



CAEIN
CENTRO DE ALTOS ESTUDIOS
INTERNACIONALES



Organización
de las Naciones Unidas
para la Educación,
la Ciencia y la Cultura



Cátedra UNESCO
«Paz, Solidaridad y
Diálogo Intercultural»
Universitat Abat Oliba CEU



The development of scientific training in Peru

The development of scientific training in Peru



CAEIN
CENTRO DE ALTOS ESTUDIOS
INTERNACIONALES



Organización
de las Naciones Unidas
para la Educación,
la Ciencia y la Cultura



Cátedra UNESCO
«Paz, Solidaridad y
Diálogo Intercultural»
Universitat Abat Oliba CEU

The development of scientific training in Peru

Carlos German Castagnola Sanchez
Victor Raul Castagnola Sanchez
Compilers
2021



CAEIN
CENTRO DE ALTOS ESTUDIOS
INTERNACIONALES



Carlos Castagnola Sanchez
Victor Castagnola Sanchez

Compilers

The development of scientific training in Peru / Fernando Isaías Aguilar Padilla, Tito Orlando Chunga Diaz, Joel Alanya-Beltran, Adolfo Cacho Revilla, Moraima Angelica Lagos Castillo, Héctor Raúl Santa María Relaiza, Amado Fernández-Cueva, María Isabel Denegri Velarde, Lida Ivonne Lima Cucho, Norma Alderete Campos, Mercedes Alejandrina Collazos Alarcón, Miriam Corina Castro Rojas, Kony Luby Duran Llaro, Deny Giovanna Calvo De Oliveira, Luis Humberto Bejar, Rosa Ysabel Bazan Valque, River Chávez Santos, Calderón Chávez Roberto Gabriel Rolando, Flórez Ibarra Jannett Maribel, Ancaya Martínez María del Carmen Emilia, Helga Ruth Majo Marrufo , Pauta Guevara Ricardo Arturo, Freddy Antonio Ochoa-Tataje, Ena Elizabeth Cuba Mayuri, Zulema Daria Leiva Bazan, Yolvi Ocaña-Fernandez, José Antonio Carbonel Arribasplata, Aristides Alfonso Tejada Arana, José Antonio La Cotería Vega, Olinda Sabina Reyes Colquicocha, Zuly Cristina Molina Carrasco, Sergio Alex Alvarez-Gutierrez, Kelly Myriam Jiménez de Aliaga, Roque Juan Espinoza Casco , Jeidy Gisell Panduro Ramirez, Benjamín Roldan Polo Escobar, Sara Edith Castillo Olsson, Martin Albino Solis Tipian, Francis Esmeralda Ibarguen Cueva, Osmar Raul Morales Chalco, Gilberto Carrión-Barco, Godofredo Pastor Illa-Sihuíncha, Ricardo Edmundo Ruiz Villavicencio, Griselda Gladys Vera Nuñez

Bellavista Mz. 2 Villa 13, 2021 xxxp
17x24cm
ISBN: 978-9942-33-479-4

CAEIN

Cátedra UNESCO "Paz, Solidaridad y Diálogo Intercultural"

Title: The development of scientific training in Peru

First Edition: November 2021

ISBN: 978-9942-33-479-4

Layout and Printing
CAEIN

The total or partial reproduction of this work by any means (electronic, mechanical, photocopying, recording or other) is not allowed, without the prior written authorization of the copyright holder, under the penalties established by law. The content of this publication can be reproduced citing the source.

The published work exclusively expresses the opinion of the authors, in such a way that it does not compromise the thinking or responsibility of the CAEIN and Cátedra UNESCO "Paz, Solidaridad y Diálogo Intercultural".

TABLE OF CONTENTS

Organizational development, work environment in educational management.....	6
Introduction.....	6
Educational management: characteristics and importance	10
Organizational development.....	12
Work environment: importance and characteristics	15
Impact of educational management	20
Conclusions	27
References.....	29

Qualities of leadership in the quality of human relations teacher.....	33
Introduction	33
Educational leadership: characteristics and importance	39
Human relations	43
The influence of Leadership on Human Relations..	47
Conclusions	50
References.....	51

Managerial skills and their relationship to staff job satisfaction in state-run alternative basic education centers.	56
Introduction.....	56
Management skills: characteristics and importance	60
Job satisfaction	62
The impact of managerial skills on job satisfaction	66
Conclusions	69

References.....	71
A look from the perspective of leadership education of the public policy of citizen security	75
Introduction.....	75
Public safety	78
Public policy for citizen security	79
Citizen security action plans.....	84
Problematic situation.....	84
Implementation of Citizen Security Policy.....	85
Political Leadership Analysis	93
Conclusions	96
References.....	98
Educational research analysis of point-of-contact management in times of Coronavirus.....	102
Introduction.....	102
Contact point management.....	104
Channel management.....	108
Accessibility.....	109
Infrastructure	110
Accessibility of care at points of contact.....	112
Conclusions	115
References.....	116
Use of videoconferencing and attitudes towards mathematics in Architecture students at a private university	120
Introduction.....	120
Videoconferencing	123
Attitudes towards mathematics.....	126

Conclusions	135
References.....	137
Applications of Artificial Intelligence in public education management.....	142
Introduction.....	142
Artificial intelligence in government and public sector	146
Challenges of artificial intelligence in the public sector	154
Dilemmas in the future development and implementation of artificial intelligence.....	160
Conclusions	162
References.....	163
Human rights in Peru, a study from higher education during the pandemic by COVID	170
Introduction.....	170
Human rights.....	173
The Coronavirus pandemic	175
Measures Restricting Fundamental Rights during the COVID-19 Pandemic	179
Conclusions	186
References.....	187
Agronomy education and the development of organic quinoa in Peru.....	191
Introduction.....	191
Organic quinoa certification.....	193
Productive assistance	195

Analysis of the production and certification sector of organic quinoa.	198
Conclusions	203
References.....	205
Implementation of sanitary regulations at Covid-19: Transdisciplinary optics.....	208
Introduction.....	208
Reformulated regulation and transmission in social contexts.....	211
Covid service planning 19.....	212
Disinformation in the media.....	213
Conclusions	217
References.....	217
Assessment of the current situation of green areas in a district of Lima : a study from the university.	222
Introduction.....	222
Importance of green areas	223
Green areas in today's problems	225
Conclusions	234
References.....	235
Academic analysis of electoral system reform and political representation in Peru and Latin America	239
Introduction.....	239
Political Scenario	241
Relevance of electoral reform for political representation	244
Strengthening and modernization of the electoral system	245

Conclusions	249
References.....	250
 Videoconferencing as a means to strengthen learning among university students in Peru.....	253
Introduction.....	253
Satisfaction in the use of videoconferencing	258
Sudden change in virtual education.....	260
Conclusions	261
References.....	262
 The use of information and communication technologies in the modernization of the administration of justice system in Peru.....	266
Introduction.....	266
Information and Communication Technologies (ICTs)	270
ICTs in Peruvian justice administration.....	272
Application of new technologies.....	277
Conclusions	279
References.....	281
 Implementation strategies of digital government towards the modernization of the public university in Peru	285
Introduction.....	285
Use of ICT's in e-Government.....	288
Digital government towards the modernization of the public university in Peru	290
Perception of modernization levels.....	293
Conclusions	298
References.....	299

Organizational development, work environment in educational management

Fernando Isaías Aguilar Padilla
Tito Orlando Chunga Diaz
Joel Alanya-Beltran
Adolfo Cacho Revilla
Moraima Angelica Lagos Castillo

Introduction

Although organizational development is based on constant and productive training, changes in the environment can affect institutional management, making it more bureaucratic and preventing the fulfillment of institutional objectives. The modernization processes that have been attempted have almost all failed, and public administration in Peru continues to be more bureaucratic than ever, resisting change and with very few institutions having modernized and developed.

The institutional problem of constant organizational development is centered on the human capital suitably trained to face risks and with skills to use adequate management tools at the right time. It is not simple to solve complicated situations in the organization because it

integrates solutions, human resources for the solution and in general the materials to achieve the remission of these problems, for this is vital organizational development that proposes to empower and train workers to make them more competent for the organization accompanied by an appropriate methodology and technology for effective and timely results.

It should be noted that management for organizational development is constantly dynamic. For Mikhnenko , it consists of "a set of activities for the purpose of long-term change of the institution, helping to adapt to the context" (2017, p.44).

When we refer to the work environment we can say that the behavior of an employee can result in attitudes that affect the activities and efforts within the organization. The work environment in which the employee finds himself affects the way he relates to other people, both internally and externally. For Povedano-Jiménez, Granados-Gamez and García-Caro (2020), the prevention of factors that affect a bad work environment determines the success of the entity; if they are identified in a timely manner, they can be reduced or managed to reverse the situation so that the environment remains stable and pleasant (p. 2). In order that productivity can be given in the form of meeting goals and quality in this educational case.

The institutional culture and climate are becoming more relevant in public and private organizations due to the awareness of top management that only by knowing the state of things and the way in which they are working to achieve the objectives of the institution will it be possible to achieve total quality in the service. On several occasions the entity is evaluated for its processes, finding deficiencies at all levels, but without evaluating the work environment, this aspect is key, especially at the present time when the educational reforms are making the entities proceed to a change, in the country the concern is the Pisa qualification and not the entity as a business unit or management.

Management in education is seen as a mere administrative procedure and is not given the importance it requires because all the attention is focused on the pedagogical part, unfortunately it is not perceived that for pedagogy and its goals to develop, a whole managerial action is needed to provide them with the means of compliance in an effective and efficient way. For Briceño, Correa, Valdés and Hadweh, (2020) this management practice today goes far beyond the mere execution of instructions coming from the center, people who have management responsibilities have to plan and execute the plan; it involves both planning and administration actions; also applying innovation to achieve educational quality (pp. 287-288). Administration, as the execution of the instructions of a plan, is projected and carried out in the learning process in

education, whether face-to-face or virtual, the latter being little researched.

The management of educational institutions in Peru is hampered by a series of problems such as an inadequate strategic plan, therefore an outdated operational plan, few economic resources, poor controls, union problems, low salaries, an undefined teaching career, reforms and more reforms lead to the management only to survive in the midst of chaos, the poor preparation of directors to administer or manage an educational institution are a major problem because the consequences are suffered by the students.

At I.E.S. Carlos Cueto Fernandini. Lima, there is a strategic plan, an operational plan and the plans that come from the norms of the Ministry of Education, however, in terms of management it is not considered a formal organization, the little experience of the management to lead the entity in a managerial way has as a consequence a low organizational development, an inadequate work environment that mainly affects the students, There is no training plan to help develop managerial activities and it is more directed to the pedagogical part but without the managerial support that is necessary for an adequate, effective and efficient educational management.

Educational management: characteristics and importance

Management deals with the administration of the components of the institutions, adding to it the pedagogical part that is transversal to all processes, it is fundamentally characterized by focusing in a broad way on the real possibilities of an institution, in the sense of solving situations or achieving a purpose in question. An educational management that promotes change must promote autonomy in the decision making of educators in an environment that favors participation, dialogue and consensus and above all, must continuously reflect on the same practice as a method of permanent learning in order to improve their professional performance, the correct management corresponds to the administrative actions that are carried out to manage the educational action, it includes the processes of direction, conduction, planning and management by results. For Moreno (2017), the change and adaptation to the context of educational management will allow the passage to quality, allowing students to acquire modern capabilities, using useful tools and instruments for this management, having the possibility of expanding their proposal in the field of innovation, infrastructure and scientific research (pp. 27-30). For Oviedo and Almendrale (2018), by having a good educational institutional management, different learning strategies can be raised and reach the expected educational quality (p. 2). The development of management of educational projects, educational institutions and everything that means managing to

achieve goals is a management with all its components, but oriented to the education sector, plays an important role in conducting and carrying out activities, which will lead to the achievement of the goals and objectives set in the educational system; thus, educational institutions are seen and analyzed as organizations.

It is framed in a process management because it implements the systematization of specific actions for each activity, resulting in a correct administration of the educational entity in such a way that its results are combined in quality and rationalization of the resources used, achieving its goals with the full participation of all the educational authors. It is the set of processes, decision making and execution of actions that allow carrying out the pedagogical practices, their execution and evaluation. For Gonzales-Campos, Aspeé-Chacón, Sessarego-Espeleta, González-Suárez and Gómez-Osorio (2018) educational management is a pillar for the improvement of the educational systems of any country, thus being the discipline with a low level of organization, which is in the search for the application of management to the educational field and which impacts the educational system (p. 4).

Aguilar and Macazana (2020) state that the importance of this management for the improvement of a country's educational system lies in the strengthening of education

and educational establishments; in their administrative bodies and pedagogical system to generate changes and provide added value in knowledge and development of competencies to students (pp. 377-378).

It is based on considering the executive entities as an organization that is based on the fulfillment of goals and objectives in such a way that its importance lies in the efficiency of management and in the improvement of educational quality, i.e., for quality to exist, administrative actions must be managed in order to satisfy the external user who is the student body and on whom all the positive or negative effects of the administrative actions taken by the management fall as a user. Barbón and Fernández (2018) consider that currently, being at the forefront with the new technological requirements required to be able to have a curriculum that is within the context having as key the integration of knowledge management, science, technology and innovation (p. 52).

Organizational development

It establishes strategies, on the way to meet goals by developing capabilities of its workers, establishing knowledge as a way of personal and entity improvement, installation of organizational development for the development of corporate competencies in conjunction with those of the workers, with the first purpose of

changing their organizational development as a condition for improvement. For Carro-Suárez, Sarmiento-Paredes and Rosano-Ortega (2017) society today is obliged to be competitive and have competencies that can perform properly in the current market especially as regards technology and science (p. 353).

Mikhnenko, points out that the strategies proposed for organizational development, is based on data collection, organizational analysis and the actions proposed to intervene. (2017, p. 44). The changes that occur are constant in an institution, presenting itself as constantly dynamic.

For Morgado-Pereira (2019) at the institution level, communication and efficient coordinations must be present, as they are essential pillars for the development of competencies to promote disaster resilience (p. 117). In organizational development all its elements infer a specific but realistic and sufficient activity in such a way that they are self-regulated and developed with educational strategies of management and application of efficient processes but developed jointly all these processes are developed integrally and tangentially with communication which is the best vehicle of integration for the development of strategies and establishment of processes. Institutional development comes with globalization in the sense of implementing strategies in human resources to make them

more efficient, supported by an effective leadership that produces changes. The administrative and academic personnel and other participating agents of the institutions intervene in the improvement of the infrastructure, the organization of schedules, action plans and other elements that are expected to contribute to the projection of the vision.

For Gairín, Muñoz, Silva and Suárez (2020), organizational and professional development and learning strategies are directly linked, since, through the strategy proposed as informal learning, with constructivist techniques, they proved in their research the significant link between organizational development and educational quality, with the professional intervention of the teacher (p. 4). Organizational development in the educational field is applied in management teams using the competencies developed previously and established based on leadership. This technique, plus the strategies plus the capabilities to implement management improvements according to plan, driven by top management.

It enhances human capabilities in the organizations where it is applied, improving management for the benefit of the entity, which is why it considers the following characteristics: it is an educational strategy because it is based on the modification of the organizational culture to achieve a planned change in the company. The changes

sought are directly linked to the demands or requirements that the organization intends to satisfy: growth, destiny, identity and revitalization, human satisfaction and development, organizational efficiency. Its foundation is a methodology that emphasizes the importance of experiential knowledge. Change agents are mostly external to the organization. It implies a cooperative and collaborative relationship between the change agent and the components of the client system.

Carro-Suárez, et al (2017) stated that organizational development is the use of knowledge in stages for workers to achieve change towards effectiveness through proper training and planning (p. 360). Having as main objective the excellence of own work, considering for this to change attitudes, values, strategies to overcome the competitive advance of other organizations produced by globalization, changes in technology, environmental environments and the emergence of new values appropriate to modernity.

Work environment: importance and characteristics

Barría-González, Postigo, Pérez-Luco, Cuesta and García-Cueto (2021). They point out that the work environment is the panorama that the worker feels in the organization where he performs his work, its composition is given by the infrastructure, relationships, performance, leadership, conflicts, etc., everything that directly influences the worker

(p. 168-169). The organization by its own functioning generates a series of conditions that give rise to a positive or negative work environment, this environment has direct action on workers. Influenced on the attitudes, beliefs, values and motivations of the people working in an organization.

The work environment refers to the relative quality of the internal environment of an organization that is experienced by its members and influences their behavior. It can be described in terms of the values of a particular set of characteristics. According to Nurminingsih, Nimran, Suharyono and Abdillah (2020), it can be physical, emotional, subjective, and felt, i.e. it is given in different characteristics of the entity, the point is that it positively influences workers to be more productive (p.72).

According to Scholze, Martins, Galdino, Moreira, Costa and Trevisan (2020) the attitudes, behavior and work and emotional responses of the worker are subject to the work environment of their entity and its emotional and productive effect (p. 31). Some dimensions of the climate intervene, modulate the influences between the components of the organization and integrate individual attitudes and behaviors related to the development of work. The work environment is the panorama that the worker feels in the organization where he performs his work, its composition is given by the infrastructure,

relationships, performance. Leadership, conflicts, etc. everything that directly influences the worker.

The characteristics that can be proposed are: positive moral values, a relaxed and productive atmosphere, commitment to excellence, direct and sincere communication, cooperation and support, and opportunities for promotion and training. For Barría-González, et al (2021) the work environment is composed of a series of variables that modify the attitudes of workers in favor or against, the entity focuses its labor strategies first in providing an adequate work environment, which motivates the worker to improve their performance and productivity, there are no two entities with the same work environment because the people who compose them are different therefore their perceptions will be different (p. 168).

For Nurminingsih et al. (2020), in their research they found that the work environment in educational institutions is a determining and significantly influential factor in learning orientation. The worker not only feels the need for the material, man is a social being who relates, who establishes friendly relationships, who has an individual behavior and through the work environment establishes a sense of belonging and identity with the entity, they may have a lot of capacity, but their work environment will act as a catalyst up or down in such a way that the work environment is

linked to the results of productivity and performance (pp. 71-74).

A good work environment in organizations is a full guarantee of development and success for the organization and all its people, there will be no barriers where our people do not reach, because their inner strength is greater than all obstacles and reach any goal. For Povedano-Jiménez, et al (2020) a healthy work environment, encourages, lifts the spirit, preserves the immune system, prevents physical and psychosomatic diseases, makes people grow in values, knowledge and human development (p. 2).

The worker with a good work environment fully identifies with his entity, takes care of his resources and tends to maximize his performance and therefore his productivity, that also avoids conflicts and paralyzations that affect the entity, a good communication at all levels makes everyone united in a purpose that is to meet their goals.

The environment has an impact on the behavior of the worker, his work and decision making that have to do with the function of the entity, its operation and productivity, a variable that has a great effect on the work environment is communication, depending on the sense in which it circulates and what messages it contains, normally

communication is integrative and keeps workers together with their messages and improves the relationship between the sender and the receiver. For Riquelme, López, Riquelme, and Meza (2020) the work environment in all areas can be the same or different and the most linked factors are: organizational design and structure, the environment and the environment in general, human resources, the psychological situation of each worker, the microclimates, etc. (p. 1807)

This research is necessary because of the importance of the application of organizational development processes, to improve the work environment, to contribute to the improvement of educational management in the entity; being in order to improve the efficiency of management and the improvement of educational quality in the I.S.T.P. Carlos Cueto Fernandini Lima. 2016 The research used the hypothetical deductive method, quantitative approach and basic type. The population was 60 teachers of the I.S.T.P. Carlos Cueto Fernandini - Lima. The survey was used as a means of data collection.

For the presentation of the results, frequency and percentage tables and comparative bar graphs were used, which were processed using the SPSS V22 statistical package. For the validation of the instrument, it was evaluated by three doctors who issued a certificate of validity. For the reliability of the instrument, Cronbach's

Alpha coefficient was used, with a result of 0.937 (very good) for the organizational development instrument, 0.957 (very good) for the work environment variable instrument, and 0.948 (very good) for the educational management instrument; all three instruments were reliable for application in the population.

Impact of educational management

According to the results obtained, Table 1 shows that of the total number of I.S.T.P. Carlos Cueto Fernandini teachers surveyed on organizational development, 8.3% believe that it is not optimal, 55% regular and 36.7% optimal.

Table 1: *Distribution of teachers at I.S.T.P. Carlos Cueto Fernandini according to organizational development.*

Levels	Frequency	Percentage	Cumulative percentage
Non-optimal	5	8.3	8.3
Regular	33	55.0	63.3
Optimum	22	36.7	100.0
Total	60	100.0	

Table 2 shows that of the total number of I.S.T.P. Carlos Cueto Fernandini teachers surveyed regarding the work environment, 10% believe that it is deteriorated, 63.3% are fair and 26.7% are adequate.

Table 2 *Distribution of teachers at I.S.T.P. Carlos Cueto Fernandini according to work environment.*

Levels	Frequency	Percentage	Cumulative percentage
Deteriorated	6	10.0	10.0
Regular	38	63.3	73.3
Suitable	16	26.7	100.0
Total	60	100.0	

Table 3 shows that of the total number of I.S.T.P. Carlos Cueto Fernandini teachers surveyed on educational management, 11.7% believe that it is inefficient, 55% regular and 33.3% efficient.

Table 3. *Distribution of teachers at I.S.T.P. Carlos Cueto Fernandini according to educational management.*

Levels	Frequency	Percentage	Cumulative percentage
Inefficient	7	11.7	11.7
Regular	33	55.0	66.7
Efficient	20	33.3	100.0
Total	60	100.0	

Table 4 shows that of the total number of teachers surveyed, the majority have a fair opinion of organizational

development (55%), a fair opinion of the work environment (63.3%) and a fair opinion of educational management (55%).

Table 4. *Distribution of teachers according to comparison of organizational development, work environment and educational management.*

Variables	Levels	Frequency	Percentage
X1_Organizational_Development	Non-optimal	5	8.3
	Regular	33	55.0
	Optimum	22	36.7
X2_Labor_Environment	Deteriorated	6	10.0
	Regular	38	63.3
	Suitable	16	26.7
Y_Educational_Management	Inefficient	7	11.7
	Regular	33	55.0
	Deficient	20	33.3
Total		60	100.0

Source: I.S.T.P. Carlos Cueto Fernandini

Regarding the results obtained from the questionnaire with ordinal scale, we will assume a non-parametric test that shows the dependence between the dependent variable and the independent variable; subsequently, the hypothesis test will be based on the logistic regression model, since the data for the modeling are of an ordinal qualitative nature, oriented to the ordinal logistic regression model, for the effect we will assume the SPSS report.

Table 5. *Determination of the fit of the data for the model of organizational development and work environment that affect educational management.*

Information on model adjustment				
Model	-2 log likelihood	Chi-square	gl	Sig.
Intersection only	43,529			
Final	27,092	16,437	4	,002
Link function: Logit.				

As for the report of the program from the data, we have the following results where the data obtained would be explaining the dependence of organizational development and work environment in the educational management of the teachers of the Institute, likewise we have to the Chi-square value is 16.437 and p_value (significance value) is equal to 0.00 versus statistical significance α equal to 0.05 ($p_value < \alpha$), means rejection of the null hypothesis, i.e.

the data of the variable are not independent, it implies the dependence of one variable on the other.

Table 6 *Goodness of fit for the ordinal logistic regression model.*

Goodness of fit			
	Chi-square	gl	Sig.
Pearson	11,047	6	,087
Deviation	9,024	6	,172

Link function: Logit.

Likewise, the results of the goodness of fit of the variable are shown in which the null hypothesis is not rejected; therefore, with the data of the variable it is possible to show the dependence due to the variables and the model presented would be given by the statistical value of p_value 0.087 versus α equal to 0.05. Therefore, the model and the results are explaining the dependence of one variable on the other.

Table 7. *Presentation of the coefficients of organizational development and work environment that affect the educational management of the Institute's teachers.*

Parameter estimates

		Estimate	Typical error	Wald	g	S	95% confidence interval	
					l	i	Lower limit	Upper limit
Threshold	[Y_Educational_Management = 1]	-3,802	,750	25,712	1	,00	-5,271	-2,332
	[Y_Educational_Management = 2]	-,459	,512	,803	1	,370	-1,462	,545
Location	[X1_Organizational_Development=1]	18,371	1,143	258,428	1	,00	16,131	20,611
	[X1_Organizational_Development=2].	-,245	,786	,097	1	,755	-1,785	1,295
	[X1_Organizational_Development=3]	0a	.	.	0	.	.	.
	[X2_Ambiente_Laboral=1]	-22,237	,000	.	1	.	-22,237	-22,237
	[X2_Ambiente_Laboral=2]	-1,269	,849	2,232	1	,135	-2,933	,396
	[X2_Ambiente_Laboral=3]	0a	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

As for the Pseudo R-squared test, what is being presented is the percentage dependence of the organizational development and work environment that affect the educational management of the Institute's teachers, in which the Nagalkerke coefficient is used, implying that the variability of educational management depends 28.2% on organizational development and work environment in the Institute's teachers.

Regarding the result of the COR curve, we have the area that represents the classification capacity of 67.6% representing a moderate level of implication of the of organizational development and Work environment in the Educational management of the teachers of the Institute, 2016.

From the findings and the analysis of the results, regarding the general objective, in terms of the Pseudo R-squared test, what is being presented is the percentage dependence of the organizational development and work environment that affect the educational management of the teachers of the Institute, in which the Nagalkerke coefficient is found, implying that the variability of the educational management depends on 28.2% of the organizational development and work environment of the teachers of the Institute; likewise, regarding the result of

the COR curve, we have the area that represents the classification capacity of 67.6%, representing a moderate level of implication.2% of organizational development and work environment in the teachers of the Institute; likewise, as for the result of the COR curve, we have the area that represents the classification capacity of 67.6% representing a moderate level of implication of the of organizational development and work environment in the educational management of the teachers of the Institute, 2016.

Likewise, the analysis of the results shows that of the total number of I.S.T.P. Carlos Cueto Fernandini teachers surveyed on organizational development, 8.3% believe that it is not optimal, 55% regular and 36.7% optimal; it is observed that of the total number of I.S.T.P. Carlos Cueto Fernandini teachers surveyed on work environment, 10% believe that it is deteriorated, 63.3% regular and 26.7% adequate. Carlos Cueto Fernandini surveyed on work environment, 10% think that it is deteriorated, 63.3% regular and 26.7% adequate; it is observed that of the total number of teachers at I.S.T.P. Carlos Cueto Fernandini surveyed on educational management, 11.7% think that it is inefficient, 55% regular and 33.3% efficient.

Conclusions

The present research demonstrates with respect to the general objective that organizational development and

work environment have a significant impact on educational management at I.S.T.P. Carlos Cueto Fernandini Lima. 2016; that is, implying that the variability of Educational Management depends 28.2% of Organizational Development and Work Environment in the teachers of the Institute.

This research shows that organizational development and the work environment have a significant impact on the institutional dimension of educational management at I.S.T.P. Carlos Cueto Fernandini. Lima. 2016; that is, implying that the variability of the institutional dimension of Educational Management depends 21% of Organizational Development and Work Environment in the teachers of the Institute.

This research shows that organizational development and the work environment have a significant impact on the administrative dimension of educational management at I.S.T.P. Carlos Cueto Fernandini. Lima. 2016; that is, implying that the variability of the administrative dimension of educational management depends on 29.1% of organizational development and work environment in the teachers of the Institute.

This research shows that organizational development and the work environment have a significant impact on the

pedagogical dimension of educational management at I.S.T.P. Carlos Cueto Fernandini. Lima. 2016; that is, implying that the variability of the pedagogical dimension of Educational Management depends 36.9% of Organizational Development and Work Environment in the teachers of the Institute. This research shows that organizational development and the work environment have a significant impact on the community dimension of educational management at I.S.T.P. Carlos Cueto Fernandini. Lima. 2016; that is, implying that the variability of the community dimension of Educational Management depends 51% of organizational development and Work environment in the teachers of the Institute.

