In this line, institutions should consider university teachers' perspectives while making decisions that will affect all the actors involved. Although decisions during a period of emergency are characterized by their swiftness due to the limited amount of time available, efforts should be made to limit teachers and students feeling isolated. For example, professional development initiatives could become adequate environments where students, teachers, and authorities can collaborate in the decision-making process to benefit the institution as a whole.

In this line, learning how to integrate ICT in a university should not be put forth as an occasion to coerce the behavior of students or teachers. If institutions need to make drastic transitions, special care should be taken to avoid disregarding the individual needs of participants. In this line, the SDT literature provides valuable insight on how to present professional development initiatives - not as a mandatory endeavor aimed at correcting weak areas - but as an opportunity for growth and fulfillment (Jaramillo-Baquerizo et al., 2021). In the same way, universities are encouraged not to ignore feelings of uncertainty and constant worry expressed by their students and teachers. Their psychological well-being should be addressed and considered a priority in the design of institutional policies. Institutions will be negatively affected in the long-term due to the constant stress of their members, as the literature suggests (Hagenauer et al., 2018).

Regarding the need of competence, both students and teachers highlighted the need to improve digital competence, especially for teachers who are responsible for the design and implementation of classroom activities. A natural trend seems to be to transpose the face-to-face lecture to an online synchronous environment. Remote learning, which is what most universities have adopted during the emergency period, is not limited to synchronous virtual conferences. It embraces strategies from both distance learning and online learning environments. Hence, institutions should make it a priority to present professional development initiatives in ICT as a means to improve the quality of education as well as the personal wellbeing of both students and teachers. As the literature on professional development suggests, mandatory teacher professional development may cause resistance and adversity from teachers directly affecting students learning experience through a lack of transfer of learning (Gegenfurtner et al., 2009).

The results of this study emphasize the importance of fostering teachers' knowledge on instructional design and not limit professional development on ICT usage only. The pedagogical foundation for online learning seems to be a key missing factor in the context of this study. Both students and teachers agree that to improve the quality of education, knowledge on how to design and impart an online class is more important than knowledge on how to use technology. In this line, the educational literature provides concrete guidelines on how to design learning environments that support the psychological needs of students (see Su & Reeve, 2011). As one student mentioned in the interview, teachers whose digital competence is limited tend to provide an unorganized online learning environment causing uncertainty and stress. On the other hand, SDT literature suggests the need for teachers to provide clear guidelines, structure, and expectations to enhance student motivation, engagement, and learning (Reeve, 2009).

Regarding the need for relatedness, the results of this study point out the challenges faced by both students and teachers to develop and maintain interpersonal relationships to feel support through online learning environments. Although the transition to remote education seems to not have affected the daily administrative affairs, it has limited significantly the



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Revista Cátedra, 4(3), pp. 91-106, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3173>

human aspect of relating to others. As SDT suggests, all individuals have the basic need to establish interpersonal bonds and feel cared for by others (Ryan & Deci, 2000). However, the transition to remote learning has limited this natural tendency, although some respondents mentioned attempts to maintain these bonds via online environments, they all mentioned the positive aspects of engaging in the premises of the university. Thus, fostering the need of relatedness seems to be the most challenging one to address during this period of emergency. In this sense, attempts should be made to recur to an instructional design that fosters collaborative work, peer evaluations, and other strategies where students and teachers can engage in activities fostering not only a learning experience but a necessary feeling of support.

4.1 Guidelines for teacher professional development

One of the aims of this study was to gather initial data that may contribute to the development of guidelines in the design and implementation process of professional development initiatives that foster digital competence and improve the quality of education. Following the theoretical framework and the results of this study, the following guidelines are presented in Table 2, following the basic psychological needs.

Autonomy	Competence	Relatedness
Foster a needs analysis where teachers actively participate voicing their opinion on the areas where they see a need to learn	Focus the content of professional development primarily on instructional design rather than the technology itself.	Relatedness seems to be the most challenging need to address
Provide teachers with a voice to avoid feeling isolated in the process of decision making during a transition to a different modality of teaching and learning	Despite the emphasis on instructional design as the core of professional development teachers also need specific knowledge on the use of ICT	Students and teachers need to learn how to establish bonds through online learning environments
Present teachers with the reasons behind the need to engage in professional development initiatives and avoiding recurring to mandatory participation	Due to limited time available for teachers, asynchronous programs could provide a viable option	Collaborative learning may foster relations among students and teachers, e.g., projects, PBL, and others
Provide teachers with various options not only of content but of the modality of participation (e.g., online, asynchronous) regarding professional development initiatives	Emphasis is made on how to integrate ICT to forming collaborative networks among students and teachers	Professional learning communities may help teachers continue their professional development while establishing relations and possibilities for mutual support