References

- Aguilar, C. and Macazana, D. (2020). Educational management and academic satisfaction in peruvian army infantry school students. *Revista universidad y Sociedad*, 12 (S1). 373-379. <https://rus.ucf.edu.cu/index.php/rus/article/view/1801/1797>
- Barría-González, J., Postigo, A., Perez-Luco, R., Cuesta, M. and García-Cueto, E. (2021). Organizational climate assessment: Psychometric properties of the ECALS. *Journal annals of psychology*, 37 (1), 168-177. <https://revistas.um.es/analesps/article/view/417571/295791>

- Barbón, O. and Fernández, J. (2018). Role of strategic educational management in the management of knowledge, science, technology and innovation in higher education. *Journal Medical Education*, 19 (1). 51-55.
<https://doi.org/10.1016/j.edumed.2016.12.001>
- Briceño, M., Correa, S., Valdés, M. and Hadweh, M. (2020). Educational management model for virtual learning programs. *Revista de Ciencias Sociales*, 26 (2). 286-298.
<https://produccioncientificaluz.org/index.php/rcs/article/view/32442/33870>
- Carro-Suárez, J., Sarmiento-Paredes, S. and Rosano-Ortega, G. (2017). Organizational culture and its influence on corporate sustainability. The importance of culture in corporate sustainability. *Estudios Gerenciales*, 33(145), 352-365.
<https://doi.org/10.1016/j.estger.2017.11.006>
- Gairín, J., Muñoz, J.L., Silva, P. and Suárez, C.I. (2020). Informal teacher learning: linkage with professional and organizational development. *Revista Brasileira de Educação*, 25.
<https://www.scielo.br/pdf/rbedu/v25/1809-449X-rbedu-25-e250046.pdf>.
- Gonzales-Campos, J. , Aspeé-Chacón, J., Sessarego-Espeleta, I., González-Suárez, H. Gómez-Osorio, R. (2018) Analysis of scientific production in educational policy and management published in ScieLO 2012-

2015. *Revista Electrónica Educare*, 22 (3), 1-22.
<https://www.revistas.una.ac.cr/index.php/EDUCARE/article/view/8706/13361>
- Mikhnenko, P. (2017). Mathematical models of organizational development and organizational change. *Journal of quantitative methods for economics and business*, 25, 42-53.
<https://www.upo.es/revistas/index.php/RevMetCuant/article/view/2378/2710>
- Morgado-Pereira, S., Paim-Pacheco, M., Estrela-Rego, I. (2019). Risk perception and organizational capacity building in the Azores. *PsyEcology*, 11(1). 116-129.
<https://www.tandfonline.com/doi/full/10.1080/21711976.2019.1644005>
- Moreno, C. I. (2017) Reforms in public higher education in Mexico: ruptures and continuities. *Revista de la Educación Superior*, 46(182). 27-44.
<http://dx.doi.org/10.1016/j.resu.2017.03.001>
- Nurminingsih, Nimran, U., Suharyono and Abdillah, Y. (2020) Implication of work environment, market and learning orientations on innovation in Indonesia. *Option Magazine*, 36, Eng. 27. 65-79.
<https://www.produccioncientificaluz.org/index.php/option/article/view/31971/33208>.
<https://www.produccioncientificaluz.org/index.php/option/article/view/31971/33208>

- Oviedo, A.I. and Almendrales, G. (2018) Study on Learning Styles using Data Mining as a support for Academic Management in Educational Institutions. *RISTI - Revista Iberica de Sistemas e Tecnologias de Informacao*, 29, 1-13. <http://www.scielo.mec.pt/pdf/rist/n29/n29a02.pdf>
- Povedano-Jiménez, M., Granados-Gamez, G., & García-Caro, M. (2020). Work environment factors in coping with patient death among Spanish nurses: a cross-sectional survey. *Revista Latino-Americana de Enfermagem*, 28. <http://dx.doi.org/10.1590/1518-8345.3279.3234>.
- Riquelme, H., López, S., Riquelme, M. and Meza, N. (2020). Conditions and work environment of retail workers in La Araucanía, Chile. *Izquierdas Magazine*, 49 (91), 1804-1829. http://www.izquierdas.cl/images/pdf/2020/n49/art91_1804_1829.pdf
- Scholze, A. R. , Martins, J. T. , Galdino, M. J. Q. , Moreira, A. A. A. O. Costa, V. M. L. and Trevisan, G. S. (2020). Nurses' perceptions about the influence of the labor environment in the use of psychoactive substances. *Revista Brasileira de Medicina do Trabalho*, 18(1). 30-36. <https://www.rbmt.org.br/details/1502/pt-BR/percepcoes-de-enfermeiros-sobre-a-influencia-do-ambiente-laboral-na-utilizacao-de-substancias-psicoativas>

Qualities of leadership in the quality of human relations teacher

Héctor Raúl Santa María Relaiza
Amado Fernández-Cueva
María Isabel Denegri Velarde
Lida Ivonne Lima Cucho
Norma Alderete Campos

Introduction

In this research it is considered that for there to be a good educational organization there must be a good leader who has the necessary characteristics to lead and carry forward the institution as a company, it must be a self-motivated, positive, disciplined, committed and competent person, there must be job satisfaction among the teachers who work, there must be good communication, motivation, avoiding conflicts and encouraging assertiveness among teachers at the secondary level with the aim of improving human relations in the educational institutions under study, achieved this will have more competitive teachers, cohesive, aimed at achieving the planned goals, with a good disposition. For Segovia (2019), it is considered that the improvement of student learning, is the ultimate

primary objective that argues the educational practice and is due to the teamwork of the institution, both managers and teachers (p. 898).

As the process of globalization and modernity changes and advances, organizations put into practice paradigms associated with the management and mastery of technology that seems to have no brakes and limits, affecting lifestyles within them; however, this is not the most important point of interest. According to Romero (2021), organizations need individuals capable of leading and facing the new and incessant challenges that are part of the greatest transformation in our history (p. 76).

At the global level, countries have undergone a vertiginous transformation in economic, social, political, scientific and technological matters. This progress in the 21st century is carried out with greater speed, generating a constant rethinking in the decisions that are taken to solve the multiple and different problems that afflict the different sectors of a country. For Romero (2021) in Latin America, it is a challenge to achieve inequalities in the educational system, evidencing a wide gap between the needy and the wealthy (p.74).

The education sector is not exempt from these changes, it is necessary to insert itself quickly and assertively to the changes that the globalized world demands, being an indispensable requirement that the teaching staff and the

director of the educational institutions lead these changes and get involved in them, to benefit mainly the students. For Romero and Krichesky, (2019), [in this context, different influencing factors are observed], such as managerial leadership, depending on this leadership to be able to generate input and eliminate gaps, in order to achieve a desired educational quality (p. 3).

According to the General Education Law and the Public Teaching Career Law, the principal is the highest authority and legal representative of the Institution; in this sense, he/she is responsible for the educational, pedagogical and administrative management processes. Likewise, our contemporary world demands an interactive and participative educational management practice, where the principal must be the individual capable of guiding groups of people, taking into account innovation and permanent change in the organization. He/she must also actively intervene, taking advantage of the members of the educational community as well as the human resources of the institution, intervening in the different roles to which he/she must attend in order to achieve the objectives he/she has set without major difficulties, seeking to adapt to changing situations.

It should be emphasized and considered that educational institutions should be managed by individuals whose professional qualities and skills are linked to communication, motivation and establishment of

interpersonal relationships within an educational management, in which human relations play a leading role. For Segovia (2019) throughout different researches, a set of four key dimensions of leadership practices that produce learning in students are determined: consolidating a direction with point of view, expectations, team objective; in addition to building relationships (p. 904).

For Catalán, Villalobos and Muñoz (2020) emphasizes that the educational manager must respect and fulfill his functions, highlighting among them leadership, since it will serve as a means to develop an educational management with a mission and vision, which will help him to plan his work and also to control, guide, direct and evaluate teachers and other members of the educational process, considering that the success of an organization depends on the growth and development of those who integrate it, thus it is the directors of educational institutions who must lead these processes (p. 464). Therefore, Rodríguez, Couturier and Jiménez (2020) argue that the United Nations Educational, Scientific and Cultural Organization (UNESCO) considers it essential to train the directors of educational institutions in management issues, since the management of educational institutions contributes to the administration of education and requires capacity, greater professionalism and leadership in the use of management tools for educational quality (p. 42). According to the management of effective leadership, the management of

the establishments and the organization of human resources is given.

Therefore, the role played by the principal is also vital to establish good relationships among teaching staff, the interrelationship established between two or more people who are in psychological contact, where feelings and emotions come into action, as well as reason and intelligence, will depend on his or her management and persuasion. According to Romero and Krichesky (2019) studies to date point out that educational policies in different countries that highlight and work based on achievements of excellence expose that the principal is a key factor, however, it is still not given due importance, it is still in Latin America a character that is missing (p. 6).

For Sanz-Ponce, López-Luján and Gonzales-Bertolín (2021) the teaching staff will always try to find a leader who exerts influence on the group to remain unified regardless of personal interests (p. 175). The climate in the interpersonal relationship will depend on the relationship that exists in the group, there are difficult communications without harmony, with personality conflicts where feelings are not expressed and the group does not support the individual. In another case there is conformism, apathy, resignation, passive acceptance of authority, being totally dependent, aggressive. There can also be a climate where listening, truth, mutual understanding are preached, the group is

flexible and creative, working as a team and communications are easy.

Consequently, it can be highlighted that the educational institution the public educational institutions of the network No. 01 of Ventanilla- 2018, lacks a directive or managerial system which in turn translates into absence of effective leadership, which has an impact on efficient human relations, it is inferred from planning, that in addition to planning, organizing, executing and controlling activities of an educational organization, the primary role of a leader is to influence others, demonstrating excellent institutional management, an act that does not exist so it is very necessary and urgent to investigate the reason for the existing problems in order to provide alternative solutions and improve the way of acting of all members of the public educational institutions of the network No. 01 of Ventanilla-2018 that negatively affects institutional development.

In view of the problems described above, it is observed that there is a lack of leadership on the part of principals, a deficiency that is noticeable and that would have a negative impact on human relations at the level of teachers within each educational institution under investigation. Likewise, it is perceived that there is a crisis of institutional leadership at the national level, and this is the reason that motivates us to carry out this more in-depth research on the subject, which is why it is fundamental to investigate the relationship that exists between the leadership style of

the principal and the human relations of teachers at the secondary level in the public schools of network 01 of the UGEL-Ventanilla. Consequently, it is deduced that the leadership style will imply managing the educational institutions, generating mechanisms of effectiveness, which will probably have an impact on improving human relations among secondary school teachers, responding to the challenges and demands of the globalized world.

In view of the inadequate management policies that affect human relations in the public educational institutions of the network 01 of the UGEL-Ventanilla, it is urgent to find a solution to such problems that condition the participation and empowerment of the human resources of the educational institution, establishing improvement actions to reduce conflicts that allow the creation of good human relations among teachers. This fact motivates to investigate the predominant styles of leadership and human relations for which the following question arises.

Educational leadership: characteristics and importance

For Griffith, Nordbäck, Sawyer and Rice (2018) leadership can be interpreted by two central pillars: sense of direction, where you point; and the power to influence the team through a relational work (p. 2). For Bolivar (2017) leadership can be said not to be equal to leader, but refers to the functions exercised at the organizational level, as opposed to being a position, it is the one who exerts that

influence; being the person who exerts power over others (p. 100-102). Educational leadership refers to the person who leads or manages the school institution, influencing the behavior of the team, aiming at educational quality, as a search for student learning.

For Eliyana, Ma'arif and Muzakki (2019) the interpersonal influence exerted in a situation that explain how leadership is exercised by principals of educational institutions and how they manage to improve human relations taking into account the goals and purposes in the school organization led through the process of human communication is a critical aspect in the performance of principals (p. 145).

For Martínez-Valdivia, García-Martínez and Higuera-Rodríguez (2018) a leader always has objectives to pursue, a purpose in his or her action and has the strength to commit a work team to the achievement of these (p.36). Therefore, a leader does not work alone, encourages and strengthens teamwork, according to the level of responsibility of each employee. Leadership is the ability of an individual to influence a group in order to achieve goals and meet objectives, if only the transformational leadership style is taken into account. For Lusquiños (2019), the goals to be set are the means to articulate the different points of view of the members of an organization in order to build a shared vision of the school (p. 147).

For Maureira and Garay (2019), they propose distributed leadership as a model for understanding leadership in educational institutions, understanding collaborative leadership, shared leadership, co-leadership, democratic leadership and situational leadership as synonyms of distributed leadership (p. 146). Leadership is the action of influencing others; the attitudes, behaviors and skills of directing, guiding, motivating, linking, integrating and optimizing the work of individuals and groups to achieve the desired objectives.

For Bass (in Zapata, et al., 2018; Perilla-Toro and Gómez-Ortiz, 2017, p. 43), leadership is characterized by a strong drive towards responsibility and task accomplishment, persistence in achieving goals, originality in problem solving, initiative, self-confidence, ease in taking charge of interpersonal tensions, high frustration tolerance, ability to influence people's behaviors, and capacity to structure social interactions. Likewise, for Yagil and Oren (2021), servant leadership shows a vision of growth and empowerment, being the leaders who are the model, by offering the necessary help, executing their actions in an ethical manner and with the care of the team, they are the ones who originate the institutional functioning (p. 58-59).

According to Hurn and Murillo (2016), leadership should be understood as a process that includes influencing the task objectives and strategies of a group or organization; the people to implement the strategies and achieve the

objectives; the groups so that there is identification among its members and on the culture of the organization (p. 65). In addition, an individual is considered to lead the process, thus becoming the leader with all the implications that this entails.

Analyzing the theories on leadership these theories can be classified into six groups: great man theory, behavioral theory, trait theory, Maslow's z-man theory, Sigmund Freud's theory, behavioral theory. Taking into account the different theories on leadership styles, the following dimensions have been taken: charismatic leadership, participative leadership, delegative leadership, transformational leadership and transactional leadership. For Martínez-Valdivia, et al (2018) the leadership characteristics and strategies that should be taken into account to manage an educational institution are: the challenge of the center, the qualities of the management team and the work with the student body (p. 37). For Romero (2021), managerial leadership in the school institution is the second component of educational management, which has an indirect consequence for achieving learning, as it is an important part of teacher motivation and school climate, in addition to ensuring working conditions and professional development (p. 75).

Human relations

Human relations constitute an increasingly voluminous body of knowledge whose objective should be to explain and predict human behavior in any organization.

Human relations refer to the art of getting along with others, as well as the set of characteristics and behaviors that human beings have, as sociable beings with other people. For Oswal (2020), whenever there are relations with people, in any situation, the field of human relations is considered to be immersed (p. 880-881).

According to Araya-Guzmán, Ramírez-Correa, Chiang and Alfaro-Pérez (2020), taking into account principles extracted from the science of psychology, it can be seen that the success or failure of a person at any social, cultural, labor and professional level depends largely on the integral development of the personality, its emotional capacity and good mental health, since the deficient adjustments of the personality force a better adaptation, understanding of the problem and sincere desire to adapt (p. 644).

Human relations are the norms and habits that make people useful and pleasant, the human element being the essential part of organizations (Adiguzel, Ozcinar and

Karadal, 2020, pp. 104-105). Araya-Guzmán, et al, (2020) affirms that good human relations benefit especially the person who practices it, his/her family members, co-workers, friends, the public and of course the institution where he/she works (pp. 650-651).

Therefore, problems in human relations occur as a result of the commitment of those involved in their own perspectives, ideas, opinions and feelings that abuse or overlook those of others and related to the field of education these problems occur frequently among members of the educational community, which is why a good leader with transformational characteristics is required to motivate people to commit to achieving the vision of the educational institution.

Human relations in the educational environment, we talk about the teachers who are working in the institution, who are of vital importance to be motivated, have a level of commitment, maintain the degree of confidence, sense of self-efficacy and sense of well-being; being a product of the leadership of the directors (García-Garnica and Martínez-Garrido, 2019, pp. 7-8). Therefore, it can be said that, the teacher who has felt expert in his work and feels that the actions are correct, is more motivated and is able to innovate. For the same reason, the aim is to apply leadership focused on the development of people by

boosting teacher satisfaction, self-confidence and commitment (Hurn and Murillo, 2016, p. 65).

Consequently, with the theory of human relations, another conception of the nature of man emerged: the social man based on the following aspects: "workers are complex social creatures who have feelings, desires and fears", i.e. man is motivated and incentivized by social and economic stimuli taking into account that the human being is a social creature in need of humanizing and democratizing management (being equitable with all employees), freeing it from the rigid and mechanical concepts of the classical theory. (Chiavenato, 2006, p. 100).

According to Chiavenato (2006) human relationships are conscious contacts established between people, employees and their colleagues, subordinates, their bosses and the elements of a section (p. 114). That is why groups of people are characterized by the human relationships established by their members. The personal interrelationship, first of all, makes it possible to satisfy a primary desire that is directed to the reason, to the human intelligence. It responds, secondly, to the need to persuade, addressing then the affectivity, that is to say, the feelings and emotions.

Consequently, interrelation is the foundation of all social life; if it is suppressed, the human being will cease to exist as such. From the moment of his birth to the moment of his death, the individual will establish exchanges, it is a shared activity and especially in his workplace. In this case that shows that human relations is the capacity of interrelation of the human being, where feelings and emotions come into action, in a certain context such as an educational center in which a specific profession was developed.

The theories of organizational management describe how to maintain good human relations in all organizations and for this to take place they take into account the following dimensions: job satisfaction, communication, motivation, social conflict, assertiveness,

The research was quantitative, basic descriptive level of correlational design. The population frame is constituted by 506 teachers of secondary level of public educational institutions of the network N° 01 of the UGEL Ventanilla of, 2018. For the selection of the population, it was taken into account that the educational institutions should meet the following criteria: the educational institutions should be public and the educational institutions should have a secondary level. The sample obtained in a probabilistic way and under the non-random, stratified sampling technique is made up of 209 teachers. The technique used was the survey and the questionnaire instruments, which

were validated by five expert judges and subjected to a reliability test, resulting in a Cronbach's alpha coefficient of 0.834 (strong reliability) for the first leadership questionnaire, and a Cronbach's alpha coefficient of 0.776 (strong reliability) for the second questionnaire on human relations.

The data collected were statistically processed and presented in tables and graphs to facilitate their interpretation. The aforementioned procedures were carried out using SPSS version 20 statistical software.

The influence of Leadership on Human Relations

According to the results obtained, Table 1 shows that most of the teachers of the public educational institutions of the network N° 01 of the UGEL of Ventanilla - 2018, in 82.19%, consider that leadership presents a medium level, indicating with this result that some skills of educational management should be strengthened. On the other hand, a group of teachers (11.42%) consider that there is a high level of leadership in the educational institution.

Table 1 Results of the variable: Leadership.

Leadership Levels	Frequency	Percentage (%)
high	25	11.42
medium	180	82.19
under	14	6,39
Total	219	100%

Source: Questionnaires applied

The result obtained is observed in Table 2 shows that the level of interpersonal relations is high in 37.90%, however, most teachers have the perception that there is a moderate level of interpersonal relations in 52.97%, also 9.13% consider that the level of interpersonal relations is low of the public educational institutions of the network No. 01 of the UGEL of Ventanilla - 2018.

Table 2. *Results of the variable: Human relations.*

Levels of interpersonal relations	Frequency	Percentage (%)
high	83	37.90
moderate	116	52.97
under	20	9.13
Total	219	100%

Source: Questionnaires applied

As part of the hypothesis testing, the General hypothesis is considered: There is a positive and significant relationship between the predominant leadership style of the principal and human relations of teachers at the secondary level in public educational institutions of the network No. 01 of the UGEL Ventanilla, 2018. And the null hypothesis: There is no positive and significant relationship between the

predominant leadership style of the principal and human relations of teachers at the secondary level in the public educational institutions of the network N° 01 of the UGEL Ventanilla, 2018.

The results of the statistical analysis show the existence of a relationship $r = 0.660$ between the variable: Leadership and human relations. This degree of correlation indicates that the relationship between the variables is positive and with a moderate level of correlation. The significance of $p=0.000$ shows that p is less than 0.05, which indicates that the relationship is significant, therefore, the null hypothesis is rejected and the researcher's hypothesis is accepted.

Table 3. *Spearman's correlation coefficient.*

			Leadershi	Human
			p	Relations
Spearman an correlati on	Leadership	Correlation coefficient	1,000	0,660**
		Sig. (bilateral)		0,000
		N	219	219
	Human Relations	Correlation coefficient	0,660**	1,000
Sig. (bilateral)		0,000		
N		219	219	

Note: **. Correlation is significant at the 0.01 level (bilateral).

It is concluded that: Leadership has positive and significant relationship with human relations in public educational institutions of the network N° 01 of the UGEL Ventanilla, 2018.

Conclusions

Finishing the statistical analysis of the research, the following conclusions were reached: Taking into account the studied theory of both variables and the application of the questionnaire it can be determined that the predominant style of leadership and human relations obtain the value of $r = 0.660$ demonstrating that there is a moderate but significant correlation between the predominant style of Leadership and human relations, likewise the bilateral significance of $p = .000 < 0.05$, rejecting the null hypothesis. Therefore, it is affirmed, with a 95% probability that there is a positive and significant relationship between the predominant style of leadership and human relations among teachers at the secondary level in public educational institutions of the network No. 01 of the UGEL Ventanilla, 2018. Finally, it is concluded that the most predominant leadership style in the educational institutions under study is the participative leadership style (75.80%), and it is also confirmed that human relations in its job satisfaction dimension (68.49%), is the one that is most practiced in the educational institutions of network No. 1 of the UGEL Ventanilla.

References

- Adiguzel, Z., Ozcinar, M. F. and Karadal, H. (2020). Does servant leadership moderate the link between strategic human resource management on rule breaking and job satisfaction?. *European Research on Management and Business Economics*, 26 (2). 103-110. <https://doi.org/10.1016/j.iiedeen.2020.04.002>
- Araya-Guzmán, S., Ramírez-Correa, P., Chiang, M. and Alfaro-Pérez, J. (2020). Exploring antecedents and consequences of the Success of Human Resource Information Systems in Educational Establishments. *RISTI - Revista Iberica de Sistemas e Tecnologias de Informacao*, E28, 642-653. <http://www.risti.xyz/issues/ristie28.pdf>.
- Bolívar, R. (2017). Political leadership: the case of Andrés Manuel López Obrador in the National Regeneration Movement (MORENA). *Estudios Políticos*, 42. <https://doi.org/10.1016/j.espol.2017.05.006>
- Catalán, J.P., Villalobos, R. and Muñoz, C.E. (2020). Professional Learning Communities (PLCs): A Theoretical Review for Directive Management and the Achievement of Pedagogical Leadership in 21st Century Schools. *Fronteiras: Journal of Social, Technological and Environmental Science*, 9(3), 462-477. <https://doi.org/10.21664/2238-8869.2020v9i3.p462-477>.

<https://doi.org/10.21664/2238-8869.2020v9i3.p462-477>

Eliyana, A., Ma'arif, S. and Muzakki (2019). Job satisfaction and organizational commitment effect in the transformational leadership towards employee performance. *European Research on Management and Business Economics*, 25 (3). 144-150.
<https://doi.org/10.1016/j.iedeen.2019.05.001>

García-Garnica, M. and Martínez-Garrido, C. (2019). Dirección Escolar Y Liderazgo En El Ámbito Iberoamericano. *Revista de curriculum y formación del profesorado*, 23(2).
<https://dialnet.unirioja.es/servlet/articulo?codigo=7038394>

Griffith, T. L., Nordbäck, E. S., Sawyer, J. E, & Rice, R. E. (2018). Field study of complements to supervisory leadership in more and less flexible work settings. *Journal of Organization Design*, 7 (10).
<https://doi.org/10.1186/s41469-018-0034-5>.

Hurn, A., & Murillo, F. (2016). Incidence of school leadership on teacher engagement: A multilevel study. *Psychoperspectives - Individual and Society*, 15(2), 64-77.
<https://www.psicoperspectivas.cl/index.php/psicoperspectivas/article/viewFile/746/500>

Lusquínos, C. S. (2019). Prácticas De Liderazgo Distribuido Y Mejora Escolar. Evaluación De Un Ciclo De

Capacitación De Principales. *Journal of Curriculum and Teacher Education*, 23 (2). 131-151.
<https://doi.org/10.30827/profesorado.v23i2.9298>

Martínez-Valdivia, E., García-Martínez, I., & Higuera-Rodríguez, M. (2018). Leadership for School Improvement and Social Justice. A Case Study on a Compulsory Secondary Education Center. *REICE. Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 16 (1), 35-51.
<https://revistas.uam.es/reice/article/view/9029/9280>

Maureira, O. and Garay, S. (2019). Towards measuring the distribution of leadership in effective and vulnerable schools in Chile. *Perfiles Educativos*, 41(166).
<https://doi.org/10.22201/iissue.24486167e.2019.166.58718>

Oswal, N. (2020). Human resources role in redefining the workplace diversity. *Opcion Magazine*, 36, SE26, 876-891.
<https://produccioncientificaluz.org/index.php/opcion/article/view/31749/33011>.

Perilla-Toro, L. E. & Gómez-Ortiz, V. (2017). Relationship of transformational leadership style to employee health and well-being: the mediating role of trust in the leader. *Journal of Work and Organizational Psychology*, 33, 95-108.
<https://doi.org/10.1016/j.rpto.2017.02.005>

- Rodríguez, A., Couturier, D. P. and Jiménez, R. G. (2020). Basic schooling among adults in Mexico. *Perfiles Educativos*, 42(170), 40-59. <https://doi.org/10.22201/iisue.24486167e.2020.170.59390>
- Romero, C. (2021). Managerial Leadership in Schools that Overcome Contextual Barriers. REICE. *Iberoamerican Journal on Quality, Effectiveness and Change in Education*, 19(1), 73-90. <https://doi.org/10.15366/reice2021.19.1.005>
- Romero, C. and Krichesky, G. (2019) The School Principal in Argentina: A Key, But (Still) Invisible Actor. A Study on the Norms, Working Conditions and Training of Public School Principals. *Education Policy Analysis Archives Journal*, 27(12). <https://epaa.asu.edu/ojs/article/view/3576/2202>
- Segovia, J. D. (2019). A school leadership with pedagogical leadership capacity. *Revista mexicana de investigación educativa*, 24 (82), 897-911. <https://dialnet.unirioja.es/servlet/articulo?codigo=7268798>
- Sanz-Ponce, R., López-Luján, E. and Gonzales-Bertolín, A. (2021). Proposal of a model of pedagogical leadership for principals of primary schools. Application of confirmatory factor analysis. *Estudios sobre educación*, 40. 173-193. <https://revistas.unav.edu/index.php/estudios-sobre-educacion/article/view/39833>.

- Yagil, D. and Oren, R. (2021). Servant Leadership, Engagement, and Employee Outcomes: The Moderating Roles of Proactivity and Job Autonomy. *Journal of Work and Organizational Psychology*, 37(1), 58 - 67. <https://doi.org/10.5093/jwop2021a1>
- Zapata, C., Demmler, M. and Uribe, A. (2018). Leadership in the implementation of an eco-efficient culture in organizations. *Revista Producción y Limpia*, 13(1), 43-53.
<http://repository.lasallista.edu.co:8080/ojs/index.php/pl/article/view/1796/210210270>

Managerial skills and their relationship to staff job satisfaction in state-run alternative basic education centers.

Fernando Isaías Aguilar Padilla

María Isabel Denegri Velarde

Mercedes Alejandrina Collazos Alarcón

Miriam Corina Castro Rojas

Kony Luby Duran Llaro

Introduction

In the era of knowledge, a new trend is being created with the indication that professionals must manage management skills, the same that must be integral with the job satisfaction of individuals who are members of organizations, is a current issue that occupies the main agendas of the governments of all countries by the growth

and economic and social impact that is observed in the different sectors and services provided by the business world and state.

In relation to the managerial skills of those who are in charge of educational institutions, as is the case of the CEBAs, the directors need to have and maintain basic administrative skills such as technical, personal and conceptual skills because they must adapt to the reality of a changing world, This forces today's professionals to apply new forms of strategies in management and personal relations as well as the handling of new technological tools that allow them to show an efficient and effective work in educational management, and above all to look for ways to be closer to the teacher, offering motivation, value of their work, establishing a close relationship with the work teams, with the objective of committing them to the institution and thus finally reaching the goals entrusted to them.

The national education system is organized in three basic modalities: Regular Basic Education (EBR), Alternative Basic Education (EBA) and Special Basic Education (EBE). Our research focuses on the problematic reality of Alternative Basic Education, understood as an organized system that provides educational service, that is, as an educational enterprise, where managerial skills were under direct observation.

Likewise, for Serrano (2017), they point out that the most sustainable managerial skills are leadership, communication, teamwork, conflict resolution and decision making (p. 209-210). Similarly, Pereda-Pérez, López-Guzmán and González-Santa Cruz (2018) point out that managerial skills are those that improve effectiveness, considering communication, knowing how to make decisions and being aware of the risk that each one entails, having creativity to innovate, planning between resources and time, working as a team and having assertiveness (p. 202). Also, Serrano (2017) states that they are a group of technical; human; and conceptual skills, also known as strategic (pp. 210-211).

In the Alternative Basic Education Centers of UGEL 04, there is dissatisfaction among teachers due to the conditions in which they carry out their teaching duties, in an environment with poor lighting, lack of maintenance, poor ventilation, where teachers feel that the economic retribution received is not commensurate with the work performed; In the same way, the work environment is tense on many occasions, communication among principals is vertical and not horizontal as it should be, there are no good interpersonal relationships among teachers, principals do not coordinate for supervisions, and they do it in an arbitrary manner.

From what has been described, teachers do not feel motivated or identified with the educational institution, they are not motivated by the principals in view of their achievements during the educational period; likewise, they do not feel motivated to improve their personal and professional development; in the same way, passive principals are observed, who are only concerned about their well-being and personal development, leaving aside the improvement of the educational institution, they do not plan the development of activities, often supported by the lack of supervision by the UGEL.

According to the internal observation made in the development of the activities of teachers in schools within the parameters of job satisfaction and work environment, it was considered of great importance to have an updated study of the situation that persists in educational institutions with respect to job dissatisfaction of teachers; Therefore, it was considered of great importance to have an updated study of the situation that persists in educational institutions with respect to job dissatisfaction of teachers, it is observed that teachers day by day give less importance to their pedagogical work, only attend the educational institution to fulfill their hours, which results in the deterioration of the quality of educational service, it is this problem described what allows the research to be carried out.

Management skills: characteristics and importance

Pereda-Pérez, et al, (2018) point out that managerial skills are capabilities, roles and functions performed by a director with managerial skills and offers him techniques to perform a good organization and administration of time and resources. These skills should ensure greater effectiveness, such as people development and communication skills (p. 203). In addition, for Leyva, Cavazos and Espejel (2018), the knowledge, skills and aptitudes of today's manager must have knowledge and competencies related to the economic, financial, commercial, legal, marketing and personnel management fields, and be able to handle at least two languages to develop the necessary skills to achieve efficient results (p. 3).

Management is the central part of administration, since it is through it that the results that will ultimately serve to evaluate the manager are achieved; complicated planning, organization and control techniques will have little effect if the work of management is deficient. For Salvador (2019), management is the most practical and real part, since it deals directly with people, and these are the ones who ultimately influence the success or failure of the social organism (p. 275). Managerial skills involve various capabilities and knowledge that must be possessed or acquired. It can be said that, managerial skills consider a series of skills that influence the performance and

competitiveness of the organization (González and Ley, 2019, p.17).

In the business world, management skills are all those qualities necessary to manage one's own life, as well as relationships with others. These are part of the leadership capacity of managers and involve personal and professional effort. For this reason, it is said that in the educational field, the principal is responsible for the school's assets and documentation, and is also the head of personnel. A function usually forgotten in the pedagogical consideration and that, nevertheless, constitutes one of the decisive cores of its management. The skills that the person who directs must master are communication, assertiveness in decision making and planning, being a leader, time and resource management, as well as teamwork.

The knowledge and ability to perform actions that contain management instruments, processes, techniques and instructions. Therefore, it represents working with certain tools and techniques to achieve the stated objectives. For Serrano (2017), skills are classified into technical, human and conceptual. However, it should be taken into account that technological development requires innovation competencies to be acquired in processes and management (pp. 212-213).

They are indispensable for all the extracurricular activities that sustain the life of the school and, with it, the work of the classrooms. For this reason, management requires the consensus and, if possible, the support of the teaching staff. The relationship between boss and subordinate, in strictly labor terms, seems to be a fundamental condition to achieve this: from the control of punctuality and schedules, the management of the working day, permissions and criteria to justify absences, to the ways of supervising and encouraging performance with students.

The principal is also expected to promote a positive institutional climate conducive to work, in this sense, he/she should be skilled in conflict management and be able to establish positive and constructive relationships with the different school actors. The school organization enables principals to counterbalance the power of the group by establishing individual and vertical working and professional relationships with their teachers.

Job satisfaction

The studies related to job satisfaction provide fundamental knowledge in relationships; which since the 60's and with greater influence in the 80's the various studies conducted in relation to management skills and job satisfaction have been considered as a determining and essential factor in organizations to keep their workers satisfied.

The human being is a social being, that is to say, he cannot live isolated because among his needs is that of relating to

the external world, with the purpose of living together as harmoniously as possible, this would not be possible without good communication, which is responsible for transmitting information and receiving it. and to receive it. The behavior of man is not necessarily conditioned to the economic aspect, nor to the orders of an instructor, it undoubtedly depends on the social relations that are established, on the conditions of empathy that can be established and of course on personal motivations. For Pino, Areválo-Avecillas, and Padilla-Lozano (2020), they point out that "job satisfaction refers to a positive emotional state, as a result of the subjective perspective of the experiences of workers in the organization" (p. 208).

The word satisfaction, from the Latin *satisfacit*o, is the action and effect of satisfying or being satisfied. This verb refers to paying what is owed, satisfying an appetite, calming the passions of the mind, satisfying demands, rewarding a merit or undoing a grievance. According to Herzberg (in Eirin, Hernández, Valdez-Prieto, Fuentes and Robaina, 2020, p. 2). Job satisfaction is related to two motivational elements: intrinsic and extrinsic, satisfaction is achieved by the integration of both factors (St-Jean and Duhamel, 2020, p. 321). Satisfaction is the value of feeling good in the midst of some situation, and for some reason provides joy and comfort with the moment being lived, it leads to longing for what is happening to never end (Gutiérrez-Coba, 2020, p. 6).

Professional motivation can be defined as the degree of effort that people are predisposed to make in their work (Alarcón, Ganga-Contreras, Pedraja and Monteverde, 2020, p. 3). Job satisfaction is the effective response derived from a positive or negative evaluation of the work performed; this is a consequence of the objective conditions of the job, which acts as an antecedent of the behavior of people in the organization (Setiawan, Aliyana, Suryani and Christopher, 2020, pp. 337-338).

It should be specified that different people show or express different degrees of satisfaction due to the fact that the subjective nature of satisfaction will not depend only on the objective conditions but also on the evaluation that the person makes of these conditions depending on personal characteristics, needs, sociodemographic characteristics, etc. (García, Fulquez and Vázquez, 2020, pp. 237-238).

The specific work environment that a person makes job satisfaction, the person gets an assessment of the context in which he/she works (Zafra, Tenorio-Mucha and Bazalar-Palacios, 2020, p. 3). However, the manifestation of attitudes of dissatisfaction, are affected in efficiency and quality of care, as well as the personal well-being of employees (Bernal and Flores, 2020, pp. 278-279). The functioning of educational institutions is also part of an organizational process of the educational environment, the educational policy can address job satisfaction, attending

to the institutional functioning and management of teachers (Tomás, De Los Santos and Fernandez, 2019, p. 67).

Management skills have become the fundamental study of business schools today, many companies have failed due to problems of their managers not making good decisions. The research will help to increase the results of the organization, such as profitability and reduce costs in unnecessary administrative processes. In addition, it directly benefits the organization and the results capacity of UGEL 04. The research will maximize results for learners, teachers and the educational organization.

The research is of a basic type, with a non-experimental, transversal or cross-sectional correlational-descriptive orientation, applying quantitative methodology in the analysis and interpretation of the data on the sample determined by the directors and teachers in the Alternative Basic Education Centers of UGEL 04. The CEBAs have sufficient personnel and resources to offer diverse programs and forms of quality attention to children, adolescents, young people and adults who are currently excluded from the system or are provided with educational services that are not in accordance with their reality, with a total of 320 directors and teaching staff. The staff is divided into two areas where there are directors and teachers as follows: (a) Director: The directors of the CEBAs of UGEL

N° 04. (b) Teaching Staff: Teachers who work in the CEBAs of the initial cycle, intermediate cycle and advanced cycle, by different curricular areas. Both are objects of study, since they are a fundamental part of the development of UGEL N° 04 and the CEBAs. After the application of the formula, it was determined that the sample is 172 respondents, of which the simple random sampling procedure was applied.

After having performed the Cronbach's alpha analysis, the following result was obtained through the analysis of the 30 items obtaining a 0.922% reliability of the data collection instrument and denominating it according to the range with a high magnitude of reliability by means of the SPSS statistical study. A pilot survey was applied to 10 subjects in order to determine the reliability and validity of the survey. The questionnaire was evaluated by an expert, in our case the methodological advisor of the course, and validated by means of Cronbach's Alpha coefficient. The information obtained was processed in the statistical package (SPSS); this package stores the data, performs the calculations and provides relevant information for the study.

The impact of managerial skills on job satisfaction

The results of the application of the managerial skills scale show that more than 83.8% of principals should have the skills and knowledge to determine the main needs of

teachers, while 16.20% of teachers indicate that they do not agree that principals have the skills and knowledge to determine the main needs of teachers.

On the other hand, in relation to the second variable, the objective of the research was to analyze if the managerial skills: personal, interpersonal and group skills developed in the function performed by the principals allow developing and/or establishing adequate working conditions and expectations for the teaching staff, relating among themselves and complying with the proposed norms and the styles of the principals, that is why the results found in job satisfaction are discussed, for which a scale was administered. It is in that sense, with the demonstration of the present descriptions, the existence of a relationship between both variables is denoted, since the results obtained do not necessarily adjust to the antecedents or studies previously considered.

Next, the data obtained in the field were analyzed using the SPSS program to determine the level of relationship of our variables and thus reach the conclusion of the following research; proposing as an alternative hypothesis: the existence of Personal, Interpersonal and Group management skills in the Principals positively influences the job satisfaction of the Teaching Staff of the CEBA's of the UGEL N 04 in the year 2013. Likewise, the null hypothesis that arises: the existence of Personal,

Interpersonal and Group management skills in the Principals does not have a positive influence on the job satisfaction of the Teaching Staff of the CEBAs of UGEL N 04, in 2013.

The percentage of total variability that is explained by the simple linear relationship between the managerial skills and job satisfaction variables is 83.8%. Continuing with the statistical interpretation, the "Anova" table was analyzed to confirm the relationship between the variables under study.

Table 1: ANOVA

Model		Sum of squares	df	Root mean square	F	Sig.
1	Regression	576,898	1	576,898	97,057	,000b
	Residual	95,102	21	5,944		
	Total	672,000	22			

a. Dependent variable: JOB SATISFACTION

b. Predictor variables: (Constant), MANAGEMENT SKILLS.

To make decisions, the column entitled sig. is interpreted, which shows a value of $P=0.000$. This value should be compared with the significance level of the test (α) which is 5% or 0.05. Statistical decision: as $0.000 < 0.005$ the null

hypothesis is rejected. In conclusion, there is sufficient evidence to conclude that managerial skills and job satisfaction are linearly associated and that this association is significant ($p=0.0000$). Interpretation of the correlation between managerial skills and job satisfaction: there is sufficient evidence to conclude that managerial skills and job satisfaction are associated in 83.8% and that this association is significant ($p=0.000$).

The linear regression model, which evaluates the model globally; with respect to the correlation coefficient of managerial skills and job satisfaction, a coefficient of 0.927 is determined. In the following investigation the variables are statistically significant ($p=0.000$) and concludes rejecting the null hypothesis and accepting the alternative hypothesis. It is concluded that the personal, interpersonal and group management skills developed by the principals have great relevance in their relationship with the job satisfaction of the teaching staff in the State Alternative Basic Education Centers of UGEL N° 04, a result expressed in the surveys and statistics analyzed.

Conclusions

The purpose of this research was to describe and learn about the relationship established between the managerial skills developed by principals in their functions and the job satisfaction of the teaching staff of the CEBAs, which

means that the skills possessed by the principals have been subjected to a rigorous study, the conclusions of which are as follows:

It is concluded that principals necessarily need to have and always maintain three basic administrative skills such as personal skills, consisting of knowledge and competencies in a specialized field, interpersonal skills of good treatment of subordinates, such as teaching staff, students and educational users in general, and finally, the ability to work in groups to achieve the articulation of pedagogical actions as a team to achieve strategic goals and objectives.

In addition, it is argued that the personal, interpersonal and group management skills developed in the function performed by principals are positively related to the job satisfaction of the teaching staff in the State Alternative Basic Education Centers of UGEL N° 04, during the year 2013. From the results obtained in the present research, it is concluded that teachers indicate that principals should know how to explain how to articulate the functionality of the institution's needs, use appropriate techniques or strategies to overcome low motivation, take into account the suggestions and professional experiences, seek correlates the needs of teachers, a situation that is reflected in the results, demonstrated that 83.8 % state that principals should have skills and knowledge to determine what are the main needs and conflict resolution.

Finally, the results obtained made it possible to verify the hypotheses of the research and to validate it completely. The results obtained will allow their application in other institutions, which will improve the educational work or another thesis in public agencies, on the same or related topics.

References

- Alarcón, N., Ganga-Contreras, F., Pedraja, L. and Monteverde, A. (2020). Job satisfaction and motivation in obstetric professionals in a hospital in Chile. *Medwave*, 20 (4).
<https://www.medwave.cl/link.cgi/Medwave/Enfoques/ComunicacionesBreves/7900.act>.
<https://www.medwave.cl/link.cgi/Medwave/Enfoques/ComunicacionesBreves/7900.act>
- Salvador, J. (2019). Leadership and innovation in the navigation plan of the endocrinology and nutrition specialty. *Endocrinology, Diabetes, and Nutrition*, 66- (5), 275-277.
<https://www.sciencedirect.com/sdfe/pdf/download/eid/1-s2.0-S2530016419300886/first-page-pdf>.
- Bernal, I. and Flores, A. (2020). Job satisfaction of human capital in health sector organizations. *Revista Venezolana de Gerencia*, 25 (E4), 276-296.

<https://www.produccioncientificaluz.org/index.php/rvg/article/view/35192/37229>

Eirin, E., Hernández, R., Valdez-Prieto, Y., Fuentes, L. and Robaina, T. (2020). Job satisfaction in family physicians of a polyclinic in Placetas municipality. *Revista Cubana de Medicina General Integral*, 36 (4). http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21252020000400012&lng=en&tlng=es.

García, L., Fulquez, S. and Vázquez, J. (2020). Job satisfaction in public system teachers in Mexico: Stressors affecting occupational health. *Revista Venezolana de Gerencia*, 25 (E4), 235-246. <https://www.produccioncientificaluz.org/index.php/rvg/article/view/35190/37226>

González, M. and Ley, J. (2019). Managerial skills and their influence on the competitiveness of agribusinesses in the Mexicali Valley, Mexico. *Revista Espacios*, 40 (42), 16. <https://www.revistaespacios.com/a19v40n42/19404216.html>

Gutiérrez-Coba, L. (2020). Professional status and job satisfaction of Colombian journalists. *Comunicación y Sociedad*, 1-26. <https://doi.org/10.32870/cys.v2020.7556>

Serrano, G. (2017). Management skills and virtues: A road to excellence. *Managerial Studies*, 33 (143), 208-216. <https://doi.org/10.1016/j.estger.2017.03.004>.

- Leyva, A., Cavazos, J. and Espejel, J. (2018). Influence of strategic planning and managerial skills as internal factors of SME business competitiveness. *Contaduría y administración*, 63 (3).
<https://doi.org/10.22201/fca.24488410e.2018.1085>
- Pereda-Pérez, F., López-Guzmán, T. and González-Santa Cruz, F. (2018). Managerial skills and gender differences in the public sector: the case of Cordoba (Spain). *Spanish Journal of Political Science*, 46, 199-230.
<https://doi.org/10.21308/recp.46.09>
<https://doi.org/10.21308/recp.46.09>
- Pino, R., Areválo-Avecillas, D. and Padilla-Lozano, C. (2020) Servant leadership and job satisfaction in MBA students. *Revista Formación Universitaria*, 13 (6).
<http://dx.doi.org/10.4067/S0718-50062020000600205>
- Setiawan, R., Aliyana, A., Suryani, T., & Christopher, J. (2020). Creating job satisfaction in a strict organization. *Option Magazine*, 36 (E27).
<https://produccioncientificaluz.org/index.php/opcion/article/view/31988>.
<https://produccioncientificaluz.org/index.php/opcion/article/view/31988>
- St-Jean, É. and Duhamel, M. (2020), Employee work-life balance and work satisfaction: an empirical study of entrepreneurial career transition and intention across 70 different economies. *Academia Revista Latinoamericana de Administración*, 33 (3/4). 321-335.

<https://www.emerald.com/insight/content/doi/10.1108/ARLA-02-2019-0054/full/html>

Tomás, J., De Los Santos, S., & Fernández, I. (2019). Satisfacción Laboral en el Docente Dominicano: Antecedentes Laborales. *Revista Colombiana De Psicología*, 28 (2), 63-76. <https://doi.org/10.15446/rcp.v28n2.71675>

Zafra, J., Tenorio-Mucha, J. and Bazalar-Palacios, J. (2020). Association between rurality index and job satisfaction in physicians and nurses in Peru. 46 (2). <http://www.revsaludpublica.sld.cu/index.php/spu/article/view/1414>

A look from the perspective of leadership education of the public policy of citizen security

Deny Giovanna Calvo De Oliveira

Luis Humberto Bejar

Helga Ruth Majo Marrufo

Rosa Ysabel Bazan Valque

River Chávez Santos

Introduction

Violence and crime is a reality that affects the world in general, and Peru in particular. Latin America and the Caribbean have the highest rates of violence and crime in the world. In 1995, the Latinobarometer indicated that the main problems were: unemployment (23%), low salaries (12.5%), poverty (9.8%) and far behind was crime

(5.2%), while the 2010 survey showed that crime had become the number one concern with 17%, even surpassing unemployment which registered 15%. The situation of violence and crime affects the effective exercise of human rights and becomes a serious obstacle to socioeconomic development (Pincheira, 2014).

The homicide rate per 100,000 inhabitants for Latin America and the Caribbean for 2003 indicated that the most violent countries in the world in the region were those of the northern triangle of Central America (El Salvador, Guatemala and Honduras), together with Colombia and Venezuela. In contrast, Chile, Peru, Uruguay and Costa Rica were the least violent countries (Pincheira, 2014). The aforementioned data also show that Peru has the lowest homicide rate with respect to Latin American countries, but in terms of perception of insecurity it is the highest than victimization itself, which also has the highest percentages in the region.

This means that there is a high level of fear of being a victim of crime. In addition, UNDP mentions that crime and violence produce feelings of fear or distrust, both in people who directly experience these events (direct victims) and in those who know about these events indirectly (through the testimony of the victims, their close circle or through the mass media); that is, crime and violence can increase a person's perception of insecurity

and make them feel more vulnerable, with "fear" in the face of the possibility of being threatened in their physical and material integrity (Peralta, et al, 2019).).

As a result, in recent years the perception of insecurity has increased, but victimization has decreased slightly. This does not mean that robberies and crime have decreased, but as Enrique Yépez points out, there is a black figure, i.e., those affected do not make complaints and therefore that there is no real information from police statistics on the amounts of robberies and crime (Barbachán, et al, 2017).

Therefore, citizen security is the main problem in Metropolitan Lima since the percentage of perception has not decreased but, on the contrary, continues to increase during the last few years; however, the percentage of victimization continues to be lower than the perception of security because people do not make their complaints due to fear and fear of making a complaint, which means that there is a black figure that is not observed.

This study poses the following research question: How has the local government of San Juan de Miraflores exercised leadership to implement actions to achieve the objectives and goals of the public policy on citizen security during the administration of Mayor Edilberto Quispe Rodríguez from 2007 to 2009?

Public safety

According to the United Nations Development Program (UNDP), citizen security is a necessary condition for human development; and vice versa, development conditions citizen security. Indeed, without citizen security, which protects a basic core of rights, people cannot fully develop their capacities or contribute to their full potential to improve their families, communities and institutions (UNDP, 2013), it aims to preserve, change or convert political and social organizational systems (Restrepo, et. al, 2021).

Citizen security is a public good, i.e., a good to which all people should have access regardless of social class, political preference, race, ethnicity, gender and identity. The State is primarily responsible for providing citizen security, as it constitutes a public good to which all people have a right (UNDP, 2013:10). It should be centered on the human person, as well as on human rights, which are essential for the development of citizens and to improve their quality of life and well-being. The State has the responsibility to provide it and must avoid any threat that puts at risk the rights of the person, for this it must generate development opportunities and achieve citizen security (Quintero, 2020; Sánchez-Rentería, et al, 2016).

According to Subirats and Montecinos, citizen security is a public problem in Latin America and Peru because it is the main concern among citizens before unemployment or poverty (INEI, 2016). Indeed, the high percentages of perception, victimization and distrust in the institutions that act against the problem have been registering very high levels for several years. Therefore, this problem has a social, political and economic impact on citizens, as it has generated fear and apprehension when they are on the street or at home. Citizen security is a public problem and governments include it in the political agenda, as is the case in cities such as Medellin, Bogota, among others. This is because local governments have intervened with public policies on citizen security (UNDP El Salvador, 2010; Lazreg, 2018).

In the case of the Peruvian State, in response to the problem of citizen security, Law 27933, Law of the National System of Citizen Security, was enacted, which has as its governing body the National Council for Citizen Security, as a measure aimed at implementing a comprehensive, participatory and multisectoral policy at different levels of government.

Public policy for citizen security

Public security policies are guidelines or courses of action defined by State authorities to achieve a specific objective,

and which contribute to creating or transforming the conditions in which the activities of individuals or groups that make up society are carried out. The public policy of citizen security is an organized and structured set of actions that seek to generate situations, goods and public services to meet the demands of citizens, thus transforming living conditions, modifying behaviors, generating values and attitudes that correspond to the law, morals and culture of a community (Glanc and Page, 2018).

The IACHR mentions that a public policy on citizen security should be a planning instrument that allows for the rationalization of available resources, within a framework of permanent participation of the social actors involved. This policy should be characterized by being:

- (1) comprehensive (for systematically encompassing human rights as a whole); (2) intersectoral (for committing actions, plans and budgets of different state actors); (3) participatory (for the permanent involvement of the population involved and for favoring the democratization of society); (4) universal (for its coverage without exclusions or discrimination of any kind); and (5) intergovernmental (for committing central and local government entities)" (Sanchez-Renteria, et al, 2016).

The Inter-American Institute for Human Development (IIDH) points out that public policy on citizen security is a responsibility of the State. It must be comprehensive, with clear and verifiable objectives in the short, medium and long term. In addition, it must have as fundamental principles inter-institutional coordination and complementarity of the actions developed; it also requires the will and commitment of the authorities and civil society to achieve results. It must also be inclusive and provide equal opportunities, guarantee citizens' freedoms and protect their rights. Thus, it must be consensual and transparent in its formulation, modern in its conceptions, updated in its procedures and make use of the most advanced science and technology, executed in a professional and specialized manner, regulatory changes, it requires leadership and training of State agents and priority for the allocation of public expenditure (IIDH, 2007, 11-15).

The public security policy is a course of action defined by the State authorities to meet the needs of the population, i.e., it is a planning instrument that should guide the procurement of services that benefit the community; therefore, the policy must have principles of coordination, will and commitment of the authorities and the participation of the population to achieve the expected results. In addition, the policy must be comprehensive,

intersectoral, participatory, universal and intergovernmental.

Navarro-Sierra and Quevedo-Redondo point out that leadership is an element that guarantees success in the adequate performance of any policy, as it strengthens governance and legitimizes (2020). Likewise, Carrascosa mentions that good practices in social policy management show that leadership is a fundamental factor for the construction of a clear vision of the service and the contributions of each member to achieve concrete results (2020). Therefore, leadership implies promoting, producing and consolidating social and organizational changes to face problems and facilitate the application of solutions to citizens' needs.

Rivas, states that leadership must have basic skills such as listening, setting goals, providing feedback, evaluating performance, disciplinary behavior, delegating, using oral persuasion, exhibiting political behaviors, conducting group meetings and resolving conflicts (2019).

Indeed, political leadership in municipal management should be oriented towards proximity to citizens, knowledge of the scenario and identity with the territory. Political leadership in municipal management should have the following: a) attitude towards change and innovation,

b) transparency and accountability, c) reduction of clientelistic practice, d) broad managerial capabilities, e) knowledge of the reality of the municipality, f) knowledge of the legal framework that regulates municipal management, g) planning and definition of strategies, h) facilitation of citizen participation in public management, i) democratic attitudes and practices, and j) transparency in its management (Rvías, 2019).

With respect to the above, leadership is a fundamental factor for the success of any policy because it generates a joint vision. Exercising leadership implies influencing changes and the development of people to achieve common objectives. To achieve proper leadership, one must have personal, technical, cognitive and interpersonal skills. There are several experiences that have been carried out in local governments whose concrete results in dealing with citizen insecurity at the local level have been satisfactory. The following are the most outstanding ones.

The type of research was a case study, using a descriptive and inductive method considering a quantitative and qualitative analysis through participant observation, interviews, information gathering and analysis of institutional, statistical and bibliographic documents. As a data collection technique, the following was used: documentary review, which describes the local policy of citizen security in the district of San Juan de Miraflores

(2007-2009), describing its location, the problematic situation and the process of implementation of citizen security; in addition to an analysis of political leadership.

Citizen security action plans

The case study was carried out in the district of San Juan de Miraflores, created by Law No. 15382 on January 12, 1965, located in the southern area of Metropolitan Lima at kilometer 15 of the Pan-American Highway South, at 141 meters above sea level, with an area of 23.98 km². It is bordered on the southeast by Villa El Salvador and Chorrillos; on the northwest by La Molina and Surco; and on the east by Villa María del Triunfo. In San Juan de Miraflores there are 8,581 commercial establishments (67%) followed by services with 2,804 units (11.51%) and various establishments dedicated to manufacturing activities with 1,475, representing 11.5%. (MSJM, 2007: 9).

Problematic situation

Statistical information from the police stations of the National Police of Peru in the district of San Juan de Miraflores for the year 2007 reported approximately 494 incidents of citizen insecurity related to drugs (110), common crime (95), gangs (87) and robberies and assaults (60) (Sub Management of Citizen Security and Municipal Police-MSJM, 2009: 8).

Interventions by the serenazgo in terms of aggression and violence during 2008 and 2009 have been 2,608 cases of which have been mainly gangs (1,875), family violence (283), street fighting (241) and vandalism and social violence (198). In the case of interventions for robbery and drugs during 2008 and 2009, there were 2,496 cases, mainly drug addiction (1,001), robbery of passersby (592), home robbery (286) and armed robbery (257) (Sub Gerencia de Seguridad Ciudadana y Policia Municipal-MSJM, 2009: 16, 21).

Implementation of Citizen Security Policy

For the implementation, the District Committee for Citizen Security of San Juan de Miraflores, CODISEC, chaired by the mayor and made up of various public institutions and the organized community, was incorporated into its organic structure as a support body. On March 13, 2007, Mr. Edilberto Quispe Huamán, mayor of the district for the period 2007-2010, installed and swore in members of the District Committee for Citizen Security of San Juan de Miraflores (CODISEC), in order to comply with the provisions of Law No. 27933 as a measure to reduce citizen insecurity in the district. At the swearing in ceremony were represented the Municipality, Government, Police Headquarters, 5 Police Stations of the district, Criminal Prosecutor's Office, Justice of the Peace Court, in the following meetings joined institutions such as the Ombudsman, representative of the UGEL 01 and the

Neighborhood Boards, and had a technical secretariat responsible for providing all the advice on the subject.

In addition, the organizational structure is implemented in the Control Management in the merger of the Sub Management of Citizen Security and Municipal Police.

Finally, it implemented the "Plan de Desarrollo Integral del Distrito de San Juan de Miraflores 2005-2012" which was approved by Mayor Paulo Hinostroza, Mayor (2003-2006); proposed until 2012 (MSJM, 2006: 111,125), which:

- Concerted citizen security plan (PNP, local government, civil society);
- Fire company equipment and serenazgo equipment and training;
- Capacity building of local citizen security networks; and
- Prevention and reduction of domestic violence in San Juan de Miraflores

a) Leadership and Participation:

The district CODISEC held a total of 33 meetings between 2007 and 2009. The mayor, in his capacity as president of the district committee, has not actively participated in the committee's meetings. Regarding the participation of the members of the district CODISEC, the greatest

participation has been from the neighborhood councils with 88.2%; the San Juan de Miraflores commissioner, 58.8%; the Justice of the Peace Judge of the 5th Justice of the Peace Court, 55.9%; the governor who is the second political authority, 47.1%; the police commissioners of Pamplona 1 and 2 with 44.1%; the Provincial Criminal Prosecutor with 41.2%; the District Police Chief with 20.1%; the police commissioners of Laderas de Villa and Mateo Pumacahua with 14.7%; the representative of the UGEL, 14.7%, and the Ombudsman's Office, 11.76%. It is worth mentioning that most of the representatives of the institutions have not had more than 50% participation in the district CODISEC.

b) Leadership and planning

At a CODISEC meeting with the mayor, the planning detailed in Table 1 was agreed upon.