Table 2. Guidelines for professional development in universities

As this study suggests, professional development initiatives should not be focused exclusively on the use of technology. These initiatives should have a broader reach by beginning to discuss and help the main actors (students and teachers) comprehend the importance and beneficial aspects of integrating ICT through a deep knowledge of instructional design and autonomy support. In other words, the emphasis of this study is to highlight the importance of comprehending the pedagogical role technology plays in the



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learning process more than the use of technology itself. For this, it is recommended to design professional development initiatives aimed at the comprehension of the pedagogical foundation of learning in remote education, i.e. instructional design. Without an understanding of the theoretical foundation of the learning process and knowledge about the curriculum design in online environments, the use of technology may become a limited goal, when instead, the creation of environments conducive to learning should be the ultimate goal of professional development.

Consequently, professional development initiatives should aim at satisfying the need of autonomy of participants providing rationales at least to the main learning activities so to engage participation and foster learning (Aelterman et al., 2014). In the same way, participants should be able to have a voice in deciding key elements of professional development. In this aspect, the present study suggests seeking a balance between presenting participants the importance of learning specific content, e.g., instructional design (and how it will help them in their job performance) and the freedom of participants to choose, e.g., the modality of participation (online asynchronous, face-to-face workshops, and others). Since university teachers and graduate students are professionals with challenging workloads and responsibilities, professional development needs to be flexible and accessible to this type of professionals.

Regarding the need of competence, professional development initiatives should above all foster participants' ability to comprehend the fundamental aspects of pedagogy. In other words, it is not enough to learn how to use a specific ICT but instead comprehend its role in the pedagogical process and how its usage may foster learning. Since the theoretical foundation of SDT suggests a strong link between competence and relatedness (Ryan & Deci, 2000) it is recommended to foster the creation of support groups or workshops among colleagues to learn new skills regarding instructional design for online and remote learning. These strategies may enhance the need of competence, i.e., to develop new transferable skills, as well as the need of relatedness, i.e., the need to feel support from others.

The need of relatedness seems to be the most challenging one, especially for university teachers. Since academia may be a profession with limited opportunities for collaborative work, where each individual may work in isolation particularly in regards to lesson planning, more needs to be done to encourage collaborative work among peers to foster the need of relatedness. Regarding students, learning activities should be designed in view of collaborative tasks fostering a balance between individual accountability and positive interdependence assigning clear goals and expectations to the learner (Cheon et al., 2019; Johnson et al., 2000).

5. Limitations and directions for future research

The present study collected data from teachers and students who belonged to one specific department. Future studies should collect data from other departments as well as other levels of education to comprehend the universality of the results and their implications. In the same way, the present study's quantitative approach was limited. Future studies should include quantitative results to establish benchmark data to gain insight into the different characteristics of individuals and the challenges they face regarding ICT integration. Moreover, intervention studies are needed to examine the way professional development initiatives foster the acceptance and integration of ICT and its impact on participants' perceptions and its impact in the quality of education. This study focused on the period of transition towards remote learning, hence, longitudinal studies are needed to understand the way in which students' and teachers' perceptions towards ICT has changed after a significant period of time.



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Revista Cátedra, 4(3), pp. 91-106, September-December 2021. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v4i3.3173>

6. Conclusion

The present study sought to analyze the experience of transition to remote learning due to the COVID-19 pandemic in the context of higher education. For this, data was collected from graduate students and teachers through interviews and questionnaires. Results for this study suggest the need to strengthen students' and teachers' digital competence with an emphasis on instructional design over specific usage of ICT. Applying the SDT framework, this study suggests the importance of designing professional development initiatives that consider the autonomy of participants (providing choice and rationales), develop specific skills (competence), and fostering relations among peers (relatedness) in view of experiencing satisfaction and well-being amid the current pandemic with the ultimate goal of improving the quality of education. Hence, this study emphasizes the need to design professional development initiatives aligned with the individual needs of students and teachers by previously gathering data of their current experience, thus avoiding unnecessary impositions on the main actors of the educational system.

Acknowledgements

The present study was supported by the Fondo de investigaciones of Universidad Andina Simón Bolívar – Ecuador P302.



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Revista Cátedra, 4(3), pp. 91-106, September-December 2021. e-ISSN: 2631-2875

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Revista Cátedra, 4(3), pp. 91-106, September-December 2021. e-ISSN: 2631-2875

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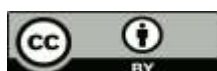
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