Table 1. *CODISEC Planning*

Main Objective	Specific Objective	Strategies
	1. In the present period reduce by 50% the actions of youth gangs, through police and social	1.1 Identification and capture of the main leaders of youth gangs 1.2 Outreach to young gang members by

	activities that allow their reintegration into society.	presenting reintegration alternatives through social programs with specialized therapies.
		1.3 Create training centers, promoting micro-enterprises as well as insert them in the employment network.
<i>To reduce the incidence of crime and citizen misconduct this year, as well as to strengthen citizen-institution relations in the district of San Juan de Miraflores, through police</i>	2) Strengthen relations between the members of the Committee and the community by treating people appropriately and strengthening citizen oversight and control actions.	2.1 Hold more frequent meetings to discuss the district's citizen security problems and the commitment of committee members to participate. 2.2 Strengthen the mechanisms for public control and supervision of the actions of the members of the District Committee for Citizen Security. 2.3 Educate and train PNP and Serenazgo personnel in values, treatment of the public 2.4 Establish permanent communication channels between local authorities and the population to

actions and preventive, educational and multisectoral training activities, conducted by the District Committee for Citizen Security.

3) In the period of one year, reduce by 40% the criminal actions in the district of San Juan de Miraflores, through joint actions of the PNP, Municipality and Organized Civil Society.

inform them of their actions and restore public trust.

3.1 Strengthen police operational work at the district level through integrated patrolling actions, as well as efficient police investigation and intervention.

3.2 Reformulate the district mapping in the 7 sectors in order to identify critical points, so as to make the police and Serenazgo operational capacity more effective.

3.3 Organize the neighborhood alert network with the participation of neighborhood councils and neighborhood watchmen to complement police and Serenazgo efforts to reduce crime.

4) To train and strengthen the values of the population of San Juan through the

4.1 Program forums, seminars and events with the active participation of the members of the district

<p>organization of four events during the current year, to be conducted by specialists in the field and with the participation of the authorities of the Judiciary and the Public Prosecutor's Office of the District.</p>	<p>authorities that are members of the committee.</p> <p>4.2 Enter into agreements with private institutions for the training of the community organized in the Neighborhood Committees.</p>
<p>5) Reduce by 50% the victimization of family violence and juvenile abuse in marginal urban areas of the district, through preventive, social and training activities, in agreement with NGOs that carry out programs in the district through an Integral Social Plan for Citizen Security.</p>	<p>5.1 Formulate the Comprehensive Social Development Plan for Citizen Security, through agreements with NGO institutions that have been developing preventive social programs with the family, youth and children, and attack the conditioning factors of citizen insecurity.</p> <p>5.2 Engage State institutions, MIMDES, Judiciary, Municipality, PNP in this task in order to contribute through their actions to the social and</p>

	human development of the people.
6. Achieve by this year that 100% of public and private institutions actively participate in citizen security through preventive, educational and reinsertion actions.	<p>6.1 Motivate the heads and directors of the institutions that have yet to join the committee to support and lead preventive, educational and reintegration activities in their area of responsibility.</p> <p>6.2 To summon the private sector, commerce and local businessmen to support the work of the authorities and the organized community in favor of citizen security.</p>

Source: District Local Plan for Citizen Security 2008 of the District of San Juan de Miraflores

In 2009, no plan was approved due to the fact that the 2008 plan had not been fulfilled, so it was continued. In addition, priority was given to following up on the citizen security project approved in 2007 so that it could be implemented that same year.

c) Leadership and budget

In the CODISEC session, the mayor pointed out that the 2009 budget will include the purchase of sirens and RPM for citizen security, as well as video cameras, vans, motorcycles and alarms for an amount of 779,000.13 soles. However, in the case of citizen security projects approved by the Municipality of San Juan Miraflores, the website of the Ministry of Economy and Finance shows that only in 2007 there was an investment of S/. 4,160 in the serenazgo implementation project that was presented and its execution was 47% of the total budgeted amount of S/. 8,758.

d) Leadership and actions in citizen security

Nineteen establishments were closed on Pedro Silva Avenue and Pasaje Guzmán. It should be noted that many problems such as robberies, drug consumption, prostitution, among others, were occurring on the boulevard. The owners were given a definitive closure resolution and their respective fine. The authorities and the mayor decided to close this place because for years it had been a security problem for the district because there was a lot of violence, robberies, snatchings, prostitution, among others.

In 2009, joint operations, mixed patrols and joint foot and motorized patrols (police and serenazgo) continued, as well as follow-up of the citizen security project approved in 2007 and the inauguration of the boulevard park.

Political Leadership Analysis

a) Role of local government and political will for citizen security

The citizen security policy implemented by the local government of San Juan de Miraflores has not had a leadership that guides a shared vision, generates trust, coordinates, carries out teamwork and commits all members of CODISEC. There has been no constant participation of the mayor in the CODISEC sessions and he has not had knowledge and skills on how to intervene in this problem considering an integral strategy, relevant planning, budget and promotion of integral activities for security.

b) Participation

The mayor's leadership has been null because he has not put into practice the basic skills of any leader, as Robbins (1989) pointed out: listening, goal setting, evaluation, discipline, conducting group meetings and conflict resolution (cited by Morella Daboin, n/d: 12). These characteristics have not been put into practice by the mayor in CODISEC due to his lack of participation, delegation of his authority, and lack of coordination with the representatives of the institutions, only with the district police, which is carried out through the Submanagement of Citizen Security.

c) Planning

The 2008 plan has not been implemented because the mayor or political leader of the district has not made a decision, has not set the agenda, and has not sought resources and support for its implementation. In the case of San Juan de Miraflores, the mayor has not implemented it in action but in speeches at committee meetings, and has not applied an adequate diagnosis that would lead to an efficient policy and its execution.

The mayor has had a lack of technical knowledge and skills to face the insecurity situation because he did not prioritize the adequate development of the planning of the citizen security policy considering a diagnosis that correctly defines the problem, the design and execution. In addition, the leadership of the authority has not been oriented to planning with an attitude towards change, innovation, transparency, managerial capacity, interpreting reality, knowing and applying the legal framework, among others. Therefore, the mayor has not assumed his leadership within CODISEC because the aforementioned elements have not been definitively applied to guide an adequate citizen security policy.

d) Budget

The citizen security policy of the district of San Juan de Miraflores has not had a budget, as stated by CODISEC members in the minutes and interviews. The security plan did not have an additional budget, but rather each

institution, according to its possibilities and responsibilities, had the function of carrying out the plan. As for the Municipality, between 2007 and 2009 it has invested only between 3.4% and 3.1% of its budget in serenazgo. No citizen security projects have been approved with budgets that are mentioned on the website of the Ministry of Economy and Finance, so it has not been a priority and there has been no political will to invest in citizen security, as it was only expressed in the mayor's speech and in practice there was no guarantee or priority in this area, despite the fact that citizen security was one of the most important problems of the district.

e) Citizen security actions

In terms of citizen security strategies and actions that have been taken within the district CODISEC, they are minimal and are oriented towards operational and control actions, such as the closure of premises, mainly on the boulevard. They have a Citizen Security Plan approved in 2008 that is oriented towards control, rehabilitation and prevention activities that the representatives have not executed, as they have not recognized their capacities and resources. In addition, a citizen security project was approved with the 2007 participatory budget for the purchase of video cameras, cell phones and motorcycles that was also not fulfilled.

Therefore, the district's citizen security policy did not have a comprehensive approach, but rather one of control and repression, which had immediate results of repressing insecurity but did not manage to totally improve citizen security in the district because in recent years it has increased, as indicated by the surveys carried out in Lima mentioned above.

Conclusions

It has been proven that there is little or no leadership from the mayor because he has not had a leadership that guides a shared vision, has not promoted active participation, has not generated trust, nor has he achieved a commitment from the members, nor has he coordinated CODISEC teamwork to develop joint strategies and comprehensive plans for a citizen security policy. In effect, this refers to the fact that the mayor has not had a continuous and permanent participation in the committee because he has only participated in 35.3% of the CODISEC sessions that have been held between 2007 and 2009; also because of his delegation of his authority in the sessions that made the members participate with less enthusiasm so that the institutions have not had more than 50% of participation in the sessions so that only the neighborhood councils are the ones that have had greater participation because they live the problem.

It has been identified that the mayor has not had a concrete political will to guarantee the implementation of an efficient citizen security policy, i.e. with a work plan, an adequate approved budget, strategies and comprehensive actions. The mayor has only stated in various CODISEC sessions that he has the political will to improve citizen insecurity in the district, but this has not been translated into actions or policies; likewise, CODISEC members have stated in various sessions that citizen insecurity has not been decreasing. In fact, the district of San Juan de Miraflores according to Ciudad Nuestra for the year 2012 is one of the most insecure districts in Lima according to a survey conducted in 35 districts of Lima.

It has been identified that there is no adequate planning because the mayor has had difficulties with technical, cognitive and personal skills to direct an adequate citizen security policy because he does not have a diagnosis that correctly defines the problems, the design and execution. This refers to the fact that the CODISEC recently approved the District Citizen Security Plan in 2008, which has not been fulfilling the programmed activities, according to what the technical secretary stated in the CODISEC session; likewise, the 2008 plan was not completed, so the same plan was continued for 2009. Therefore, the mayor has not assumed his leadership within CODISEC because the aforementioned elements have not been definitively applied to guide an adequate citizen security policy.

It has been verified that there is not an adequate budget for public safety because the human resources, logistics, public safety actions and others are insufficient because only during 2007 to 2009 has been invested between 3.4% to 3.1% of the municipal budget has been for serenazgo without considering projects and programs for security and others; also the same members of CODISEC have repeatedly pointed out in sessions that there is no budget for public safety, which reiterates the lack of political will of the mayor to ensure greater investment in security as one of the main problems of the district.

It has been proven that they have prioritized citizen security actions that have only been oriented to a strategy of control and repression because the main activities that have been carried out have been operations, patrols, approval of ordinance on zoning to close some bars, discotheques and brothels in the area, the ordinance of Plan Zanahoria that involves the sale of liquor until 11 p.m. in stores and in discos until 3 p.m. In addition, one of the most emblematic actions of the mayor's administration was the definitive closing of San Juan Boulevard. Therefore, there was no comprehensive, preventive, participatory, control, intergovernmental and coordination policy for citizen security in the district, so that in recent years the problem was not solved, but rather increased.

References

- Aguado, V. (2020). The resurgence of serenitos at the local level: between private security and citizen coexistence. *Revista Catalana de Dret Públic*, 61, 112-128. <http://www.iiis.org/CDs2019/CD2019Spring/PapersC2.htm#/>
- Barbachán, E.A., Cajas, T.V., Ramos, F. and Sánchez, F.M.. (2017). Social representations of citizen security in university students in Lima-Peru. *Opción*, 33 (84), 698-724. <https://www.redalyc.org/pdf/310/31054991025.pdf>
- Carrascosa, L. (2020). Female political leadership: a comparison of the media treatment of Ana Botella and Manuela Carmena's first week in office. *Politics and Society*, 57 (1). 99-119. <https://doi.org/10.5209/poso.64329>
- Glanc, L. and Page, F.R. (2018). Public safety and politics: An analysis of data in the Autonomous City of Buenos Aires. *Dilemas - Revista de Estudios de Estudios de Conflicto e Controle Social*, 12(2), 357-379. <https://www.redalyc.org/articulo.oa?id=563860269008>
- IIDH. (2007). *Citizen Security in Latin America (2007 ed.)*. San José, Costa Rica: IIDH.
- INEI. (2015). [December 20, 2016] https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1_251/Book.pdf.
- INEI. (2016). *Victimization in Peru 2010-2015*. Lima, Peru: INEI.

- Lazreg, N. (2018). Reforming security in latin america. Mapping the transnational network of citizen security. *Latin America Today*, 80, 29-50. <https://revistas.usal.es/index.php/1130-2887/article/view/alh2018802950/19921>.
- Navarro-Sierra, N. and Quevedo-Redondo, R. (2020). The political leadership of the european union through the mobile app ecosystem, *Revista Prisma Social*, 30 (3er), 1-21. <https://revistaprismasocial.es/article/view/3731/4348>
- Peralta, M., Aquino, M., Merma, J.L. and Huamán, C.C. (2019). Proceedings of the Ninth Ibero-American Conference on Complexity, Informatics and Cybernetics: CICIC 2019. VOLUME II - Post-Conference Edition (Papers).
- Pincheira, Iván (2014). Citizen Security policies and government management of social protest in Postdictatorship Chile. *Izquierdas Magazine*, (18), 94-110. <https://www.redalyc.org/articulo.oa?id=360133466006>
- UNDP El Salvador. (2010). *Ciudades Seguras: El ABC de la convivencia y la seguridad ciudadana. Tools for local management*. San Salvador, Salvador: UNDP El Salvador.
- UNDP. (2013). *Regional Human Development Report 2013-2014 Citizen Security with a Human Face: Diagnosis and Proposals for Latin America* (2013 ed.). New York, USA: UNDP.

- Quintero, S.P. (2020). Citizen security and community participation in Latin America. *Revista Científica General José María Córdova*, 18(29), 5-24. <https://doi.org/10.21830/19006586.561>.
- Restrepo, J.L., Cotrina, Y. E., and Daza, A. (2021). Citizen participation in the social security health system in Colombia. *Revista de Ciencias Sociales (Ve)*, XXVII(1), 230-240. <https://produccioncientificaluz.org/index.php/rcs/article/view/35309/37385>
- Rivas, J.M. (2019). Evolution of the leadership style of new political parties in Mexico and Spain: Andrés Manuel López Obrador, Pablo Iglesias and Albert Rivera (2014-2016). *Revista Mexicana de Ciencias Políticas y Sociales*, 64 (235), <http://www.revistas.unam.mx/index.php/rmcyps/article/view/64108>
- Sánchez-Rentería, G., Bonilla-Escobar, F.J., Fandiño-Losada, A. and Gutiérrez-Martínez, M.I. (2016). Observatories of coexistence and citizen security: tools for decision making and governance. *Peruvian Journal of Experimental Medicine and Public Health*. 33 (2), 362-7. <https://rpmesp.ins.gob.pe/index.php/rpmesp/article/view/2203>

Educational research analysis of point-of- contact management in times of Coronavirus

Roberto Gabriel Rolando Calderón Chávez
Jannett Maribel Flórez-Ibarra
María del Carmen Emilia Ancaya-Martínez
Helga Ruth Majo Marrufo
Ricardo Arturo Pauta Guevara

Introduction

We are currently in a national Health Emergency situation, Jordan, Guiu-Segura, Sousa-Pinto and Wang, (2021), this is due to the World Health Organization (WHO) alert of "very high level" to prevent the spread of Coronavirus (COVID-19) after outbreaks in more than 180 countries. (p.89). In 2019, Peru was among the first countries with the highest number of diseases

worldwide. The health emergency that Peru is experiencing has highlighted the shortcomings of the health sector and has had a significant impact on all public and private institutions. Taype-Rondan, Hurtado-Roca, Estrada-Martínez and Timaná-Ruiz (2020) In the case of the Social Health Insurance, EsSalud, it has been affected by the reduction of almost two million insured. (p.85) Due to the fact that most of the insured come from formal companies, of which small and medium-sized companies have been the most affected by the mandatory Quarantine.

EsSalud Social Health Insurance manages 11'654,984 insured persons nationwide as of September 2019, its financing is based on the contribution of regular insured persons through a rate of nine percent (9%) of the remuneration base, contributed by the employer, as well as independent insurances which have different scales, according to the age of the insured person. EsSalud has a network of approximately 450 health care centers, organized by level of care and level of complexity.

Currently, health services at the national level do not have the satisfaction of the user population, as is the case of the Ministry of Health and the Social Health Insurance EsSalud, which has mandatory contributory financing characteristics. The Covid-19 situation room of

the Peruvian Ministry of Health is the body authorized by the Peruvian government to report the current status of the pandemic and the evolution of the cases of coronavirus, this information is related to the research to establish the current context and the circumstances in which the research process was developed.

Contact point management

The purpose of this research is to demonstrate the importance of the management of outpatient contact points in times of coronavirus at the Hospital II-1 Jorge Voto Bernales Corpancho of EsSalud, in order to establish the aspects that influence the provision of the service and how they affect the satisfaction of the insured.

From a marketing point of view, touch point management is understood as the moment in which a user and/or customer has some kind of experience with the brand, product or service, voluntarily, involuntarily or casually, physically or virtually. Satisfaction is an intangible and qualitative aspect, which depends a lot on the level of knowledge and experience of the user and can vary from person to person. Customer satisfaction is above all and according to Hernandez, Garcia, Valencia, and Oviedo, (2019) this should be the

main objective in any organization and even more so when we talk about the health of people, it is of vital importance to constantly and periodically evaluate satisfaction. (p.95)

In the context of the health emergency caused by the coronavirus, Hospital II-1 Jorge Voto Bernales Corpancho implemented a Hospital Covid strategy that allowed it to attend the insured population affected by the coronavirus and at the same time provide preventive care aimed at reducing the outpatient care gap, through the progressive implementation of remote work such as teleconsultation and telemonitoring oriented to the health care center's employees with risk factors, with the objective of maintaining active the first line services and administrative and logistical support, as well as human resources income. These actions made it possible to attend to the most vulnerable population whose care, treatment and operations were cut off. The neighboring pharmacy service was implemented for the insured who had fixed treatments and/or who did not require further medical evaluation, in order to attend all those insured who had prescriptions pending collection, as well as those issued through the teleconsultation and telemonitoring services.

For Macinko, J., Woolley, N., Seixas, B., Andrade, F. and Lima-Costa (2020) the epidemic has had serious

consequences for health services, due to the priority of detecting COVID-19 cases, surgeries and other scheduled procedures were cancelled (p.1). Outpatient activities such as outpatient consultations and ambulatory procedures, as well as surgical interventions, have had to be suspended or delayed. For Carrión, Gómez, Rodríguez, Mantica, Esperto, Maestro, Cansino, Aguilera and Martínez (2020) While this situation lasts, telematic medical activity can provide adequate support by simulating medical consultations through video calls or phone calls, however many medical-surgical services and departments are not ready to carry out a large-scale telematic consultation practice because their experience is insufficient. (p.1)

For Studart-Neto (2020) COVID 19 can lead to higher rates of disability in acute neurological patients and a negative impact on the treatment of chronic neurological diseases such as Parkinson's disease and epilepsy, Thus the importance of reorganizing neurology consultation services for inpatient and outpatient clinics has been highlighted. (p.496). Baena, Jurado, Fernández, Rodríguez, Gómez and Vázquez (2020) mention due to the pandemic many of the social health services have had to adapt, taking safety measures, elaborating specific guidelines and giving priority to vulnerable groups, however, there are few

official documents for the care of a normal pregnancy, leaving it in the hands of the health areas to adapt the recommendations. (p.3).

For Di Tommaso, Fitz, Sastre, Hirschson, Dominé, Agüero and Baranchu (2020), telemedicine is currently of vital importance because it is an effective means of providing medical care to patients, avoiding contagion among patients, family members and health personnel, as well as preserving scarce resources, such as personal protective equipment. (p. 232). Margusino et al (2020) mentioned that some outpatient consultations continued to be performed in person, so measures were implemented to minimize viral infection of patients and professionals, such as temporal and spatial distancing, disinfection of the waiting room and the consultation room, informative posters on personal hygiene and infection prevention in the consultation rooms. (p.62). Amparore et al, (2020) mention that in Spain, new telemedicine strategies have been implemented in response to the pandemic, with the intention of protecting both health personnel and patients from the risk of contagion, face-to-face consultations have been cancelled, using the telephone as the fastest way. (p.637). Martínez-Navarro, Lozano-Zafra, Caballero-Chabrera, Modesto-Alapont and Oltra-Benavent, (2020) mention that in Spain the measures of general confinement significantly reduce urgent visits and hospital admissions, in childhood it is shown with little affectation and severity. (p.2)

Health facilities are defined as operational units that guarantee the supply of health services, organized into categories according to their level of resolution and level of complexity, implemented with human resources and equipment to provide care and administrative services. The points of contact are important in the management of any institution and from the field of marketing it is associated with user satisfaction, since an improvement in this aspect would guarantee user satisfaction in the area of health care services, although this theory originates from the administrative sciences and marketing, it can be applied to the health sector in a favorable way for the sake of user satisfaction. This is why this single category of contact point management has been subdivided into three subcategories: channel management, accessibility and infrastructure.

Channel management

Applied to a health facility, where the channels refer to the points of contact where the provider and the user coexist and the service is produced, such as appointment modules, outpatient consultation, hospitalization, pharmacy, diagnostic assistance services, administrative areas and any other area related to the user.

Last May 20, the Ministry of Health MINSA (2020) published the technical standard for the adequacy of health care centers in the face of the coronavirus pandemic, providing guidelines for containment and mitigation of the pandemic, as well as triage and differentiated triage protocols for the care of confirmed and suspected coronavirus patients, as well as the availability of health care personnel who did not have risk factors and the adequacy of the infrastructure of health care centers.

Accessibility

It is a fundamental factor in the access to services, whether public or private, and our role as social security officials is to speed up this access and make it easier for our insured, who in many cases are not aware of the procedures and formalities to be followed for different reasons. Although we are going through an adverse stage, it will soon be over and we must be prepared to face it, improving our capacity to respond to the demand for health services that will turn to the health care centers to resume their treatments and/or operations, which will again make services scarce and we must prepare ourselves for them.

From the comparative point of view, before the coronavirus pandemic and today in full state of emergency, in order to explore their experiences and

opinions regarding the time it takes to obtain an appointment compared to before the pandemic. Although it is true that due to the state of emergency most of the hospitals and polyclinics closed their outpatient clinics, starting in August, primary care was gradually reopened in all health facilities nationwide and with them, access to outpatient care was limited in terms of capacity, number of slots per specialty and with high biosecurity controls. As a result of this problem, in May and thereafter, the Social Health Insurance implemented telemedicine and teleconsultation in order to cover the demand of the insured for outpatient care, as well as the neighboring pharmacy through agreements with different chains of pharmacies and drugstores to meet the demand for medicines.

Infrastructure

The aim is to explore the perceptions of the insured regarding their expectations and opinions related to the outpatient clinic and, at the same time, their opinions regarding the infrastructure of the health care center, in terms of the design and maintenance of the points of contact, it is necessary to make a greater effort in the aspects of location and signage of the areas and give greater importance to the disabled segment, respecting the design standards, it is also important to implement an adequate waiting area for patients and family members within the facilities of the care center

considering the temporality and welfare status of people that according to Elias and Hermes (2015) is a fundamental part of the national policy on the Peruvian welfare state. (p.164)

It is important to determine the importance of knowing and identifying the points of contact in the outpatient clinic in times of coronavirus in the Hospital II-1 Jorge Voto Bernales Corpancho of EsSalud in order to manage them efficiently and determine their influence on the provision of health care services and at the same time determine whether the channels, accessibility and infrastructure of the health care center influence the management of the service and how it affects the satisfaction of the insured from a 360 degree perspective, focused on the insured who is the *raison d'être*.

The type of research is basic, the research design was developed under the concept of phenomenology, research with a qualitative approach. A category called management of contact points and three subcategories were defined: management of channels, accessibility and infrastructure. The study scenario was developed in the setting of the Hospital II-1 Jorge Voto Bernales Corpancho of EsSalud, the participants were recruited in the waiting areas of the health care center based on two criteria: age range and gender. Participants were chosen randomly and by interception, with a sample of eight interviewees, with

the aim of obtaining the opinions and experiences of different types of insured persons regarding outpatient care. This research proposes three types of data collection techniques and instruments: in-depth interview, photographic evidence and documentary analysis. The present research has considered the basic ethical aspects based on the Belmont Report. The data analysis method was carried out using the Atlas System. TI ® Version 9.0.3, which is why the data analysis was carried out through categories and subcategories, as well as the triangulation of the research instruments.

Accessibility of care at points of contact

According to the general objective for the touchpoint management category as well as in accordance with the Touchpoint theory, it is the closest and real reference of how to manage the touchpoints with customers and / or users so that we can generate an added value and brand in all processes related to customer, which is why the author referred dictates the guidelines for proper management of touchpoints in order to create a brand value in each process with the customer which is the *raison d'être* of any institution.

For the subcategory channel management, it was identified that there is dissatisfaction on the part of the insured due to various aspects, such as protocols, infrastructure, staff attention. This is why this author

supports the marketing theory whose objective is to satisfy the needs of clients and/or users in a profitable manner, applying this concept to the health sector, which means having a healthy insured population that does not require more health care services. For Alonso (2007), the term accessibility goes beyond the possibility of going where one wants to go or achieving what one wants to achieve. (p.16)

Regarding the results found for the subcategory accessibility, it was possible to identify that the insured have an idea of the concept of accessibility that is related to their rights to receive good and timely care; at the same time, the aspect of the deferral of appointments was analyzed, finding that there is indeed a deferral, but the insured used additional appointments as a means to reduce waiting times between each appointment. This is why this author supports and provides the basic criteria of accessibility and how they should be implemented, taking into account that access to health is a fundamental right, as declared by the World Health Organization and the Peruvian government through the Congress (2009) dictated Law No. 29344 Framework Law on Universal Health Insurance, which is why this author is in accordance with the objectives and spirit of the subcategory.

In the results found it is evident that the physical aspects of infrastructure and visual communication, as well as

cleanliness and access for people with disabilities can influence the perception of the insured and at the same time in the expectation of the service to be received, which is why the author in reference considers the basic aspects of universal design which is related to shortcomings evidenced through photographic evidence and in the accounts of the in-depth interviews, which is why the recommendations of this author should be considered.

Although the general objective is related to the management of contact points, this objective is also related to the innovative category of critical points management, since both are closely linked, as there is a direct relationship with the research pillars and subcategories, demonstrating the existence of structural problems in the health care center, related to aspects of user service and/or attention, access to appointments and infrastructure. The critical points are basically caused by human factors and are influenced by material aspects related to the infrastructure of the health care center, which can be corrected.

The present authors reinforce the concepts of touch points and add other specialized marketing concepts such as strategic vision, brand value, brand awareness, trade marketing, merchandising and visual merchandising, all related to the improvement of customer and/or user management and at the same time make us reflect on the

true purpose of service institutions.

Conclusions

The management of outpatient contact points in times of coronavirus, lies in the effort to assume responsibility for institutional objectives, having the insured as the center, and to achieve this, three fundamental elements should be promoted, the contact point, the accessibility to the service and the infrastructure of the health care center, strengthening the areas of administration, admission and quality, with the objective of having greater participation in the management of the insured. The management of the channels is intimately related to three factors: the Covid scenario, the influence of the staff's attention, the level of knowledge and expectation of the service, so that the human factor is one of the causes of the dissatisfaction of the insured, due to the workload and the stress of the day to day and it could be thought that this work stress is caused by a bad assistance programming and it could be asked if it is possible to implement a strategy oriented to the patient based on marketing and through a segmentation by type of insured. Regarding biosecurity protocols and outpatient care processes, there is very limited supervision on the part of the institution, which generates long waits and inconveniences for the insured, regarding accessibility, it could be concluded that there is no adequate scheduling of care services and there is a lack of human resources to meet the demand of the insured,

which results in high levels of deferral of appointments, Therefore, it would be possible to reduce the deferral of appointments by accelerating the scheduling of early diagnosis detection. EsSalud has been investing in infrastructure in recent years, but it would be worthwhile to ask ourselves if these investments are what the insured need and want. Therefore, an infrastructure standard should be implemented to provide the insured with the comfort and privacy they deserve. It can be concluded that, in spite of the existence of trained managers, housekeeping and budgetary, human resources and budget limitations mean that basic aspects of control, organization and infrastructure are put on the back burner, which is why there are claims that could be avoided with a greater effort on the part of the parties.

References

- Alonso, F. (2007). More than removing barriers: concepts and arguments for universal accessibility. *Trans. Revista de Traductología*, 2, 15 - 30. <https://doi.org/10.24310/TRANS.2007.v0i11.3095>
- Amparore, R. , Campi, E. , Checcucci, A. , Piana, M. , Sica, A. , Andrea Grosso, M. , Presutti, P. , Barzaghi, A. , Minervini, S. , Serni, C. , Fiori, F. , and Porpiglia (2020) Patients' perspective on the use of telemedicine in urological outpatient consultations: learning from the COVID-19 pandemic. *Actas Urologicas Espanoles*. <https://doi.org/10.1016/j.acuro.2020.06.008>

- Baena, F., Jurado, E., Fernández, F., Rodríguez, L., Gómez, J. and Vázquez, J. (2020), Pregnancy care during the COVID-19 epidemic, an impetus for change? *Rev Esp Public Health*.
<https://dialnet.unirioja.es/servlet/articulo?codigo=7721383>
- Carrión, D., Gómez, J., Rodríguez, M., Mantica, G., Esperto, F., Maestro, M., Cansino, R., Aguilera, A. and Martínez, L. (2020), Implementation of teleconsultation in urological practice during the Covid-19 era. *Medex*.
<https://medes.com/publication/151857>
- Di Tommaso, F., Fitz, M., Sastre, P., Hirschson, A., Dominé, E., Agüero, P. and Baranchu, A. (2020), Consultations by whatsapp in the electrophysiology department of a public hospital in the City of Buenos Aires in times of COVID-19, *Revista Argentina de cardiología*.
<http://dx.doi.org/10.7775/rac.es.v88.i3.18000>
- Elías, G. and Hermes, R. (2015). Epistemological underpinning of the public policy of a Welfare State in Peru. *Ciencia y Tecnología*, 12 (2).
<https://revistas.unitru.edu.pe/index.php/PGM/article/view/1389>
- Hernández, A., García, C., Valencia, J., & Oviedo, M. (2019). User management as a key tool in achieving satisfaction for health promoting entities (EPS). *Unaciencia*, 8. doi:
<https://doi.org/10.35997/runacv12n2>

- Jordan, D. , Guiu-Segura, J., Sousa-Pinto, G. and Wang, L. (2021). How COVID-19 has impacted globally on the role of the pharmacist. *Farm Hosp.* 45(2):89-95. <http://dx.doi.org/10.7399%2Ffh.11652>.
- Macinko, J., Woolley, N., Seixas, B., Andrade, F., & Lima-Costa, M. (2020). Health care seeking for COVID-19-related symptoms and health care cancellations among Brazilian older adults: the ELSI-COVID-19 initiative. *Cadernos de Saúde Pública*, 36. <https://doi.org/10.1590/0102-311x00181920>.
- Margusino, L., Illarro, A., Lorenzo, K., Monte, E., Márquez, E., Fernández, N., Gómez, D., Lago, N., Poveda, J., Díaz, R., Hurtado, J., Sánchez, J., Casanova, C. and Morillo, R.(2020), Outpatient pharmaceutical care during the COVID-19 pandemic. *Telefarmacia, Revista Farmacia Hospitalaria*. <http://dx.doi.org/10.7399%2Ffh.11498>.
- Martinez-Navarro, G., Lozano-Zafra, C., Caballero-Chabrera F., Modesto-Alapont, V. Oltra-Benavent, M. (2020) COVID-19 impact on emergency and inpatient Delaware United Nations tertiary hospital. Delaware Management Lessons Learned, *Enferm Infecc Microbiologia Clin.*,<https://doi.org/10.1016/j.eimc.2021.02.008>
- Studart-Neto, A., Fukelmann, B., Tuma, R., Camelo, A., Kubota, G., Iepsen, B., Moreira, G., Rodrigues, J., Ferrari, M., Carra, R., Spera, R., Oku, M., Terrim, S., Lopes, C., Passos, C., Fiorentino, M., De Souza, J.,

Baima, J., Da Silva, T., Moreno, C., Silva, A., Heise, C., Mendonça, R., Fortini, I., Smid, J., Adoni, T., Gonçalves, M., Pereira, S., Pinto, L., Gomes, H., Zanoteli, E., Brucki, S., Conforto, A., Castro, L., and Nitrini, R. (2020). Neurological consultations and diagnoses in a large, dedicated COVID-19 university hospital. *Arquivos de Neuro-Psiquiatria*, 78(8), 494-500.<https://doi.org/10.1590/0004-282x20200089>.

Taype-Rondan, A., Hurtado-Roca, Y., Estrada-Martínez, M., and Timaná-Ruiz, R. (2020). Clinical recommendations for COVID-19 risk assessment and management in health personnel of the Social Security of Peru (EsSalud). *Acta Médica Peruana*, 37(1), 84-87. <https://dx.doi.org/10.35663/amp.2020.371.953>.

Use of videoconferencing and attitudes towards mathematics in Architecture students at a private university

Joel Alanya-Beltran
Freddy Antonio Ochoa-Tataje
Lida Ivonne Lima Cucho
Ena Elizabeth Cuba Mayuri
Zulema Daria Leiva Bazan

Introduction

The use of information and communication technologies has revolutionized the world. Thus, learning in the past does not have the same meaning as learning today, because although learning is the act of acquiring knowledge, nowadays it implies the ability to solve problems, for which the student must be prepared to

search for information, organize it, analyze it and be able to solve problems in a real environment.

The digital world is progressing rapidly, we are in the Internet culture where from a very young age children manipulate any digital device in the social environment and at school, but for this it is important to train the student to have autonomy and ability to properly manage technology. In addition, the progress of technologies has transformed the social and economic life of society, many of the activities will be carried out through more technified methods. In the field of education, new technological tools are frequently incorporated. (Mata de López and Acevedo, 2010, p.30).

Currently, an irreplaceable foundation of technological and communication advances is mathematics, of a highly digitized society that requires training to integrate into the continuous change in which we live. Therefore, its understanding is crucial for the understanding, interpretation and analysis of diverse and complex scenarios. Taxes, interpreting graphs, economic news, building a house, a bridge, deciphering the time, locating on a map, conducting scientific research, are tasks impossible to perform without the support of mathematics. (Alvarez and Ruiz, 2010, p.227).

That is why it is of vital importance to conduct a study on the attitudes of students towards mathematics, thus facilitating progress in the learning of this subject, in this sense we find background on attitudes towards mathematics and their relationships with learning in university students. (Flores and Auzmendi, 2018, p.246).

Within the use of information technologies, one of the most complete tools is videoconferencing because it allows us to maintain a two-way conversation as well as to share files in real time between two or more people without the need to be in the same physical space. The teacher plays a very important role because he is the guide of the group in learning, he is the one who will use different computer tools simultaneously to keep the attention of his listeners (Panduro-Ramírez, Alanya-Beltrán, Soto-Hidalgo and Ruiz-Salazar, 2021, p.50); and to make the videoconference an enriching experience as far as learning is concerned.

In this sense we can affirm that nowadays videoconferencing has become one of the preferred tools for university professors, since in this way both students and professors do not have the need to move, however,

there is doubt about its effectiveness, which is why I developed this research to corroborate it.

Videoconferencing

Currently, education can be provided without the need for a classroom, the student can be anywhere in the world and can access the class at any time, all this thanks to distance education. Distance learning is that learning that is developed thanks to information technologies and allows the interaction of the teacher with his students despite not being in the same place and could be in a deferred time, this depending on the needs of students. This type of learning is currently carried out as a complement to face-to-face education.

Educational institutions are increasingly adapting to new teaching technologies, and programs that allow them to communicate, collaborate and create experiences with users from all over the world are being proposed. It is worth mentioning that the use of a virtual education platform requires constant supervision, it allows the teacher to manage a group, behaviors are strengthened through different tools, the resulting attitude is an attention to a constant flow of visual, auditory and reactivity signals. Content learning carries with it a tacit biocontrol that prescribes an archetype of the ideal virtual student (Ayala, 2021, p.178).

Likewise, it should be taken into account that since in distance education there is no direct interaction between teacher and student, the platform has to be as interactive as possible, as well as the contents, which have to have a structure or organization that makes them easy to learn. This is how the role of the educator has changed, the educator is no longer the one who provides the information to the student, but the one who teaches him to investigate, to analyze the information, to organize it, he is the guide who will take him through the cybernetic cloud, in order to help the student to adapt to this new teaching system.

This type of education is one in which teachers and students participate in a digital environment through new technologies and computer networks, making intensive use of the facilities provided by the Internet and digital technologies. Within these technologies, videoconferencing is one of the main tools of virtual education.

Videoconferencing is currently one of the tools that offers us more possibilities to reach the student in an understandable way, using audiovisual communication, thus overcoming the geographical limitations of face-to-face educational programs. Torres and Costales define

some characteristics of videoconferencing: "Integral, it allows the sending of images, sound and data. Interactive, it allows two-way communication at all times. Synchronous, it allows live transmission from one point to another or between several points at the same time". Videoconferencing allows interacting with people who are in different places, being able to make a live and live transmission from one point or either several, as well as being able to send images, sounds and data. (2012, p.18)

Most students find videoconferencing useful and interesting because it is shorter than a normal session. This powerful tool for simultaneous two-way audio and video communication allows us to hold meetings with groups of people located at distant locations. Additionally, they offer us telematic or other facilities such as the exchange of graphics, still images, transmission of files from the computer, etc. Its implementation provides important benefits, such as collaborative work between geographically distant people and greater integration between some work groups.

Videoconferencing in universities still presents challenges to its implementation as the technology, its application, and its continued evolution. Challenges include the cost of the technology and connections, the quality of the equipment, and the classroom environment and procedures that create the learning experience, but even

knowing all this, videoconferencing has become a means to spread learning to more people in more remote and distant locations.

The use of ICTs transforms the ways, forms and times of interaction between teachers and students; in this way, these new technologies increase communication between teachers and students regardless of time and space.

Attitudes towards mathematics

Mathematics is a discipline that has been present in all civilizations since the beginning of humanity. Its understanding has allowed society the explanation, knowledge and transformation of social and natural events that take place in its environment. In ancient Greece, it was one of the main educational areas constituted as a discipline, which was called the Quadrivium (Arithmetic, Music, Geometry and Astronomy) or the study of number and its concordance with physical space and time. (Alvarez and Ruiz, 2010, p.227).

The teaching of mathematics is a complex task in all educational systems; all countries have mathematics as part of their school curricula. (Mora, 2003, p.231). Rocha et. al. mention that in Mexico, the mathematics course

represents a problem for most students at all levels, what the author suggests is to incorporate an adaptive tutor system that can provide the personalization and flexibility required to improve student learning, since all students have different learning rhythms, as well as working with small groups. (2020, p.272). Cardoso, Vanegas and Cerecedo, affirm that student attitudes represent significant information for teachers in the planning and execution stage of the formative process, and emphasize the importance of the subject because students will continue to interact with it in the academic and work environment. (2012, p.16).

The discipline of mathematics presents great challenges, such as how to guide this process, the resources to be used and the relationship between what is done and what is intended to be achieved. Within this framework, two significant currents have been generated. 1) Didactics in mathematics education, which has been consolidated as a discipline of study that addresses the purposes of mathematics education in the specific contexts in which it is developed. 2) The dialectical relationship between teacher and student, in which the former differs from the latter in methodologies, motivations and specific training needs. (Grisales-Aguirre, 2018, p.200)

According to Palacios, Arias and Arias (2014), the dimensions of mathematics are 1) Perception of mathematical competence. These are attitudes related to

the perception of inability, confusion, difficulty, and expectations of failure in the face of mathematics. 2) Satisfaction with mathematics. This refers to the positive emotions aroused by the study of mathematics, perception of ease and comfort in solving mathematical problems. 3) Perceived usefulness. This refers to the attitudes resulting from the usefulness and necessity of mathematics as a discipline of study. 4) Mathematical self-concept. It refers to the student's conception of himself/herself as skilled and capable for the study of mathematics (p.69).

It is necessary to be able to define the attitude of the students towards mathematics because it is necessary to know the degree of acceptance, to know the problems, to be able to take measures regarding this and to look for indicators that demonstrate that our method is working, that the use of videoconferencing reinforces student learning. Petriz, Barona, López and Quiroz (2010, p.1246) point out that attitude is a metacognitive strategy that, properly managed, can help to reverse the prejudices about mathematics. From this point of view, the attitude that a student may have towards mathematics can be understood as a measure of acceptance or rejection, as well as how familiar he/she is with certain mathematical contents. If we handle the attitude of the students in a positive way, we can eradicate from the student any kind of prejudice he/she has about learning mathematics.

In many cases, students see mathematics as a difficult subject, the preferred subject of the minority, because it can be seen as boring, complex and difficult to understand. This generates in the student, frustration, anguish, collective rejection. However, this will depend a lot on the teacher, on the teaching method he/she uses. The teacher has to know well the contents to be taught and also to get the information in a didactic way to the student, as well as to choose an adequate method of evaluation and motivation.

Alvarez and Ruiz (2010) affirm that a large number of teachers perceive the increase of students' attention, interest and motivation when faced with contents that coincide with their attitudes, principles and values. On the contrary, they avoid or ignore information that is incongruent with their attitudes and values (p.232). Therefore, attitudes help to predict how much the student is assimilating the contents, how motivated he is, how much he is memorizing, as well as the use he will make of the subject in the future, and these variables can help or hinder learning. We have to take into account that students learn what catches their attention and what they do not forget easily (Alanya, Padilla and Panduro, 2021, p.180).

With respect to the mathematics course in distance education, it should be taken into account, in which fields their studies go, from there we see that on the one hand

they are in charge of understanding the mathematical knowledge mediated by information and communication technologies; and on the other hand, the analysis of the difficulties that emerge in the processes of teaching and learning mathematics in virtual environments. In addition, the interaction modalities should be taken into account: interaction with the media, interaction with mathematical resources, interaction with the teacher and interaction with other students.

It is important to use new online communication tools to provide solutions to problems of non-attendance at classes. A videoconference allows users to participate in sessions from the comfort of their homes and without having to attend a physical location.

Through the implementation and use of videoconferencing it is intended to achieve a better way of imparting knowledge to students and thus overcome academic gaps that often remain in the memory and in turn are retransmitted. Avoiding this problem will contribute to the training of teachers who are better prepared and familiar with the use of videoconferencing, from which it is no longer possible to disappear.

Students in architecture majors need to analyze, understand, and solve math problems related to their

major. However, some students do not have the ability to learn mathematics. In other cases, some of them still present the college mentality and do not take due importance to the course and, therefore, to their professional career, where mathematics is of great importance for their good professional performance.

The research uses the hypothetico-deductive method is of basic type is developed under a non-experimental, cross-sectional and correlational design The population consists of 60 students enrolled in the Basic Mathematics course of the Architecture career of the University of Applied Sciences (UPC), 2016. The instrument used to obtain data was the questionnaire: 1) Questionnaire of valuation of the use of videoconferencing and 2) Questionnaire of attitudes towards mathematics, the questionnaires developed were validated through expert judgment, to establish the reliability of the questionnaires to be used in this study, a pilot test was applied to 25 students, then the descriptive and inferential analysis of the variables was performed.

With the analysis conducted, it has been found that there is a significant relationship between videoconference use and attitudes towards mathematics ($\rho = 0.658$; $p < .05$), this means that the greater the use of a multimedia service that allows interaction between different people or work groups, through virtual interactive sessions (Chacón, 2003, p. 8), there will be a better or favorable valuation,

appreciation and liking for the mathematical discipline, highlighting more the affective aspect than the cognitive one in the attitude expressed (Palacios, Arias, & Arias, 2014). The use of information technologies to increase the predisposition of students to achieve learning has been reported by Eiland, Garza, Hester, Carroll and Kelley (2016), who in their research concludes that these technologies play an important role in the university work environment since they allow establishing channels and codes accepted by the students of a new generation so that their use is daily; in addition, these tools allow teachers to be more effective in developing the subject they teach (p.8).

Similarly, it has been found that there is a significant relationship between videoconference use and perception of mathematical competence ($\rho = 0.605$; $p < .05$), this means that the greater the use of a multimedia service that allows interaction between different people or work groups, through virtual interactive sessions (Chacón, 2003, p.8), the greater the possibility that students abandon perceptions of inability, clumsiness, confusion, difficulty and expectations of failure in mathematics (Palacios, Arias & Arias, 2014, p.68). In this line, De Pablo, García, González and Arguedas (2011) have pointed out that ICT are tools that achieve significant learning in students since they activate previous knowledge (p.4055); to a certain extent, academic results make students gain greater confidence in

their own abilities to learn, which in turn would increase their own perception of efficacy with respect to the mathematics course.

Likewise, it has been evidenced that there is a significant relationship between videoconference use and satisfaction with mathematics ($\rho = 0.499$; $p < .05$), this shows that the greater the use of a multimedia service that allows interaction between different people or work groups, through virtual interactive sessions (Chacón, 2003, p.8), the greater the possibilities of developing positive emotions for the study of mathematics, as well as increasing the perception of ease and comfort in the resolution of mathematical problems. (Palacios, Arias and Arias, 2014). According to this, a better didactics for teaching would be appreciated since it keeps students motivated and with sufficient expectations to continue learning (p.73). In this regard, Pedraza, Farías, Lavín and Torres (2013) concluded in their research that videoconferencing directly influences the teaching-learning process of teachers (p.11). Likewise, when videoconferencing is used and students' participation is encouraged, it allows them to perform better, as stated by Jiménez-Valverde and Núñez-Cruz (2009), who concluded that students to whom this type of evaluation was applied (active - participatory) showed progressive improvement in their academic level in the mentioned course (p.318).

It has also been observed that there is a significant relationship between the use of videoconferencing and the perceived usefulness of mathematics ($\rho = 0.716$; $p < 05$), which means that the greater the use of a multimedia service that allows interaction between different people or work groups, through virtual interactive sessions (Chacón, 2003, p.8), the greater the possibility of improving the perceptions of usefulness and necessity of mathematics as a discipline of study (Palacios, Arias, & Arias, 2014, p.73). According to Montagud and Gandía (2014), these perceptions of usefulness would be related to the improvement of academic performance; to which, they add that students perceive the usefulness of virtual classrooms as a function of the conceptual learning they access (p.134). Furthermore, Holguin-Alvarez, Taxa, Tortora, Alanya-Beltran, Panduro-Ramírez and Soto-Hidalgo (2020) concluded that the use of appropriate innovative tools allows the interaction of students with mathematics, which improves confidence, security, motivation and commitment in the development of their mathematical activities, since they can understand their usefulness (p.8617).

On the other hand, there is also a significant relationship between videoconference use and mathematical self-concept ($\rho = 0.629$; $p < 05$), this indicates that the greater the use of a multimedia service that allows interaction between different people or work groups, through virtual

interactive sessions (Chacón, 2003, p.8), the greater the possibilities of improving the student's self-concept as skilled and capable for the study of mathematics (Palacios, Arias & Arias, 2014, p. 79). In fact, self-concept has to do with the achievements that students gradually develop and, as described, videoconferencing allows these results; in addition, the dynamics of the teaching-learning process and learning achievements allow for a relationship between attitudes towards learning mathematics and interests in teaching mathematics (Rodríguez-Muñiz & Díaz, 2015, p.70).

Conclusions

It is concluded that there is a significant relationship ($r=0.658$; $p<.05$) between videoconference use and attitudes towards mathematics in Architecture students, year 2016. These results indicate that the greater the use of videoconferencing the greater the probability of improving attitudes towards mathematics of students taking Basic Mathematics, so it is suggested to university managers to increase the use of videoconferencing as a teaching tool to teach courses such as mathematics, since it has been proven that it improves the favorable attitudes of students towards this subject, which in parallel facilitates their effective learning, also it was identified that there is a significant relationship ($r=0.605$; $p<.05$) between videoconference use and perception of mathematical competence in Architecture students, year 2016, therefore

it is suggested to expand the use of videoconference to other courses related to mathematics that are part of the curriculum of any educational program, since it has been proven that it dispels the perceptions of inability and expectations of failure of students, encouraged towards more favorable attitudes towards learning. Likewise, it was found that there is a significant relationship ($r=0.499$; $p<.05$) between the use of videoconference and satisfaction with mathematics in students, therefore it is suggested that teachers be trained in the use of videoconference and in this way they can expand the teaching influence in the formation of students.

It was also identified that there is a significant relationship ($r=0.716$; $p<.05$) between videoconference use and perception of usefulness of mathematics in Architecture students, year 2016, so it should be considered that for a learning to be meaningful, it is necessary that the student considers it useful. The videoconference allows offering the student a broader view of mathematics in such a way that he/she can visualize its usefulness in the field. It is recommended to emphasize these considerations when designing the contents and learning strategies in order to obtain not only better learning but also better attitudes to learn. And finally there is a significant relationship ($r=0.716$; $p<.05$) between videoconference use and mathematical self-concept in Architecture students, year 2016. These results indicate that the greater the use of

videoconferencing, the greater the probability of improving the mathematical self-concept of students taking Basic Mathematics. In the future, it is recommended to expand the use of information technologies such as videoconferencing in all courses that are part of the architecture career in order to verify that the findings of this thesis are extended to all topics of training of students.

References

- Alanya, J. , Padilla, J. and Panduro, J. (2021). Proposals addressed to learning styles: systematic review . *Centro Sur.* E3, 418- 433.
<https://doi.org/10.37955/cs.v0iE3>
- Álvarez, Y., Ruiz, M. (2010). Attitudes towards mathematics in engineering students in Venezuelan autonomous universities. *Revista de Pedagogia.* 31(89).
<https://www.redalyc.org/pdf/659/65919436002.pdf>
- Ayala, R. (2021). A zoom to virtual education: biopolitics and student-centered learning, *Medical Education,* 22(3), 177-180,
<https://doi.org/10.1016/j.edumed.2021.01.004>
- Cardoso, E., Vanegas, E., & Cerecedo, M. (2012). Diagnosis of the attitudes towards Mathematics of students who begin their studies in three graduate programs in Business Administration. *Revista Electrónica Educare,* 16(2), 237-253.

<https://www.redalyc.org/articulo.oa?id=194124286016>

Chacón, A. (2003). *Videoconferencing: conceptualization, elements and educational use*. Granada: Grupo Área.
<http://www.ugr.es/~sevimeco/revistaeticanet/Numero2/Articulos/La%20videoconferencia.pdf>.

De Pablo, R., García, R., González, J. and Arguedas, R (2011). Teaching Innovation Network: An educational virtual model, *Procedia - Social and Behavioral Sciences*, 15, 4053-4058.
<https://doi.org/10.1016/j.sbspro.2011.04.413>.

Eiland, S., Garza, K., Hester, K., Carroll, D and Kelley, K. (2016) Student perspectives and learning outcomes with implementation of team-based learning into a videoconferenced elective, *Currents in Pharmacy Teaching and Learning*, 8 (2), 164-172.
<https://doi.org/10.1016/j.cptl.2015.12.007>.

Flores, W. and Auzmendi, E. (2018). Attitudes towards mathematics in university teaching and their relationship with gender and ethnicity variables, *Revista profesorado*,
<https://revistaseug.ugr.es/index.php/profesorado/article/view/8000/pdf>

Grisales-Aguirre, A. (2018). Use of ICT resources in mathematics education: challenges and perspectives. 14(2).

<http://www.scielo.org.co/pdf/entra/v14n2/1900-3803-entra-14-02-198.pdf>

Holguin-Alvarez, J., Taxa, F., Tortora, E., Alanya-Beltran, J., Panduro-Ramírez, J., & Soto-Hidalgo, C. (2020). Video games and Kahoot! as cognitive gamifiers in compulsory social isolation. *International Journal*, 9(5), 8615-8620. <https://doi.org/10.30534/ijatcse/2020/245952020>.

Jiménez-Valverde, G. and Núñez-Cruz, E. (2009). On-line cooperation in virtual environments in chemistry teaching. *Chemical Education*, 20(3), 314-319, [https://doi.org/10.1016/S0187-893X\(18\)30031-4](https://doi.org/10.1016/S0187-893X(18)30031-4).

Mata de López, A., & Acevedo, A. (2010). Teachers' attitudes towards the use of information and communication technologies. *Investigacion y Postgrado*, 25(2-3), 022-042. http://ve.scielo.org/scielo.php?script=sci_arttext&pid=S1316-00872010000200005&lng=es&tlng=es

Montagud, D. and Gandía, J. (2014). Virtual learning environment and academic outcomes: empirical evidence for Management Accounting teaching. *Journal of Accounting*, 17 (2), 108-115, <https://doi.org/10.1016/j.rcsar.2013.08.003>

Mora, C. (2003). Strategies for learning and teaching mathematics. *Journal of Pedagogy*, 24(70), 181-272.

http://ve.scielo.org/scielo.php?script=sci_arttext&pid=S0798-97922003000200002&lng=es&tlng=es.

Palacios, A.; Arias, V. and Arias, B. (2014). Attitudes towards mathematics: construction and validation of an instrument for its measurement. *Revista de Psicodidáctica*, 19(1), 67-91. <https://dialnet.unirioja.es/servlet/articulo?codigo=4586520>

Panduro-Ramírez, J., Alanya-Beltrán, J., Soto-Hidalgo, C. and Ruiz-Salazar, J. (2021). Student Assessment in the Digital Age: A Systematic Review in Latin America. *Espiraes Revista Multidisciplinaria De investigación*, 5(36), 48-66. <https://doi.org/10.31876/er.v5i36.779>

Pedraza, N., Farías, G., Lavín, J. and Torres A. (2013). Teaching competencies in ICT in the areas of business and accounting An exploratory study in higher education. *Educational Profiles*, 35(139), 8-24. [https://doi.org/10.1016/S0185-2698\(13\)71806-3](https://doi.org/10.1016/S0185-2698(13)71806-3).

Petriz, M., Barona, C., López, R. Quiroz, J. (2010). *Performance levels and attitudes towards mathematics in undergraduate students in administration at a Mexican state university*. *Revista Mexicana de Investigación Educativa*, 15(47). <https://www.redalyc.org/articulo.oa?id=14015564012>.

- Rocha, G., Juárez, J., Fuchs, O and Rebolledo-Méndez, G. (2020). Academic achievement and attitudes towards mathematics with an Adaptive Tutor System. *PNA*, 14(4), 271-294. <https://revistaseug.ugr.es/index.php/pna/article/view/pna.v14i4.15202/13548>
- Rodríguez-Muñiz, L. and Díaz, P. (2015). Strategies of Spanish universities to improve mathematics performance of incoming students. *Aula Abierta*, 43(2), 2015, 69-76. <https://doi.org/10.1016/j.aula.2015.01.002>.

Applications of Artificial Intelligence in public education management

Yolvi Ocaña-Fernandez

Joel Alanya-Beltran

José Antonio Carbonel Arribasplata

Arístides Alfonso Tejada Arana

José Antonio La Cotería Vega

Introduction

Established as an academic discipline in the 1950s, artificial intelligence remained an area of relative scientific obscurity and limited practical interest for more than half a century. Artificial intelligence, as an idea, first appeared shortly after humans developed electronic digital computing and has since faced waves of hype and pessimism (Press, 2017). According to Chui (2017) artificial intelligence refers to the ability of machines to exhibit human-like intelligence, e.g.,

solve a problem independently of some manufactured software. The breakneck pace of development in artificial intelligence is providing unprecedented opportunities (Park, 2017; Issa, Sun, & Vasarhelyi, 2016), innovations introduced by artificial intelligence include highly advanced computational methods that mimic the way the human brain works (Abduljabbar et al., 2019).

Artificial intelligence offers enormous transformative potential for the augmentation and replacement of human tasks and activities within a wide range of industrial, intellectual and social applications (Helbing et al., 2019). Currently, due to the rise of scientific disciplines derived from the application of artificial intelligence such as big data (storage and management of huge volumes of data), machine learning (generation of machine learning systems), deep learning (use of artificial neural networks of hierarchical levels), have entered the environment of public management and administration (Haenlein and Kaplan, 2019). According to Helbing et al. (2019) new advances in algorithmic machine learning and autonomous decision making, has resulted in generating novel opportunities for continued innovation in this field (p.282). Therefore, there is no doubt that artificial intelligence is poised to unleash the next wave of digital disruption, which is why institutions, organizations and/or companies should strive to be prepared for it now (Chui, 2017; Nadikattu, 2016).

As stated by Dwivedi et al. (2019), artificial intelligence is a concept that has been part of public discourse for decades, often depicted in science fiction movies or apocalyptic discussions where intelligent machines will take over the world and relegate the human race to a mundane subservient existence in support of the new order imposed by artificial intelligence. While such a depiction has a cartoonish tinge, the reality is that artificial intelligence is already present and many of us interact regularly with such technology in our daily lives. In this regard, it will need to be kept very much in mind that artificial intelligence should not be conceived of as just another utility that needs to be regulated, only once it is mature; for it is itself a powerful force that is reshaping our lives, our interactions, and our environment (Cath et al., 2018).

This document provides an overview of the most relevant aspects of artificial intelligence in relation to public management processes in order to present a convergent vision on key aspects that have been developed in recent years and the possibilities that the application of this proposal brings with it. The proposed approach seeks to provide accurate and updated information on how artificial intelligence has been incorporated in the government sector, especially in key management processes, and to provide information on the most promising achievements in various contexts related to public management. Likewise, several domains where the application of

techniques related to machine learning and artificial intelligence in the public sector are innovating will be discussed: the creation of new coordination mechanisms, new technological strategies and the new challenges of transversal rights and obligations and new capabilities. Next, we have tried to elucidate in a focused way the related diatribes that artificial intelligence faces and/or will have to face with respect to public management processes. Regarding the latter, the possibilities and limitations of artificial intelligence as a tool and its employability have been taken into account.

In order to be able to dimension the panorama regarding artificial intelligence and its linkage in public management, we proceeded to collect and purge scientific works on the subject that cover such problems. For this purpose, databases such as Scopus, Web of Science, Medline, ProQuest, and EBSCO were consulted, using as inclusion criteria key terms related to management and public administration and artificial intelligence, to compile and purge relevant information with a maximum of 5 years of antiquity, due to the constant changes to which the subject matter is subject, in order to compile and analyze its scope in the current scenario. On the other hand, we have excluded those works that were older than 5 years and others that focused on criteria such as big data systems and algorithms (code) because they are purely technical in nature.

Artificial intelligence in government and public sector

Summary. This chapter shows the progress of artificial intelligence in public management, how several governments have been implementing specific processes and its shift from the private sector to the public sector, due to its enormous potential. For this purpose, it has been constituted to generate a compilation of several works of connoted relevance in terms of impact and its proximity in time, since very recent studies have been chosen with the purpose of providing relevant and updated information in order to be able to cover the greatest number of aspects in which artificial intelligence has become its inevitable landing in management processes in different levels of government. In the development of this section, the levels of impact that artificial intelligence has generated in public administration are presented, showing a series of concrete achievements at different levels of management according to specific needs, as for example in the sector of transport management or solid waste management, which due to their juncture are crucial dilemmas that affect various cities in the world. The enormous potential offered by technologies based on artificial intelligence is also presented, including the field of research, which is where, according to many experts in the field, the greatest achievements will be generated.

Artificial intelligence is an interdisciplinary research field that has recently gained particular importance in society,

the economy, and the public sector, opening up a variety of new opportunities (Boyd and Wilson, 2017). Public bodies and agencies are increasingly looking to use new forms of data analytics to provide better quality in public services (Etscheid, 2019, p.253). Such reforms have consisted of digital service transformations such as e-government 2.0 and the creation of integrated data infrastructures or supports, generally with the aim of improving the citizen experience, making government more efficient, and boosting business and the economy in general (Veale and Brass, 2019; Mikhaylov et al., 2018).

According to Henman (2020), new digital technologies are rapidly transforming the landscape of public service delivery, as mobile devices combined with applications bring online public services to wherever citizens are located. Networked technologies allow geo-coded information provision and data collection to be integrated with traditional administrative data, creating sets of huge blocks of information (big data) to generate knowledge about populations and individuals, which can be processed by artificial intelligence-based techniques to optimize decision making. Automated administrative decision-making processes are expanding, and artificial intelligence (through machine learning) provides more nuanced ways of making decisions in complex circumstances (pp. 8-10).

Various public sector organizations are increasingly interested in using data science and artificial intelligence capabilities to implement policies and generate efficiencies in high uncertainty environments (Mikhaylov et al., 2018). According to Veale and Brass (2019), recently, there has been a push to use administrative data to build models for the purpose of helping to make day-to-day operational decisions in the management and delivery of public services, rather than to provide general evidence to improve strategy or interaction between government and citizens. The introduction of artificial intelligence into government actions will enable a wide range of unique opportunities. They likewise remarked that many of them are beginning to stand out in a growing number of views on artificial intelligence in the public sector (Duan et al., 2019).

In order to elucidate part of the experiences regarding the above, it is worth taking into account what Sun and Medaglia (2019) stated that, in the case of China, in an incipient phase, the hype linked to the introduction of artificial intelligence in the public sector was inevitably accompanied by a certain degree of uncertainty, since the application of such technologies in the public sector would be the continuation of the explosion of artificial intelligence in the private sector. This is nothing new, since it was the private sector that was the first to adopt artificial

intelligence for the organization, planning and management of its processes.

According to Agarwal (2018), one of the most pressing dilemmas regarding the implementation of supports based on artificial intelligence for public management is linked to public administrators who are not or not linked to such innovations and are therefore not prepared to face the challenges required by the transformation/derivation of the application of new technologies, especially those related to the management of huge amounts of information oriented to decision making, which are based on artificial intelligence, a fact that may result in some impairment at the time of opting for significant improvements in management. This leads us to suggest that although many current government structures and processes have evolved over the past decades, they will probably become irrelevant or outdated in the near future, and there is a growing need to structure the basis for governments to reconsider how they can better serve their constituents.

On the other hand, the transformative impact of artificial intelligence has generated significant academic interest, as recent studies have moved from investigating the impacts and consequences of the technology to the implications on the implementation of artificial intelligence-based systems and their performance levels spanning multiple fields such as economic, military, administrative, education, medical,

security, management, among others (Dwivedi et al., 2019; Sun and Medaglia, 2019). As an example, it is worth mentioning the analysis conducted by Sun and Medaglia (2019) on the challenges of applying artificial intelligence in the public sector (in the Chinese context) based on the analysis of three groups of stakeholders: government policy makers, hospital managers/physicians and IT company managers, with the aim of identifying how the challenges of adopting artificial intelligence in the public sector are perceived in relation to changes and the impact on citizens in the context of political, legal and policy challenges, as well as threats to national security from foreign-owned companies. The analysis showed that stakeholders have diverse and sometimes conflicting expectations that could be mitigated by implementing artificial intelligence-based processes in service management.

The reasoning put forward by Shava and Hofisi (2017), supported by technological advances, was based on the fact that artificial intelligence is already generating a significant effect on the value of work and, for major segments of the population, human value is now determined by the cost of equivalent artificial intelligence; therefore, public administration will have to respond to this reality by seeking to establish the most suitable protocols for implementation according to their needs.

The introduction of artificial intelligence in the public sector opens new scenarios for both practitioners and researchers. A particular example, is the case of the United States and China, who have recognized the value of artificial intelligence for the public sector and its competitiveness in the global economy (Wirtz et al. , 2019). Being able to understand and act in these scenarios now becomes of utmost importance (Dwivedi et al., 2019). In this regard, Galloway and Swiatek (2018) expounded that artificial intelligence-based management systems can help PR professionals deal with people's emotions while planning implementations. Artificial intelligence offers great opportunities for public administration, including automation of workflow processes, faster and more efficient information processing, in addition to improved quality of service or increased labor efficiency (Morkhat et al., 2019; Galloway and Swiatek, 2018; Kouziokas, 2017). One way in which artificial intelligence is beginning to be applied, is in local government through the introduction of predictive analytics and decision support technologies allowing the government to develop its management more efficiently (Vogl et al. , 2019).

Given that citizen satisfaction with digital government offerings leaves much to be desired, artificial intelligence may be a way to bridge the gap, while improving citizen engagement and service delivery (Cath et al., 2018; Mehr, et al. , 2017). Artificial intelligence techniques and tools,

such as machine learning, rule-based systems, natural language processing, and speech recognition, when adopted in the public sector, have potential implications for various aspects of government action, including the inner workings of government agencies, the relationship between governments and citizens, and the role of governments as regulators (Dwivedi et al., 2019).

The study presented by Abbasi and El Hanandeh (2016) on the concrete application of artificial intelligence in a field related to public administration to ensure proper management of municipal solid waste in an Australian town. In that process, they implemented advanced forecasting systems based on artificial intelligence. In this study, four artificial intelligence algorithms were compared for their accuracy in predicting waste generation rates. The results showed that the artificial intelligence models provided promising tools that can enable managers to make better decisions to successfully forecast future trends in municipal solid waste management, as well as in municipal solid waste management planning and design. According to the advances developed in some aspects related to public administration, the implementation and development of processes based on artificial intelligence have demonstrated superiority to conventional models of management and management of municipal solid waste.

Another relevant example is the work developed by Kouziokas (2017) on improvements in the quality and safety of public transport services in Greece, where he mentioned that the public administration has chosen to apply artificial intelligence methods to generate predictive models of artificial neural networks in transport areas at high risk of crime, in addition to geographic information systems to perform spatial analysis in order to identify regions with a high concentration of criminal incidents. This study implemented a scaled conjugate gradient algorithm, as a training algorithm, for the generation of the feedback neural network models, as it was considered to be one of the fastest learning algorithms compared to several other equivalent algorithms. Its results showed a very good prediction accuracy, considering it as very promising and can promote safer transportation management policies, especially in cities where crime rates are very high.

Another outstanding achievement is the work developed by Abduljabbar et al. (2019) on the application of artificial intelligence in the field of transportation with the goal of overcoming the challenges of increasing travel demand, carbon dioxide emissions, safety issues, and environmental degradation. Transportation problems become a challenge when the system and user behavior is too difficult to model and predict travel patterns. This was done using a large amount of quantitative and qualitative data on the characteristics and variables of the transportation

system and methods based on artificial intelligence such as artificial neural networks, genetic algorithms, among others. The results of the analysis showed that artificial intelligence can be conveniently employed to solve the challenge of increasing travel demand, carbon dioxide emissions, safety issues and fuel wastage. According to the aforementioned researchers the next promising application of artificial intelligence in transportation will be connected and autonomous vehicles, which will aim to improve productivity by reducing the number of accidents on the roads. The applicability of artificial intelligence in the management of transport in cities is very promising for transport authorities, as it will allow them to determine how to manage processes and problems in the sector with a feasibility above the classic studies, a fact that could translate into quality services, risk mitigation, better productivity of vital assets and by default a greater acceptance of the process implemented by the population.

Challenges of artificial intelligence in the public sector

Summary. This section focuses on the most relevant diatribes that, according to the most current reviews in this field. For this purpose, a concrete and concise description has been made of how the application of artificial intelligence has been contributing to different levels of government and management processes, and with it the inevitable exposure of challenges, which in some cases may entail dilemmas that not only cover the time scale but

also touch the sensitive fibers of society through the exposure to problematic situations that revolve around ethical aspects and even more related to labor displacement, an aspect that, due to its conjuncture, must be one of the most difficult hurdles that the application of intelligence in management will have to face. For this reason, concrete cases are presented that will shed more light on which are the most critical issues regarding the development and implementation of artificial intelligence in management, and then conclude with the possibilities in the not too distant future of finding solutions in this regard.

Public administration can hardly keep up with the rapid development of artificial intelligence, which is reflected in the lack of concrete artificial intelligence governance and legislation programs (Sun and Medaglia, 2019). While the challenges of artificial intelligence and possible adverse effects on society have begun to attract the attention of researchers (Wirtz et al. , 2020); objectively determined trends and needs regarding the introduction of artificial intelligence in the system and process of public administration, have established or reflected in many conceptual, doctrinal and programmatic documents in the field of public administration of Great Britain and other countries in the European region (Galanos, 2019).

As artificial intelligence advances, the potential applications to government work will multiply, even though

governments often slow the adoption of new technologies (Bullock, 2019; Sharma et al. , 2020). According to Mehr et al. (2017), while the potential future use cases for artificial intelligence in government remain limited by government resources, the most obvious and immediately beneficial opportunities are those where artificial intelligence can reduce administrative burdens, helping to solve resource allocation problems and take on significantly complex tasks (pp. 9-10). Thus Nadikattu (2016) estimated that artificial intelligence would play the more general part of making public relations practice more efficient and user-friendly, thereby improving an organization's bottom line.

According to Dwivedi et al. (2019) the impacts of artificial intelligence, in public management, contemplate three aspects. First, on the public sector workforce, by delegating decision making to artificial intelligence; which would result in a clear classic threat of labor substitution. Second, to address the increased dynamics in public decision making supported by artificial intelligence; because artificial intelligence applications tend to introduce non-diagnostic aspects by reducing the ability of non-experts to audit the mechanisms that lead to decision outcomes. Third, the decrease of opacity issues regarding the performance of artificial intelligence and its affordability with the population; as artificial intelligence algorithms tend to suggest that the level of transparency,

traceability and explainability are inversely proportional to their complexity.

In resource-constrained environments, public organizations do not bet on investing in massive upgrade processes of the hardware and software used; however, as costs become more accessible and artificial intelligence gains in replicability, scalability and efficiency, the same pressures that delay the technological leap in public management could catalyze such tools to become attractive investments due to their connoted efficiency (Etscheid, 2019, p.252). According to the proposal of Merh et al. (2019) if any public entity would be interested in implementing artificial intelligence-based processes, they can learn from artificial intelligence implementation processes by the private sector. On the other hand, any entity should consider the following strategies to apply artificial intelligence to its field of action: making artificial intelligence part of a citizen-centric and goal-based program, obtaining citizen feedback, leveraging existing resources, suitability processes for data processing taking into account the safeguarding of privacy and above that the mitigation of ethical risks (Merh et al. , 2019; Agarwal, 2018, Jarrahi, 2018).

Another relevant challenge is given by Allam and Dhunny (2019) on the progress of cities which, inevitably, are increasingly turning to specialized technologies to address

issues related to society, ecology, morphology and many others. On such a basis arises the emerging concept of *Smart Cities*, which greatly fosters this perspective by promoting the incorporation of sensors and big data management through the so-called *Internet of Things* (Ismagilova et al., 2019). This inevitable surge of data will bring new possibilities and challenges in city design and management as much as economic perspectives. The processing of big data mediated by artificial intelligence can contribute, to a large extent, to the development of the urban fabric in the dimensions of sustainability and livability.

The use of artificial intelligence by state entities to perform various tasks, could be very relevant, as it would lead to develop a more attractive prospect for its implementation; however, it is still impossible to talk about the integrated, fully tested and properly regulated implementation of this type of technology therefore, it is urgent to delve into this issue from a theoretical point of view (prognosis), taking into account the possible directions and alternatives regarding the implementation and use of such technology (Morkhat et al. , 2019; Butcher and Beridze, 2019).

According to Manyika et al. (2017) there is a positive relationship between the benefits and adoption levels of artificial intelligence in various sectors of the global economy, which translate in the context of greater

efficiency, improved productivity and reliability. But Jarrahi (2018) mentioned that this positive image of innovation is not fully accepted since estimates for labor displacement resulting from the introduction of artificial intelligence or equivalent mechanisms (big data, machine learning) predict that up to a third of the current labor market could be seriously compromised by 2030 as a result of automation.

While it is true that a number of artificial intelligence-based applications are emerging for the public sector, which promise great value with respect to workforce and productivity, another fact that cannot be denied is that it comes with significant challenges that are crucial for its successful implementation and use. In this regard, Wirtz et al. (2020) noted pressing challenges regarding the accountability and implementation of artificial intelligence, as well as the social and ethical issues that potentially threaten the successful use of artificial intelligence and the respective value creation for the public sector and society as a whole. Artificial intelligence is a technology that is alien to the bulk of the population, a fact that could become a considerable hindrance to its implementation and development in society.

As new technological devices based on artificial intelligence tend to replace human labor in the long term, the future of public administration is threatened, therefore,

governments should carry out initiatives to train workers in the use of such technology (Wirtz et al., 2020; Shava and Hofisi, 2017). As mentioned by Bullock (2019) converges the trend that, with current technologies, many tasks performed by human actors can already be performed more efficiently and effectively by artificial intelligence (p.753). This suggests that tasks performed by human bureaucrats, in many domains, can be augmented or automated by artificial intelligence.

Dilemmas in the future development and implementation of artificial intelligence

Technology-driven disruption is occurring at a pace and scale never before seen in history. Waves of technology, such as big data and machine learning, are reshaping the modus vivendi globally in profound ways. A new world is emerging in which many of today's job classes will disappear, while new ones emerge that require completely different skill sets.

The world is on the brink of the long-awaited digital transformation orchestrated by the Fourth Industrial Revolution, which is based in part on the development and applications of artificial intelligence. Despite the perceived benefits of increased efficiency and effectiveness in service delivery, the Fourth Industrial Revolution presents to a large extent numerous challenges for public administration

in developing countries that lack sufficient human and material resources to execute the ensuing enormous technological advances. This aspect must be understood from the reality of the absence of experts in the field in adequate numbers for an effective implementation process to take place, in addition to taking into account the limiting factor of the economies of the region that very rarely bet on the technical-scientific training of cadres that lead such possibilities and can work on it. Perhaps this delicate aspect is one of the most critical ones that exceeds expectations, since its solution responds to the policies adopted by the current administration.

The increasing use of artificial intelligence is likely to challenge cultural norms and act as a potential barrier within certain sectors of the population. There is also the latent risk that artificial intelligence may surpass human performance in many jobs and could inevitably replace them. There is no doubt that artificial intelligence will continue to improve its capabilities and infiltrate many more domains of society's endeavors; hence the growing concern that artificial intelligence will usurp or extinguish jobs and replace human employees will prevent people's confidence in artificial intelligence; but that, due to its effectiveness, such a trend will be quasi-inevitable. In fact, being a trend and being present in one way or another in social life, it is an ineluctable fact that the shift towards processes mediated by artificial intelligence in various

fields and activities will materialize, but the radical question is how prepared are we for it? And in the case of access to mechanisms and processes based on artificial intelligence, it is worth asking: are there sufficiently trained professionals to be able to take advantage of artificial intelligence and adapt it to national development processes; and on the other hand, in the local context and assuming the levels of education of the countries of the region and the cultural gaps, how and how much would be the level of acceptance/rejection of the implementation of artificial intelligence in public management on the part of the population? These dilemmas, to which we cannot be exempt, will be part of the next research agenda regarding the field of possibilities and implications of the adaptation of artificial intelligence in our countries on the way to the desired development.

Conclusions

The vision presented here contributes to a theoretical understanding of the convergence of various currents of disaster information and artificial intelligence research and the advances made in relation to the field of public management, in which it has been gaining a notorious presence and influence; but this does not mean that it is exempt from design and implementation challenges in the field of public management. In this regard, it is worth mentioning that these challenges concerning administrative structures can be circumscribed, according

to three different levels of public management and execution. First, the "macro" scale, where governments play a strategic role in directing the implementation of this technology in all public functions and have the duty to balance its benefits with its unintended consequences. Second, the "meso" scale, where the delivery of individual public functions and policies is partly actualized through algorithmic systems and where the design, monitoring and evaluation of algorithmic systems are considered. Finally, there is an urgent need for the convergence of interdisciplinary research currents that focus on specific problems according to the given context with respect to the applications of artificial intelligence, which, based on the above, holds great promise for improving the performance of management processes.

References

- Abbasi, M., and El-Hanandeh, A. (2016). Forecasting municipal solid waste generation using artificial intelligence modelling approaches. *Waste management*, 56, 13-22. <https://doi.org/10.1016/j.wasman.2016.05.018>.
- Abduljabbar, R., Dia, H., Liyanage, S., and Bagloee, S. A. (2019). Applications of artificial intelligence in transportation: An overview. *Sustainability*, 11 (1), 1-24. <https://doi.org/10.3390/su11010189>.

- Allam, Z., and Dhunny, Z. A. (2019). On big data, artificial intelligence and smart cities. *Cities*, 89, 80-91. <https://doi.org/10.1016/j.cities.2019.01.032>.
- Agarwal, P. K. (2018). Public administration challenges in the world of AI and Bots. *Public Administration Review*, 78 (6), 917-921. <https://doi.org/10.1111/puar.12979>
- Boyd, M., & Wilson, N. (2017). Rapid developments in artificial intelligence: How might the New Zealand government respond? *Policy Quarterly*, 13 (4), 36-44. <https://doi.org/10.26686/pq.v13i4.4619>.
- Butcher, J., and Beridze, I. (2019). What is the State of Artificial Intelligence Governance Globally? *The RUSI Journal*, 164 (5-6), 88-96. doi: <https://doi.org/10.1080/03071847.2019.1694260>
- Bullock, J. B. (2019). Artificial intelligence, discretion, and bureaucracy. *The American Review of Public Administration*, 49 (7), 751-761. <https://doi.org/10.1177/0275074019856123>
- Cath, C., Wachter, S., Mittelstadt, B., Taddeo, M., & Floridi, L. (2018). Artificial intelligence and the 'good society': the US, EU, and UK approach. *Science and engineering ethics*, 24 (2), 505-528. <https://doi.org/10.1007/s11948-017-9901-7>.
- Chui, M. (2017). *Artificial intelligence the next digital frontier?*. McKinsey and Company Global Institute,

Shanghai: China. <https://bit.ly/33TVo6N>.
<https://bit.ly/33TVo6N>

Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of Big Data - evolution, challenges and research agenda. *International Journal of Information Management*, 48, 63-71.

<https://doi.org/10.1016/j.ijinfomgt.2019.01.021>.

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., & Galanos, V. (2019). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 101994.
<https://doi.org/10.1016/j.ijinfomgt.2019.08.002>.

Etscheid, J. (2019). Artificial Intelligence in Public Administration. In *International Conference on Electronic Government* (pp. 248-261). Springer, Cham.

Galanos, V. (2019). Exploring expanding expertise: artificial intelligence as an existential threat and the role of prestigious commentators, 2014-2018. *Technology Analysis and Strategic Management*, 31 (4), 421-432.
doi: 10.1080/09537325.2018.1518521.

Galloway, C., & Swiatek, L. (2018). Public relations and artificial intelligence: It's not (just) about robots.

Public relations review, 44 (5), 734-740.
<https://doi.org/10.1016/j.pubrev.2018.10.008>

Haenlein, M., and Kaplan, A. (2019). A Brief History of Artificial Intelligence: On the Past, Present, and Future of Artificial Intelligence. *California Management Review*, (000812561981986492). doi:10.1177/0008125619864925.

Helbing, D., Frey, B. S., Gigerenzer, G., Hafen, E., Hagner, M., Hofstetter, Y., ..., & Zwitter, A. (2019). Will democracy survive big data and artificial intelligence?. In *Towards digital enlightenment* (pp. 73-98). Springer, Cham.

Henman, P. (2020). Improving public services using artificial intelligence: possibilities, pitfalls, governance. *Asia Pacific Journal of Public Administration*, 1-13. <https://doi.org/10.1080/23276665.2020.1816188>.

Ismagilova, E., Hughes, L., Dwivedi, Y. K., & Raman, K. R. (2019). Smart cities: Advances in research - An information systems perspective. *International Journal of Information Management*, 47, 88-100. <https://doi.org/10.1016/j.ijinfomgt.2019.01.004>.

Issa, H., Sun, T., & Vasarhelyi, M. A. (2016). Research ideas for artificial intelligence in auditing: The formalization of audit and workforce supplementation. *Journal of Emerging Technologies in Accounting*, 13 (2), 1-20. <https://doi.org/10.2308/jeta-10511>.

- Jarrahi, M. H. (2018). Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making. *Business Horizons*, 61 (4), 577-586. <https://doi.org/10.1016/j.bushor.2018.03.007>.
- Kouziokas, G. N. (2017). The application of artificial intelligence in public administration for forecasting high crime risk transportation areas in urban environment. *Transportation Research Procedia*, 24, 467-473. <https://doi.org/10.1016/j.trpro.2017.05.083>.
- Manyika, J., Lund, S., Chui, M., Bughin, J., Woetzel, J., Batra, P., Ko, R., & Sanghvi, S. (2017). *Jobs lost, jobs gained: Workforce transitions in a time of automation*. McKinsey Global Institute. <http://hdl.voced.edu.au/10707/444873>
- Mehr, H., Ash, H., and Fellow, D. (August, 2017). *Artificial intelligence for citizen services and government*. Harvard Ash Center Technology & Democracy Fellow, at Harvard Kennedy School, 1-12. <https://bit.ly/3kq9Tb6>. <https://bit.ly/3kq9Tb6>
- Mikhaylov, S. J., Esteve, M., & Campion, A. (2018). Artificial intelligence for the public sector: opportunities and challenges of cross-sector collaboration. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 376 (2128), 1-21. <http://dx.doi.org/10.1098/rsta.2017.0357>

- Morkhat, P. M., Ponkin, I. V., Markhgeym, M. V., Botnev, V. K., and Turganbayev, A. O. (2019). Artificial intelligence versus public administration: limitations of application. *Humanities and Social Sciences Reviews*, 7 (3), 516-520. <https://doi.org/10.18510/hssr.2019.7376>.
- Nadikattu, R. R. (2016). The emerging role of artificial intelligence in modern society. *International Journal of Creative Research Thoughts*, 4 (4), 906-911. <https://ssrn.com/abstract=3652429>
- Park, D. A. (2017). A study on conversational public administration service of the Chatbot based on artificial intelligence. *Journal of Korea Multimedia Society*, 20 (8), 1347-1356. <https://doi.org/10.9717/kmms.2017.20.8.1347>
- Press, G. (January 23, 2017). Top 10 hot artificial intelligence (AI) technologies. *Forbes*, 1-4. <https://bit.ly/3wKzjTo>
- Sharma, G. D., Yadav, A., & Chopra, R. (2020). Artificial intelligence and effective governance: A review, critique and research agenda. *Sustainable Futures*, 2 (100004), 1-16. <https://doi.org/10.1016/j.sftr.2019.100004>.
- Shava, E., & Hofisi, C. (2017). Challenges and opportunities for public administration in the fourth industrial revolution. *African Journal of Public Affairs*, 9 (9), 203-215. <https://bit.ly/3lSuyCn>

- Sun, T. Q., & Medaglia, R. (2019). Mapping the challenges of Artificial Intelligence in the public sector: Evidence from public healthcare. *Government Information Quarterly*, 36 (2), 368-383. <https://doi.org/10.1016/j.giq.2018.09.008>.
- Veale, M., and Brass, I. (2019). Administration by Algorithm? Public Management meets Public Sector Machine Learning. In: *Algorithmic Regulation*, (Karen Yeung and Martin Lodge Eds.). Oxford University Press.
- Vogl, T. M., Seidelin, C., Ganesh, B., and Bright, J. (2019). Algorithmic Bureaucracy: Managing Competence, Complexity, and Problem Solving in the Age of Artificial Intelligence. *SSRN Electronic Journal*. <https://doi:10.2139/ssrn.3327804>
- Wirtz, B. W., Weyerer, J. C., & Geyer, C. (2019). Artificial intelligence and the public sector-applications and challenges. *International Journal of Public Administration*, 42 (7), 596-615. <https://doi:10.1080/01900692.2018.1498103>.
- Wirtz, B. W., Weyerer, J. C., and Sturm, B. J. (2020). The Dark Sides of Artificial Intelligence: An Integrated AI Governance Framework for Public Administration. *International Journal of Public Administration*, 43 (9), 818-829. <https://doi.org/10.1080/01900692.2020.1749851>.

Human rights in Peru, a study from higher education during the pandemic by COVID

Olinda Sabina Reyes Colquicocha
Zuly Cristina Molina Carrasco
Sergio Alex Alvarez-Gutierrez
Kelly Myriam Jiménez de Aliaga
River Chávez Santos

Introduction

WHO declared the presence of a virus causing a severe respiratory syndrome SARS-CoV-2 called Coronavirus, this generated a global health emergency alert of universal significance, after it had been confirmed in territories outside China, and 4 cases of human-human transmission had been confirmed. Richards and Stacey, (2020) The

reason for the emergency was the likelihood of spread to territories with weaker health systems, several of which do not possess the capacity to actually cope with epidemic transmission in the set of nations. (p.2).

In times of fear and uncertainty, such as today's, leaders have chosen to apply restrictive and punitive measures, establishing bans on the independent movement of individuals within and outside the States, confining groups of people, publishing information on cases of contagion, infected sectors and deaths due to Covid-19, using, on some occasions, language of signaling or labeling in functionality of the political propaganda of instant and criminalizing people who may have incurred in the violation of the limitations resulting from the spread of the virus. In this sense, Garcia and Hernandez (2020), mention that such restrictive and punitive mandatory measures imposed by various states, primarily in the Latin American system, produce greater problems for the most vulnerable societies, exacerbating the barriers for the most needy individuals, as well as potentially vulnerable societies (p. 117).

The problem is insisted upon between the battle against the pandemic disease or the protection of human rights, or defending the health of individuals or respecting their independence. This disjunctive approach, which leads to tragic choices, is based on the error of thinking that health

and rights are goods that tend to be incompatible in a pandemic disease, once the calm contemplation of the truth shows them, rather, as complementary. Bellver (2020) The universal declaration of human rights foresees the probability of determining rights, either so that others can exercise them or to defend fundamental goods in a democracy. However, the way and extent to which such limitation is achieved is regulated by art. 4 of the Universal Agreement on Civil and Political Rights (1966). (p.168)

Today, infectious outbreaks are spreading faster and farther with greater effect worldwide. In parallel, the WHO report on disability showed that well over one billion of the world's people (15%) live with some form of disability, of which 2-4% experience significant performance problems. Bellver (2020) This shows the value of making connections between disability and health emergencies, and the need to take measures for integration throughout health emergencies. (p. 173)

For this reason, this research seeks to make known the violation of human rights in Peru during 2020, the time when the Coronavirus pandemic reached the country, as well as most countries, becoming the first problem that all the governments involved in it had to face and, obviously, for which none of them was prepared to face, not even the United States, one of the most powerful countries in the world.

Human rights

Human rights, as we know them today, emerged after World War II, when countries united and formed the United Nations Organization. Therefore, it is of interest to analyze how they were violated even with legal measures such as Article 137° of the Political Constitution of Peru (State of Emergency), because a right never exists by itself, it always involves other related rights.

Throughout history, mankind has struggled to acquire rights that were initially considered natural, despite living in continuous subjugation when kingdoms were formed, but when many of these rights became positivized through laws, they became Human Rights. These have evolved thanks to the social movements that at different times sought their recognition. That is why there are now three generations and we are heading towards fourth and fifth generation human rights, in accordance with science and technology.

Outbreaks and health emergencies raise many ethical and public health questions about how to properly respond to and maintain transmission control. To do so, public health tactics aimed at community, national or universal levels sometimes require the suppression of personal rights of independence of movement and grouping, e.g., using measures such as isolation in the general population

interest. Nevertheless, Schiariti (2020) mentions throughout epidemics it is determinant to monitor the utilization of public health tactics with conscious attention to human rights, especially of those people possessing a disability. (p. 3).

The speed with which the virus is prolonged has led various territories to organize their activities with the exclusive and firm objective of "managing to maintain control of the pandemic", leading the various governments around the world to adopt strong measures, which are strengthened hour by hour, after the generation and updating of epidemiological reports on the planet, which provide an account of the magnitude and significance of the virus, however their answers were not entirely famous in the operation of the pandemic disease. Beltrán, Araque and Molinares (2020) this was saturated by the lack of previous experiences, the lack of certain answers produces a group of constant restrictions that manifest restricted answers to the individual, who is evidently affected in his daily life in the best of the cases and in his health when being contaminated by the virus, damaging his sanitary attention. (p. 184)

For Morocco (2020), for these reasons and basically, the confinement of the inhabitants has been chosen, restricting the independence of movement, which is enshrined in the 1948 World Declaration of Human Rights, as one of the

fundamental human rights to be protected in the entire planet, determining in its Article 13 the right of every individual to move freely and to choose his residence in the territory of a State, as well as the right to leave any territory, including his own, and to return to it. (p. 13)

The Coronavirus pandemic

The Coronavirus pandemic had a strong impact on the enjoyment of fundamental human rights and the exercise of these rights began to suffer certain restrictions and violations in health emergency situations. For Vasquez-Apestegui, Parras-Garrido, Tapia, Paz-Aparicio, Rojas, Sánchez-Ccoyllo and Gonzales (2021), Peru was savagely hit by the Wuhan virus or Coronavirus. (p. 2) With the declaration of the State of Emergency due to "serious circumstances affecting the life of the nation", several fundamental rights were restricted. But, in addition, many related rights were also affected as a result of the global pandemic.

It was on March 6, when the first case of coronavirus was announced in Peru. From that day on, measures were taken to contain the spread of the virus, but its advance was unstoppable and the ravages began to reflect the true reality of a country betrayed by its rulers. The spread of the Covid 19 pandemic, declared by the UN, set off alarms worldwide. Vasquez et al (2021) The Wuhan virus called

"viral pneumonia" broke the borders of the city and China; it moved through several countries in Europe, quickly infecting the population that was unaware of everything that is now known about this disease. (p.2)

The Peruvian government issued harsh confinement measures, known as "Total Quarantine". This initial confinement lasted 107 long days and was not fully complied with by the entire population. Accustomed to go out freely, it was very difficult not to do so and to maintain social distancing, giving up the freedom of assembly was very difficult for everyone, since man by nature is a social being, and something was learned after over 30,000 deaths. According to the WHO (2020), the Wuhan virus evolved from a group of coronaviruses that had previously attacked humans. Several coronaviruses are known to cause respiratory infections, which can range from the common cold to more serious illnesses.

New cases of significant morbidity and mortality continue to be found, and growing evidence indicates that psychiatric comorbidity is possible among coronavirus patients. In addition to the focus on anxiety among injured patients, psychiatric inconveniences resulting from infection and experiences due to ongoing pandemic coronavirus disease, we broadened the scope, witnessed coronavirus-related psychopathology and pathology trajectories that have been documented internationally.

Subramaney, Wooyoung, Chetty, Chett, Jayrajh, Govender, Maharaj, and Pak, (2020) A more vast review of psychopathological impacts due to and exacerbated by pandemic coronavirus disease and elaborate on health systems as the pandemic disease intensifies should be done. (p. 121)

Moreover, the COVID-19 pandemic demonstrated the fragility of the entire globalized world and is being fought by means of a conjunction of techniques and tools from quite different environments, from clinical to technological. The application of new technologies has triggered today's great European debate on privacy. One of its protests is the Order SND/29/2020 of March 27 of the Ministry of Health, which provides for the development of the DataCOVID App for digital tracking. Therefore, Marquez and Ortega (2020) the legality and scope of these measures should be analyzed from the point of view of respect for the right to privacy within the guarantees for human rights and data defense. (p. 207)

National public health tactics and action strategies should be adopted to address the health concerns of the entire population, and the tactics and action plan should be implemented and periodically reviewed, based on a participatory and transparent process. The Inter-American Court of Human Rights (2020) should provide for procedures, such as the right to health indicators and

baselines that allow for a close review of the progress made, the process by which the tactic and the draft action are conceived, as well as the content of both, should pay particular attention to all vulnerable or marginalized groups. (p. 1)

Considering what has been said about human rights and the Covid 19 pandemic, we can formulate the problem of our research: What human rights were violated during the Covid 19 pandemic in Peru in 2020? Who were the actors in the violation of multiple human rights? Why did the measures imposed by the government fail and why was the plateau announced by the executive branch not reached? This work aims to make known not only the violated human rights, their protagonists and co-responsible, but, above all, their repercussions on the population. It will also offer citizens a guide to be more disciplined in terms of health measures.

Therefore, the chronology of events is developed, starting on March 6, the date on which the first case of Covid 19 was announced in Peru, the measures taken by the government, including total quarantine, establishment of the State of Emergency and restrictions on four fundamental rights (inviolability of the home, freedom of transit, freedom of assembly and individual freedom) and the reactions of Peruvian society which, along with the restrictions, proposed to survive at any cost.

Measures Restricting Fundamental Rights during the COVID-19 Pandemic

Human rights in Peru, considered from the 1979 Constitution and ratified in the 1993 Constitution, were suspended - due to the state of emergency - but began to be violated by the police, the army and the citizenry; the first two sought to impose law and order, the latter, composed of an enormous underemployed, outsourced and informal majority, sought resources to provide food for the members of the family group in charge. The Peruvian population reacted by seeking to survive in the midst of restrictions. When there is hunger and need, at times, rules and laws border on the ethereal.

Hernández-Vásquez, Vargas-Fernández, Gamboa-Unsihuay and Azañedo, (2021) The Covid 19 pandemic in Peru forced the adoption of restrictive measures on fundamental rights, but the population did not fully comply with them, causing contagions to continue exponentially. (p.1) Within the framework of the law, the necessary steps were taken, such as day and night confinement, which in Peru was extended for 107 days, in order to protect the right to health and life. This meant that the virus continued to spread because it found a niche population that did not present symptoms, but was contagious. The right to health began to be violated by the younger population who, being asymptomatic, irradiated it unchecked.

The State of Emergency invoked by Supreme Decree No. 008-2020-SA was a constitutional measure, but it opened the door to violate fundamental human rights, sometimes by law enforcement, sometimes by citizens. Mamani-Coaquira, Ibarra, Vilca, Mamani and Cruz (2021) On March 15, social isolation began, the way to avoid the spread of this disease is the distancing between people (p. 618), besides the measures that a total quarantine implies, are very difficult to comply with in a multicultural country and segmented by economic levels, where thousands were found in Lima and when they were left without work, they struggled to return to their area of origin. On the other hand, when a country neglects the basic right to health, it becomes a boomerang for its citizens. This was what Peru's rulers had neglected during the economic boom; the hospital infrastructure was not only precarious and unprepared to care for the thousands of sick people who soon after arrived at the health centers.

Education also suffered the ravages of the pandemic. As of April, it was established that this service was to be "remote". The Vice-Ministerial Resolution N° 088- 2020-minedu, resolved: Article 1°. Approve the Technical Standard called "Provisions for the remote work of teachers to ensure the development of the non-presential educational service of educational institutions and programs, in the face of the outbreak of COVID-19. Unexpectedly, all students -thousands of them from rural

villages- stayed at home to receive "remote education" without having the means to access it. The digital divide came to light and along with pitiful images came complaints and grievances.

Sanz and Lopez, (2021) In this sense, the COVID-19 pandemic brought with it a long period of isolation and school closures, which has been a severe blow to students who were in vulnerable situations, who have had pedagogical, economic and/or cultural difficulties. (p. 149). Remote education brought another violated right, that of privacy. The teacher's home became a "virtual classroom", with all that this represents: invasion of privacy, excessive use of the computer, consumption of electricity and exhausting working hours, beyond the working day and, of course, an increase in the "use of data" or internet. The State or the company did not cover these costs. People who are working remotely have turned their homes into offices, classrooms. The protection of personal data has also been affected.

It should be noted that we are not before the special modality of provision of telework services, regulated by Law No. 30036 and its Regulations approved by Supreme Decree No. 017-2015-TR, since this figure has a distinctive feature, the consent of the worker for its implementation. Remote work is a creation resulting from the circumstances of the State of Emergency. Teachers at all levels had to

learn to manage virtual platforms almost unknown to them. However, that would be the least of the problems. What did generate another "discovery" was to corroborate the social, economic and digital gaps.

For Torres (2021), "The epidemic has affected all socioeconomic strata and has implicated the traditional notion of the labor relations system" (p.11). In this sense, labor informality was, by all accounts, the worst factor created by politicians and rulers who, far from eradicating it, fed it. It was easier to encourage the idea that every Peruvian "should be an entrepreneur and forge his or her own livelihood". One of the problems we have is to assume that we are all formal dependent employees, formal activity moves almost 80% of the GDP, and directly or indirectly can be the engine of the informal sector. The ideal of every worker is to join a formal company in which all his rights are recognized, but reality has shown that, in the case of Peru, a huge sector of the population worked in informal companies, therefore, without health coverage.

The government tried to alleviate the situation of hunger and need with aid vouchers that were diluted in the face of the millions of increasingly impoverished families. Then the reality dawned. Peru had an economy based on informality and, in the face of this, nothing could be done. It was found that nearly 75% of the population living in informal labor had a dramatic influence on the spread of the pandemic.

Economic growth -the desire of most government leaders- neglected basic sectors such as health and education.

What came next, in labor matters, was the application of two new measures unknown until then. The "imperfect suspension" -first, and the "perfect suspension". Although it is true that both figures had already been applied in different particular cases, they had never been applied on a massive scale, many formal companies decided to apply the imperfect suspension of work with the payment of salary between March 16 and 31; but, as of April, almost all of them requested the perfect suspension, leaving the workers without income. The violation of the worker's remuneration occurred, even in companies that continued providing services and charging for them, they cut their workers' salaries.

Among the more "peculiar" measures proposed by the Covid Command, the executive decided on alternate days off for men and women. Cultural issues such as gender identity soon emerged, and the asymmetrical structure of households and the burden of household chores, including food shopping - which falls mostly on women - were noted. It was corroborated that women had the greatest responsibility for household chores, incidents with the transgender community were not long in coming.

All the government's efforts to curb Covid 19 infections seemed in vain until September. The most sensitive population in this pandemic was undoubtedly the elderly. For Águila-Gordo, Martínez-del Río, Mazoteras-Muñoz, Negreira-Caamaño, Nieto-Sandoval and Piqueras-Flores (2021) "Elderly patients with COVID-19 have a worse clinical evolution, being more susceptible to develop severe manifestations" (p.2). The increase in deaths of older adults was due to the collapse of the system and the precariousness of the health of these elderly with pre-existing diseases such as diabetes, hypertension, asthma, obesity.

After going through the peak of infections in August, in September and October the figures finally started to fall. It was on September 2, 2020, that a delegation from the Sinopharm laboratory came to Peru to start trials. A batch of COVID-19 vaccine developed by the Chinese laboratory Sinopharm arrived to start clinical trials with 6,000 volunteers.

The participation of citizens was not long in coming. The registration of volunteers ready to collaborate with both universities lasted only hours. The population began to defend their right to health and life. By that time, the country was ranked first in the world in relative mortality. For Kenyon (2021), however, an irregularity called Vaccine-gate occurred, where people with a certain degree of

power and influence received the vaccine long before their vaccination program began, which led to public outcry, due to the bad practices of research universities administering vaccines before final clinical approval (p.463).

According to the Pan American Health Organization, the COVID-19 emergency and the response of the authorities have had economic and social repercussions; in this situation, many people experience fear, anxiety, anguish and depression. These emotional consequences of the pandemic could not go unaddressed, since they could well be a breeding ground for outbreaks of self-medication, liquor and drug use, and even suicide attempts and domestic violence.

Finally, among so many painful events, it was necessary to mention another of equal relevance to the previous ones: the disappearance of women and children. According to the Ombudsman's Office (2020) more than 5,000 women, girls and adolescents were reported missing from January to November. Undoubtedly, the number of disappearances exceeded previous statistics. The tragedy experienced by the families often began with the impossibility of filing the report due to bureaucratic requirements that, far from helping, hindered the search.

Conclusions

In conclusion, with the establishment of the "State of Emergency", four fundamental rights were suspended: the inviolability of the home, freedom of transit, freedom of assembly and individual freedom, so essential in a State governed by the rule of law. Human rights were never so far away from the citizens who, prey to hunger caused by labor informality (up to 75% of the EAP), soon forgot about social distancing and took to the streets in search of family sustenance. This happened in most countries and became the first problem that all the governments involved in it had to face and, obviously, none of them was prepared to deal with it. The problem is insisted on between the battle against the pandemic disease or the protection of human rights, or defending the health of individuals or respecting their independence. This disjunctive approach, which leads to tragic choices, is based on the error of thinking that health and rights are goods that tend to be incompatible in a pandemic disease, once the calm contemplation of the truth shows them, rather, as complementary. Education became remote and the digital divide became evident. Millions of students at all levels lost their first months of education because they did not have internet, sufficient bandwidth, or simply did not have a cell phone or a radio. Many jobs were lost which, added to the already existing informality, generated a migratory wave back to the place of origin, but this time, they returned home with the virus added to their bodies. This spread the pandemic to remote places. At the end of 2020, Peru did not have an exact date

for receiving vaccines; currently we are at 21% of the vaccinated population and it is estimated that the entire population will be vaccinated by the year 2022.

References

- Aguila-Gordo, D., Martinez-del Rio, J., Mazoterias-Muñoz, V., Negreira-Caamaño, M., Nieto-Sandoval, M. , Piqueras-Flores, J. (2021) Mortality and associated prognostic factors in elderly and very elderly patients hospitalized with COVID-19 respiratory infection. *Spanish Journal of Geriatrics and Gerontology*. DOI: 10.1016 / j.regg.2020.09.006.
- Beltrán, E., Araque, F. and Molinares, C. (2020). Coronavirus: the medical act from the juridical and human rights in Colombia, *International Journal of Philosophy and Social Theory, Utopia and Latin American praxis*. <http://doi.org/10.5281/zenodo.4087397>
- Bellver, V. (2020), Bioethics, human rights and covid-19. *Cuadernos de Bioética*. 31(102). 167-182. DOI: 10.30444/CB.60.
- Inter-American Court of Human Rights (2020) Coronavirus and health as a human right in line with ICT. Ecuador and Brazil. <https://www.corteidh.or.cr/tablas/alerta/comunicado/cp-27-2020.html>

García, R., and Hernández, O. (2020). Human rights and international normative control mechanisms in the context of the Covid-19 pandemic: reflection from the control of conventionality. *Utopía y praxis Latinoamericana*, 25(1), 116-132. <http://doi.org/10.5281/zenodo.4082011>.

Hernández-Vásquez, A., Vargas-Fernández, R., Gamboa-Unsihuay, J. and Azañedo, D. (2021) Need for improving COVID-19 mortality registries: the case of Peru. *Journal of the Egyptian Public Health Association*. 96(16). <https://doi.org/10.1186/s42506-021-00079-w>

Kenyon, G. (2021) Vaccine-gate intensifies in Peru. *The Lancet Infectious Diseases*. 21 (4). 463. [https://doi.org/10.1016/S1473-3099\(21\)00157-2](https://doi.org/10.1016/S1473-3099(21)00157-2).

Mamani-Coaquira, Y., Ibarra, M., Vilca, E., Mamani, E., Cruz, M. (2021) Identifying Sentiments in Quarantine by Covid-19 using Lexical Classifier and Supervised Learning. *Revista Ibérica de Sistemas e Tecnologias de Informação*. 41. 618-631. <https://pesquisa.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/resource/en/covidwho-1102953>

Márquez, C. and Ortega, J. (2020) COVID-19 and the challenges of digital surveillance for human rights: apropos of the DataCOVID App provided for in Ministerial Order SND/29/2020, March 27. *Journal of*

Bioethics and Law, (50), 205-220.
<https://doi.org/10.1344/rbd2020.50.31377>.

Morocco, M. (2020), Incidence of Covid-19 on the fundamental human right to ambulatory freedom, *Social Science Journal*. 26(2)
<https://doi.org/10.31876/rcs.v26i2.32418>

Richards, G. and Stacey, S. (2020). Coronavirus disease 2019: lessons, risks and challenges. *African Journal of Thoracic and Critical Care Medicine*. 26(2).
<https://doi.org/10.7196/AJTCCM.2020.v26i2.068>

Sanz, J. and López, E. (2021). Pedagogical consequences among elementary school students derived from COVID-19. A reflection on the great forgotten ones of the pandemic. *Revista Interuniversitaria*, 33(2), 149-166. <https://doi.org/10.14201/teri.25471>.

Schiariti, V. (2020). Developmental medicine and child neurology. *US National Library of Medicine National Institutes of Health*. 62(6). doi: 10.1111/dmcn.14529.

Subramaney, U, Wooyoung, A, Chetty, I, Chett, S., Jayrajh, P., Govender, M., Maharaj, P. and Pak, E (2020), Coronavirus disease 2019 (COVID-19) and psychiatric sequelae in South Africa: anxiety and beyond. *Wits Journal of Clinical Medicine*, 2(2). 115-122.
<https://doi.org/10.18772/26180197.2020.v2n2a2>

- Torres, P. (2021) COVID-19: Teleworking in times of pandemic. *History and Social Communication*, 26, 11-18. DOI: 10.5209/HICS.74237.
- Trimiño V, C., and Amézquita A, L. (2018) Reflections from the university on human rights and peace education. *Journal Historia de la Educación Latinoamericana*. 20 (31). <https://doi.org/10.19053/01227238.8564>
- Vasquez-Apestegui, B., Parras-Garrido, E., Tapia, V., Paz-Aparicio, V., Rojas, J., Sanchez-Ccoyllo, O., Gonzales, G. (2021) Association between air pollution in Lima and high incidence of COVID-19-19: findings from a post hoc analysis. *BMC Public Health*. 21 (1). DOI: 10.1186 / s12889-021-11232-7.

Agronomy education and the development of organic quinoa in Peru

Roque Juan Casco Espinoza
Jeidy Gisell Panduro Ramirez
Aristides Alfonso Tejada Arana
Benjamín Roldan Polo Escobar
Sara Edith Castillo Olsson

Introduction

This research aims to analyze the cultivation of quinoa in different agroclimatic zones, its cultivation method and the destination of production with and without technical assistance. Quinoa must meet certain sanitary requirements to guarantee its safety and wholesomeness as a foodstuff. Therefore, the presence of a regulatory agency is required to evaluate residue control and maximum tolerable levels of chemical residues, among others. A requirement in the production and traceability of the product is that it complies with phytosanitary regulations and good agricultural practices. The objective of the production advice for organic certification results show that there is advice from the state entity and private organizations that are involved in the production chain.

Quinoa cultivation has grown exponentially in recent years, with the crop being implemented in four agroecological zones (altiplano, inter-Andean valley, salt flats, Yungas, and coastal lowlands), ranging from sea level to 4,000 m.a.s.l. (Pinedo, Gómez and Julca, 2020, p. 8). A higher external consumption of the product was constituted, going from a family self-consumption agriculture to achieve a more profitable external market (Bilalis, Roussis, Kakabouki and Folina, 2019, p. 53), this increase was thanks to the declaration of the "International Year of Quinoa" in 2013, implemented by the UN, contributing to people's food security, as it is considered as a food with high nutritional value (Rosales and Mercado, 2020; Guerrero, Hurtado-Salazar and Ceballos, 2018, pp. 84-85). It is considered as a versatile crop with the possibility of growing in thriving in different climatic conditions and soils (Mahdi, Fahsi, Hafidi, Benjelloun, Allaoui, and Biskri, 2021, p. 1). The importance of this food is given by being a source of starch and a high quality protein content (Maliro and Njala, 2019; p. 83). For Espinoza, Asca, Ramos and Espinoza (2020), traditional production is considered organic, since no chemicals are applied, which demands more care in terms of phytosanitary and environmental management of the crop where the projection of production has to look at sustainability within a green production (p. 43).

In response to the problematic reality, this research work shows how Peru provides technical assistance to farmers

on the cultivation of quinoa if it has developed policies for the promotion and certification of this product, which are translated into spending and investments made at the sectoral level and in the development of productive projects. Globally in 2019, Peru was the leader in quinoa production and it would be the sixth consecutive year that it occupies this position as a producer and exporter, surpassing Bolivia and Ecuador.

Organic quinoa certification

In Peru, organic products are certified under Law No. 29196 on the Promotion of Organic or Ecological Production and the Technical Regulations for Organic Products, which establish the rules for the management, production, processing, marketing and certification of organic, ecological or biological producers. The National Agricultural Health Service of Peru (SENASA) is the national authority responsible for monitoring national organic production. There are various types and qualities of quinoa available on the market, which is why the National Institute for Agrarian Innovation evaluates and certifies that the seeds meet the properties for application and usefulness.

The control to issue a certificate has a process according to the specific item, production, processing, export and commercialization. It is certified according to

governmental organic standards of each country of destination. In Peru, the body authorized to authorize certification agencies is SENASA. The National Ministry of Agriculture (2019), when talking about seed certification refers to the verification of production, conditioning and also quality to ensure that users have seeds with purity as physical and sanitary quality levels, instead organic certification, is the process where there is a control of production according to standards. It should be noted that in Peru the exported quinoa must be produced and certified as organic quinoa for this requires the participation of the state entity and institutions attached for assistance, in addition to the participation of medium or large companies that have an administrative structure and sufficient financial conditions that can meet the requirements and demands of the international market.

Currently, seed certification has a regulation that governs the production, registration, certification, storage and marketing of seeds, being INIA, the Seed Authority. However, in order to contribute to productive development, it is important to generate intersectoral work spaces and the formulation of public policies to ensure a food and nutritional product within the organic line that is safe and healthy for national and international consumption.

According to Bedoya-Perales, Pumi, Mujica, Talamini and Domingos (2018), due to the high global demand for this food, traditional practices have decreased, however, higher yields are sought, expanding agricultural frontiers with greater mechanization of cultivation decreasing the use of chemical inputs and especially pesticides (pp. 1-2). These changes in the form of production can cause a potential negative environmental impact if they are not carried out in a planned and rational way (Gamboa, et al, 2018, p. 11).

The study is justified since it is seen the need for integrated crop management and rational use of pesticides, pest monitoring and control by state regulatory entities (Bonifacio, 2019, p. 113-114). Thus, Romaní-Morón and Valdez-Arana (2019), point out that the accessions that have the lowest concentration of saponins and the highest nutritional and functional concentration are filtered, it is for farmers of great importance, as for consumers and those people who want to work the crop and achieve greater added value (p. 294).

Productive assistance

According to Instituto Nacional de Investigación Agraria (2019), one of the most important aspects is the provision of certified and quality seed for production, in this sense, although there is a regulation for this, as well as a

competent authority, the process of seed production and marketing control is incipient, this causes the adulteration of products and, therefore, the loss of confidence of the producer. Another constraint is access to training services, technical assistance and technology transfer, and the State should have an action plan to address small agricultural production, take into account issues such as integrated pest management and implement good agricultural practices, among others. It is desired to investigate how technical assistance was carried out within the sector by MINAGRI in the main Andean communities, in addition to training and advice to producers for which golden grain meet the standards of certification and quality for final export outside the domestic market.

Technical assistance is the productive technical advice provided to farmers; it is considered as the way to develop and guide the producer to make use of agricultural techniques in order to obtain higher production and productivity. The importance of the use of organic fertilizers allows it to generate a greater added value to the soil, since it increases water retention and absorption, increases the value of nutrients and promotes an increase in biological activity that favors the properties of the soil. The exchange of knowledge that brings with it the improvement of efficiency in the productive activity that will strengthen their competitive capabilities, is taken as a key element for the sustainable development of

agricultural issues, where they should be taken into account since its implementation of a system to evaluate and monitor to see their performance and efficiency results.

The research shows the importance of traditional production processes and the need for organic certification for both national and international marketing, allowing to understand that productive assistance and organic certification are necessary within the standards and demands required in the market, it can be said that the production technique increases the organic production of quinoa.

The present research was qualitative in approach, the type of research is of basic grounded theory approach where the theoretical propositions arise from the data obtained in the research. The paradigm of this research was interpretative, which is a process of knowledge, where the subject and object interact, it is not generalized from the results obtained. The method was inductive, because general results are obtained from particular propositions, as the observations were made on a simple class proposition and then the general propositions are reached, this method allows making new assumptions, study of scientific laws and how they are demonstrated, it is currently used in scientific experiments. The structured

interview guide instrument was applied and as a technique the interview, to obtain data, their opinions, suggestions to each of the subjects immersed in the MINAGRI sector.

Analysis of the production and certification sector of organic quinoa.

In our research, the report of results is part of a qualitative process that identifies the categories related to the analysis of the different segments. By making a triangulation with the qualitative assessments of the specialists of each segment related to the category of productive assistance and organic certification, the similarity and differentiation of their answers are compared, and previous research is consulted to make an analysis of the productive sector.

When analyzing the results of organic production assistance, it can be said that there is still a need to work on environmental quality control and residue limits in order to develop good agricultural practices. In this sector there are large companies that do not promote organic crops and have not prioritized environmental care and sustainability. Productions have had an unallowed limit of pesticides, a situation that has caused returns when exported. In addition, there are political limitations despite the efforts of national and regional institutions to have a sustainable effect on organic cultivation, given that there is excessive conventional production using pesticides, which generates environmental problems and requires official monitoring of residues in the different regions of Peru.

On the other hand, it can be noted that there is advice from private and public entities within the sector, but it is focused on high production zones and biodiversity, and there is still a lack of intensified technical assistance, since advice is provided according to agro-climatic characteristics depending on the type of quinoa requested by the market, and depending on the demand, the variety, type and characteristics are selected to optimize production.

With respect to the training program and the producer networks in the different regions, there is support and technical accompaniment, with the vision of increasing the productive frontier, technology management, alternative crops, certified seeds, and the use of natural inputs so that their products are organic, which is what the market demands. There is still a need to intensify greater investment in agricultural research, incorporate more training and knowledge in adaptation and generation of agricultural technologies to improve product quality. It is necessary to implement a greater organization to give more formal relationships to the informal producers, since they are small producers who also require cultivation knowledge, levels of technology and capacity to improve their grains and seeds. Training is being provided, but investment is still needed in small producers with greater technical assistance to increase production according to

market demand. Greater formality in knowledge, technology and certified seed.

With respect to production and its organic process in the protection of productive soils is given through technical assistance, however, it would be necessary to develop good agricultural practices in its production. In this field, there should be greater coordination between national, regional and local governments to provide a solid institutional framework for crop development. To this end, it is essential to prioritize machinery, infrastructure and equipment within the regional agricultural directorates that can provide better service to small producers who exclude and do not want the necessary advice to prevent soil erosion and do not use inputs that increase production but increase pests. There is no such intense help from the region and its local governments, now, not all producers receive technical assistance and training in the variables that you ask about. There is even no credit for producers within the sector, a situation that does not allow them to access further growth. Therefore, organic production represents only 10% of the regional production, and it is destined to the transformer that sends it to the Lima market and/or exports it. Before conducting the training, it is important to have prior information on the risks that the productive areas have, such as the pests that have hindered the crop and the exhaustion of the soil.

Therefore, environmental quality control and residue limits are required to develop good agricultural practices with greater participation and investment by the region and local governments.

According to the production and reduction of pesticides in view of being more organic and natural, it is confirmed through certifications. The product is being certified in a lower percentage, since it requires a greater association and participation with greater formality, respecting ecosystems, the seasonality of production, rotation and greater communication to increase information on production areas and their production compliance. However, organic production in the country is a minority because its production costs are three times higher than conventional production. This is a factor that discourages farmers who have their plots of land from joining together to produce organically. In the certifications that guarantee an organic product there are private companies that certify with the authorization of SENASA, however, a greater incentive is required by policy in the sector for the use of microbiological inputs that reduce residue limits. This is guaranteed through the use of organic fertilizers that increase conservation value, biodiversity and the ecosystem. Greater investment to increase information, improve technology, intensify agro-ecological conditions to increase production frontiers.

In the research presented by Bedoya-Perales, et. al. (2018), it states that quinoa in Peru is an amazing genetic resource relevant to agriculture and food production, having to care for and ensure that organic agricultural production in the country is sustainable over time (p. 9). Production refers to the need to provide a balanced environment, yield and soil fertility and natural pest control, diversified agroecosystem design and the use of self-sustaining technologies. Likewise, in the research proposed by Mahdi, et. al. (2021), in which they seek to increase quinoa cultivation in Morocco, they propose the preservation of quinoa cultivation and seek to prevent pest problems, with a proposal to isolate potent PSB from the rhizosphere of quinoa and evaluate their effects on quinoa seed germination, seedling growth and biological control (pp. 1-2). They recognize quinoa as an ideal product for human beings because its protein content helps to improve the integral balance of health, therefore an evaluation and promotion of an organic crop is required for commercialization within safety and healthiness. The production, commercialization and exportation in the national and international market, due to the increase of the external demand of agricultural products, mainly has a great appreciation in the international market, due to the multiple uses that can be given to this product in the food sector, cosmetics, and medicine.

Thus, Langeroodi, Mancinelli and Radicetti (2020) study the possibility of affecting the intensification practices of weed management and yield in the quinoa crop, concluding that it optimizes the understanding of the constitution of weed varieties in the planting of quinoa and reflects on ways to develop weed control based on an integrated vision through the application of cover crops, zero tillage and herbicides to improve crop production (p. 2). Pinedo, Gómez and Julca (2020) corroborated the need to plan, control and evaluate production activities in a technified manner in order to achieve objectives and use resources appropriately in the inter-Andean valleys (p. 3). This implies that planning makes it possible to control and evaluate good agricultural practices and use resources to ensure organic production, in search of environmental sustainability.

Conclusions

The study concludes that the productive assistance and policies implemented within the sector can be analyzed, since there is a contradiction with respect to conventional and traditional production. Since Peru occupies the first place in organic production, it is necessary to encourage more policies that promote cultivation within good practices that have a foresight and care of the environment. In addition, to promote measures that reward farmers who use sustainable agricultural practices and generate positive externalities of care and conservation of the environment.

Production assistance in organic certification requires greater alignment in good practices, establishing controls and certifications to ensure the sanitary safety of the product.

The presence and accompaniment is partial because it is focused on organic production areas that have the conditions to certify the product and is only carried out in regions that have the conditions to produce in a natural and organic way. Implementing management and monitoring instruments for good practices and complying with production standards. Greater emphasis is needed on the protection of environmental management in training, consulting, and research for greater control and evaluation. A reduction in the maximum residue limit is required in order to have a more organic and natural product in different quinoa production zones.

Certification still needs to intensify the good practice of organic, natural and healthy production. Disseminate its importance and requirements in terms of phytosanitary and the need for environmental management seeing the projection of sustainability, in addition to its benefits according to the standards of a healthy production and demand of international markets to bet on a higher cost

investment but that has greater national and international trade benefit.

References

- Bedoya-Perales, N, Pumi, G. , Mujica, A. , Talamini, E. and Domingos A. (2018). Quinoa Expansion in Peru and Its Implications for Land Use Management. *Sustainability* 10(2), 532. <https://doi.org/10.3390/su10020532>
- Bilalis, D., Roussis, I., Kakabouki, I. and Folina, A. (2019). Quinoa (*Chenopodium quinoa* Willd) crop under Mediterranean conditions: a review. *Agricultural Science and Research*, 46(2), 51-68. <http://dx.doi.org/10.7764/rcia.v46i2.2151>.
- Bonifacio, A. (2019). Improvement of Quinoa (*Chenopodium quinoa* Willd) and Qañawa (*Chenopodium pallidicaule* Aellen) in the context of climate change in the high Andes. *Ciencia e investigación agraria*, 46(2), 113-124. <https://dx.doi.org/10.7764/rcia.v46i2.2146>
- Espinoza, R. J., Asca, P. G., Ramos, O. M. and Espinoza R. (2020). Productive assistance and certification of organic quinoa in Peru, 2020. *Centrosur Agraria*, 1(8), 41-52. <https://centrosuragraria.com/index.php/revista/articulo/view/49>.

- Gamboa, C., Van den Broeck, G., Maertens, M. (2018). Smallholders' Preferences for Improved Quinoa Varieties in the Peruvian Andes. *Sustainability* (10, 10). 3735. <https://doi.org/10.3390/su10103735>
- Guerrero, P., Hurtado-Salazar, A. and Ceballos-Aguirre, N. (2017). Technical and economic study of four quinoa varieties in the Colombian central Andean region. *Revista Luna Azul*, (46), 167-180. <http://200.21.104.25/lunazul/index.php/component/content/article?id=278>
- Langeroodi ArS, Mancinelli R, Radicetti E. (2020). How Do Intensification Practices Affect Weed Management and Yield in Quinoa (*Chenopodium quinoa* Willd) Crop?. *Sustainability*, 12(15). 6103. <https://doi.org/10.3390/su12156103>
- Mahdi, I. , Fahsi, N. , Hafidi, M. , Benjelloun, S., Allaoui, A. and Biskri, L. (2021) Rhizospheric Phosphate Solubilizing *Bacillus atrophaeus* GQJK17 S8 Increases Quinoa Seedling, Withstands Heavy Metals, and Mitigates Salt Stress. *Sustainability*, 13(6), 3307. <https://doi.org/10.3390/su13063307>.
- Maliro, F.A. and Njala, L. (2019). Agronomic performance and strategies of promoting Quinoa (*Chenopodium quinoa* Willd) in Malawi. *Agricultural Science and Research*, 46(2), 82-99. <https://dx.doi.org/10.7764/rcia.v46i2.2143>.

- Pinedo, R. E., Gómez, L. R. and Julca, A. M. (2020). Environmental sustainability of quinoa (*Chenopodium quinoa* Willd) production in the inter-Andean valleys of Peru. *Ciencia & Tecnología Agropecuaria*, 21(3). https://doi.org/10.21930/rcta.vol21_num3_art:1309.
- Rosales, G. and Mercado, W. (2020). Effect of food price changes on quinoa consumption and rural food security in Peru. *Scientia Agropecuaria*, 11(1), 83-93. <https://dx.doi.org/10.17268/sci.agropecu.2020.01.10>.
- Romaní-Morón, M. J. and Valdez-Arana, J. (2019). Effect of habitat change on the nutritional and functional characteristics of 16 quinoa (*Chenopodium quinoa* Willd.) accessions grown in the Peruvian Coast. *Scientia Agropecuaria*, 10(2), 293-302. <https://dx.doi.org/10.17268/sci.agropecu.2019.02.15>.

Implementation of sanitary regulations at Covid-19: Transdisciplinary optics

Kelly Myriam Jiménez de Aliaga
Zuly Cristina Molina Carrasco
Martin Albino Solis Tipian
Francis Esmeralda Ibarguen Cueva
Osmart Raul Morales Chalco

Introduction

The issuance of a health standard is expressed by the national authority or international organizations, with the purpose of ensuring the common good, to regulate, control, control, resolve, answer what, how, where, with respect to the public health problem and its compliance is mandatory. There are international legal documents such as the 166th Session of the Executive Committee of WHO - PAHO in virtual session 2020 that constitute the main instruments to ensure proper management of global action against the international spread of diseases that set guidelines in national legislations.

In view of this, the impact of these regulations is being investigated in all countries of the world and at the local level. Peru has 32,510,453 inhabitants, as of July 4, 2021 there are 2,065,113 people confirmed by Covid 19,

193,230 people dead; it can be verified in the compendium of regulations issued by the Peruvian State to address the spread of Covid 19 where there is evidence that more than 1000 measures taken in 2020 to address Covid 19, among them are laws, decrees, resolutions issued by the Central Government for the National State of Emergency. The aforementioned regulations have not yet managed to place Peru in a different place because it is considered one of the countries most affected and infected by Covid 19; even without containment and in a state of sanitary emergency.

On the other hand, the main conditions that have influenced the expansion of Covid 19 in Peru were the high levels of informality and the widespread use of temporary contracts and the country's business structure (Lust, 2021, p. 657); similarly, it has exacerbated pre-existing conditions of informality and health inequity that affect even migrants; further contextualizing this situation, "the strict and prolonged quarantine led to a GDP decline of 11.1% in 2020, employment fell by an average of 20% between April and December 2020."

This scenario leads to the following questions: how does the process of normative implementation of Covid 19 take place; how do professionals from different disciplines respond to constitutional social control? The objective was to describe the process of normative implementation of

Covid 19 in state scenarios in professionals from different disciplines.

The study shows how professionals from different disciplines carry out activities according to the standards; in the case of the implementation of preventive measures against Covid 19 in schools, more investment and human resources are needed for an effective system. Semi-structured interviews were conducted in open dialogues, with professionals from various disciplines, who manifested events closely related to the research; when performing the content analysis, it focused on the testimonies with the help of technological tools and techniques that facilitated the organization, retrieval and analysis of data continuously to support the interpretation of information (Vespestad and Clancy, 2021p.4) It can be seen that the population demands their rights based on their urgent needs in conditions of health deprivation, which in Peru as in other realities appear, due to political conflicts, neglect of vulnerable groups and weak service system (Knipper et al., 2021p.4), which is exacerbated by the lack of coordination between the various health areas that require traditional disciplinary integration and others such as sociologists, anthropologists, lawyers, health engineers, architects, educators, among others. In view of this situation, strategies must be created that "allow the adaptability of new agents to this team, and

break with traditional structures, and make joint effective actions operative" (Llosa et al., 2021 p.1).

The health crisis parallel to that of employability and governance, not only in Latin America, but also in Peru, leads to the question: How do health professionals and other disciplines implement activities in the face of non-compliance with health regulations in pandemics? This describes the following dimensions: the re-formulated regulation and transmission in social contexts; the Improvisation of the Covid 19 service without planning, the misinformation of the media.

Reformulated regulation and transmission in social contexts

In these times of technological progress, norms are not only read, but interpreted and compared with the social reality, and it is the professionals who apply them to make them operational, and to reduce contagion, which, given the ineffectiveness in sanitary control, the guidelines were permanently reformulated; generating criticism and self-criticism of the sanitary regulation process; as shown by the studies of (Sun et al., 2021, p.7) point out the inability to detect in time the spread of the disease and the scarcity of health resources in the governmental approaches to contain Covid 19, qualifying them as weak points of the health system that generate social nonconformity, and

demand a change of attitude in the health prioritization, of the investment agenda, by the authorities and the funders, who control the expenditure (Lal et al., 2021, p.61); Research describing the impact of governance systems within the broader societal context of a pandemic is required for this attitudinal shift (Desson et al., 2020, p.445). These measures could reduce the bewilderment, uncertainty, and fear of contagion that disrupt the cultural way of life, which respond with denunciations in the face of non-compliance with normative expectations. These responses of human reflection, in the face of inefficient political programs, occur permanently, within institutions, with forms of thought that encourage social action, fragilized by the inability to control it" (Thompson, 2005 p.4), configuring themselves in scenarios of increasingly acute crisis.

Covid service planning 19

The Covid 19 pandemic has made social inequalities in Peru and the world more visible and acute, with the people most affected being those who live in urban slums and informal settlements, which is why they must receive help from national governments. In the absence of social responses related to institutionalized health services, professionals from various disciplines have been emerging from the population itself and from the initiative of families to respond to their own needs, which leads to the question: "How should health policy and planning systems change

to include self-care and self-sufficiency as a basic principle? (Mathpati et al., 2020p.6). Older adults considered more vulnerable, in this scenario received more attention and very little to the pediatric and adolescent population. Studies were reviewed in which they explain that the pediatric population manifested emotional reactions such as anxiety, fear and stress, unlike older adults who had a reassuring role when facing the pandemic (Smirni, 2021 p.26). These population groups still do not receive rehabilitative care to regain sociability and enjoy their daily lives.

One of the elements that added to the fear of contagion was the rising cost of living and massive job layoffs. The country's economy also declined during the pandemic amidst great uncertainty (Lyócsa et al., 2020). On the other hand, the improvised COVID services reinforced the visibility and increase of social inequalities in Peru, generated by the lack of strategic planning with committed goals to be achieved. However, the Peruvian culture, despite the limitations of the administration of social justice, is permeated by the willingness to help and the high social sensitivity of families.

Disinformation in the media

It is important to note that mass media behavior can be detrimental to people, as since the beginning of the

pandemic, there is an overload of Covid 19 information on social media (Liu et al., 2021,p.10). In a study conducted in Finland, it was found that although social networks were not the preferred source of information for users, they were more exposed to the information overload found in this medium, causing negative impacts on their health (Soroya et al., 2021, p.2).

In Peru, fear has increased and some families have even decided to avoid news about Covid 19. On the other hand, the fact that information about the pandemic coming from the mainstream media, such as word of mouth, has been questioned for not being a direct source of valid information that has been carried out since the beginning of the pandemic. There are studies that place in relevance that "governments and media by reinforcing the dissemination of educational information about the pandemic situation would make it look more scientific and rational (Xie et al., 2020, p.297). The social media are configured as a power in the social context, which, in the face of the health crisis, informality and lack of governance, act at will, generating fear, stress and uncertainty as elements that exacerbate the health crisis, for not being prepared to deal with emerging pandemics of this nature.

The application of constantly changing legal norms from the first months generated improvised activities of the health team and other disciplines to "apply the

comprehensive care model and coordinate various elements and levels of rehabilitation. There were situations of public health insecurity that had a great impact on the provision of services in the face of the aggressiveness of Covid 19. The priority was to safeguard the health of vulnerable people due to pre-existing health conditions, consumption of medicines due to chronic diseases, pregnancy, among others. It was also observed that the initial course of the epidemic and mortality from Covid 19 in socioeconomically vulnerable states and municipalities was disproportionate and negative due to socioeconomic inequalities (Rocha et al., 2021, p.790) further exacerbated by labor instability. In these regions , rapid in-house diagnostic tests were an urgent need in the midst of the pandemic, as the delay in their implementation impedes proper public health management (Vanuytsel et al., 2020, p.156). On the part of health and interdisciplinary personnel, they find themselves in the context of regulation and the maintenance or qualification exercise of the accreditation of health institutions, in a scenario that threatens health security and undermines citizen protection; leading to situations of internal conflict among the professionals themselves, and external, with the population subject to their care.

Due to a lack of an early protection policy, vaccines were not on time in the first 12 months after the start of the pandemic. "At this time vaccines mean little to people

around the world if they cannot be vaccinated in a timely manner" (Wouters et al., 2020, p.1032). These regulations need to be evaluated to make them responsive to reality, but there are cases where new policies turn out to be low impact, and contradictory at times (BurdickandDhillon, 2020, p.2), for example, some regulations have not included protecting the emotional state of health professionals within their scope, much less of health students, however, "the Covid 19 pandemic, brought individual, community, social and global emotional consequences; generating fear and frustration, which has not yet been controlled" (Huarcaya-Victoria et al., 2021, p.9). Thus, since the beginning of the pandemic, Peru has been the scene of intense transmission of the virus, despite the confinement, social distancing and closing of borders, plus the normative labor policy related to the search for ways to promote the productive inclusion of informal workers, with a more integrated approach, was disproportionate, which has reinforced informal employment, and with it the health crisis has worsened. In studies reviewed, this situation has generated proposals with "different recommendations in temporary policies to alleviate the adverse effects of the outbreak on medium and small enterprises, which were not sufficient. In addition, word-of-mouth and mass media information generated uncertainty and greater doubt in the Peruvian population, as the overload of information from various sources generated negative psychological and behavioral responses (Soroya et al., 2021, p.1).

Conclusions

The health crisis parallel to the employability and governance crisis, not only in Latin America, but also in Peru, have made visible the existing shortcomings prior to the pandemic and have allowed the collapse of the system. In addition, the constant changes in strategies to address Covid 19, generated diverse and ineffective regulations, which reinforced internal institutional conflicts in their implementation and external ones in the face of social control in favor of the fulfillment of their rights. The improvisation of the Covid 19 service reinforced the visibility and increase of social inequalities, generated by the lack of strategic planning with committed goals to be achieved. The media are configured as a power in the social context, which, in the face of the health crisis, informality and lack of governance, act at will, generating fear, stress and uncertainty as elements that aggravate the health crisis, which requires urgent government intervention.

References

- Burdick, W., & Dhillon, I. (2020). Ensuring quality of health workforce education and practice: strengthening roles of accreditation and regulatory systems. In *Human Resources for Health*. 18(1). BioMed Central Ltd. <https://doi.org/10.1186/s12960-020-00517-4>
- Desson, Z., Weller, E., McMeekin, P., and Ammi, M. (2020).

An analysis of the policy responses to the COVID-19 pandemic in France, Belgium, and Canada. *Health Policy and Technology*, 9(4), 430-446. <https://doi.org/10.1016/j.hlpt.2020.09.002>.

Huarcaya-Victoria, J., Elera-Fitzcarrald, C., Salvador-Carrillo, J., & Flores, J. (2021). Psychometric properties of the Spanish version of the fear of COVID-19 scale in Peruvian medical students. In *Death studies*. 1-7. <https://doi.org/10.1080/07481187.2021.1899340>.

Knipper, M., Sedas, A., Keshavjee, S., Abbara, A., Almhawish, N., Alashawi, H., Lecca, L., Wilson, M., Zumla, A., Abubakar, I., and Orcutt, M. (2021). The need for protecting and enhancing TB health policies and services for forcibly displaced and migrant populations during the ongoing COVID-19 pandemic. *International Journal of Infectious Diseases*. <https://doi.org/10.1016/j.ijid.2021.03.047>.

Lal, A., Erondy, N., Heymann, D., Gitahi, G., and Yates, R. (2021). Fragmented health systems in COVID-19: rectifying the misalignment between global health security and universal health coverage. *The Lancet*, 397(10268), 61-67. [https://doi.org/10.1016/S0140-6736\(20\)32228-5](https://doi.org/10.1016/S0140-6736(20)32228-5).

Liu, H., Liu, W., Yoganathan, V., & Osburg, V. (2021). COVID-19 information overload and generation Z's social media discontinuance intention during the pandemic lockdown. *Technological Forecasting and*

Social Change, 166, 120600.
<https://doi.org/10.1016/j.techfore.2021.120600>.

Llosa, J., Agullo-Tomas, E., Ventosa, L., and Colunga, H. (2021). Multilevel response to the social emergency covid-19: experience of articulation of civil society organizations and the public sector. *Prisma Social*, 19-47. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85110551257&partnerID=40&md5=82c09c7eb09b7e690ab80c7337e2526d>

Lust, J. (2021). A Class Analysis of the Expansion of COVID-19 in Peru: The Case of Metropolitan Lima. In *Critical Sociology*.
<https://doi.org/10.1177/0896920521991612>

Lyócsa, Š., Baumöhl, E., Výrost, T., and Molnár, P. (2020). Fear of the coronavirus and the stock markets. *Finance Research Letters*, 36(2020), 101735.
<https://doi.org/10.1016 /j.frl.2020.101735>.

Mathpati, M., Payyappallimana, U., Shankar, D., and Porter, J. (2020). 'Population self-reliance in health' and COVID-19: The need for a 4th tier in the health system. *Journal of Ayurveda and Integrative Medicine*.
<https://doi.org/10.1016 /j.jaim.2020.09.003>.

Rocha, R., Atun, R., Massuda, A., Rache, B., Spinola, P., Nunes, L., Lago, M., and Castro, M. (2021). Effect of socioeconomic inequalities and vulnerabilities on

health-system preparedness and response to COVID-19 in Brazil: a comprehensive analysis. *The Lancet Global Health*, 9(6), e782-e792. [https://doi.org/10.1016/S2214-109X\(21\)00081-4](https://doi.org/10.1016/S2214-109X(21)00081-4).

Smirni, D. (2021). Noli Timere: The Role of Reassuring Adults in Dealing with COVID-19 Anxiety in Pediatric Age. *Pediatric Reports*, 13(1), 15-30. <https://doi.org/10.3390/PEDIATRIC13010003>

Soroya, S., Farooq, A., Mahmood, K., Isoaho, J., & Zara, S. (2021). From information seeking to information avoidance: Understanding the health information behavior during a global health crisis. In *Information Processing and Management*. 58(2). <https://doi.org/10.1016/j.ipm.2020.102440>

Sun, S., Xie, Z., Yu, K., Jiang, B., Zheng, S., and Pan, X. (2021). COVID-19 and healthcare system in China: challenges and progression for a sustainable future. *Globalization and Health* 2021. 17(1), 1-8. <https://doi.org/10.1186/S12992-021-00665-9>

Thompson, J. (2005). The New Visibility. *Theory, Culture & Society*, 22(6), 31-51. <https://doi.org/10.1177/0263276405059413>

Vanuytsel, K., Mithal, A., Giadone, R., Yeung, A., Matte, T., Dowrey, T., Werder, R., Miller, G., Miller, N., Andry, C., and Murphy, G. (2020). Rapid Implementation of a SARS-CoV-2 Diagnostic Quantitative Real-Time PCR

Test with Emergency Use Authorization at a Large Academic Safety Net Hospital. *Med*, 1(1), 152-157.e3. <https://doi.org/10.1016/j.medj.2020.05.001>.

Vespestad, M. and Clancy, A. (2021) Exploring the use of content analysis methodology in consumer research. *Journal of Retailing and Consumer Services*, 59, 102427. <https://doi.org/10.1016/J.JRETCONSER.2020.102427>

Wouters, O., Shadlen, K., Salcher-Konrad, M., Pollard, A., Larson, H., Teerawattananon, Y., and Jit, M. (2021). Challenges in ensuring global access to COVID-19 vaccines: production, affordability, allocation, and deployment. *The Lancet*, 397(10278), 1023-1034. [https://doi.org/10.1016/S0140-6736\(21\)00306-8](https://doi.org/10.1016/S0140-6736(21)00306-8).

Xie, X., Zang, Z., & Ponzoa, J. M. (2020). The information impact of network media, the psychological reaction to the COVID-19 pandemic, and online knowledge acquisition: Evidence from Chinese college students. In *Journal of Innovation and Knowledge*. 5(4). 297-305. <https://doi.org/10.1016/j.jik.2020.10.005>

Assessment of the current situation of green areas in a district of Lima : a study from the university.

José Antonio Carbonel Arribasplata
Aristides Alfonso Tejada Arana
José Antonio La Coteria Vega
Joel Alanya-Beltran
Yolvi Ocaña-Fernandez

Introduction

Green spaces play an important role in people's quality of life. From an environmental perspective, green areas are fundamental elements that influence the urban appearance, in addition to playing an extremely important role for the inhabitants of a city. For, Martínez-Soto, Montero and De la Roca (2016), within the urban aspect of a city, a fundamental role played by green spaces in contributing to a healthy life of people must be considered (p. 206).

Currently, the problem of urban green areas has become an issue that has created great concern in the governments of the world, with the emergence of organized institutions

that, through promotional activities, disseminate the problem. Gómez and Velásquez (2018) Assessments are necessary to know the current environmental situation of the various cities of the world (p. 167).

Importance of green areas

Urban green areas are habitats that favor the conservation of biodiversity; the flora and fauna of the urban area as a whole perform a set of associated ecosystem services and services of enormous importance. Epelde, Salazar, Martín and Garbisu (2020) Understanding ecological processes in urban environments are useful for the design and management of urban green areas, in order to promote the conservation of biodiversity of multiple taxonomic groups in urban areas. (p. 1). Dutra and Dutra (2020), highlight the importance of having green areas and their relationship with natural resources oriented to the ideal of health and hygiene, the benefits of having green spaces is the fertile soil would produce grains and other agricultural products for local and regional supply and forests that provide firewood for fuel and wood for construction. (p. 407)

For, Paecke and Melgarejo (2019) The diversity and benefits provided by urban green areas mean that they are considered indicators of quality of life (United Nations Human Settlements Programme, urban environmental quality, urban biodiversity). (p. 130). Carrus, Scopetelli, Laforteza, Colangelo, Ferrini, Salbitano, Agrimif, Portoghesif, Semenzatog and Sanesi, (2015). They

highlight among its benefits the positive contribution to the physical and mental health of people, the provision of spaces for community life, the regulation of environmental variables such as temperature, air quality, the enhancement of the sense of belonging, and the beautification of the urban landscape (p.222).

For Blancarte-Siqueiros, Pérez-Verdin and Cortes-Ortiz, (2019) Green areas are important sources of ecosystem services in urban environments; despite this, human resources , economic and climatic factors significantly affect management. (p. 98). Arbonés, Lozano and Marcén, (2019) furthermore parks and open spaces are a valuable physical environment to promote physical activity, either through state programs and strategies or individually, in the United States it has been identified that parks are the most common place to be physically active and that 70% of the population lives within 3 km of a public park. (p. 252)

Da Rocha, Moura, Hanson, Kumble, and Hussein, (2018) Cities are becoming increasingly urbanized, thus the conservation of existing landscapes and natural resources is necessary, integrating objectives of ecological sustainability, urban ecosystems, landscape ecology concepts and green infrastructure applied in urban land use, restoration, preservation and enhancement of biodiversity in urban areas become fundamental to urban resilience and to urban survival. (p. 101).

Green areas in today's problems

The Peruvian state through the National Agreement in its Public Policy number 19, on Environmental Management and Sustainable Development, is committed, among others, to promote urban order, such as the integrated management of waste generated, for its reduction, reuse and recycling, as well as to promote greater environmental awareness and vigilant and constant compliance. The Municipality of Lima, through municipal ordinance No. 1852, on the management of green spaces, is committed to the creation, conservation, protection, maintenance and sustainability of green spaces, due to their importance for the well-being of people.

At the level of Metropolitan Lima, Quispe (2017) mentions that urban growth has been causing a higher rate of pollution, as well as the loss of native plant species, with the consequent progressive decrease of vegetation cover, causing a serious problem in the ecosystem, in addition to the neglect of green spaces, and the low availability of water, as well as the unwise selection of plant species in the planting, all this has placed Lima among the cities of Latin America, as the city that has less green area per inhabitant (p. 19). As for Comas, it is a district of metropolitan Lima and, as such, this problem has worsened in recent years. Malca (2012) mentions that more than half of the population of Comas thinks that the maintenance of green areas is regular, and more than 25 percent of the

population prefers to visit green areas in other districts because they are better maintained (p. 119).

Much of the research on Environmental Management and sustainability of urban green areas, both nationally and internationally, are aimed at finding strategies for the improvement of green areas, however, these investigations are still scarce in our environment, where the importance of green areas is one of the most neglected aspects of many municipal managements, despite this, many researchers have conducted studies on these aspects involving the environmental problems of urban green spaces. Guzmán (2017) In Latin America, the problem of municipal management on green spaces in Santiago de Chile was addressed, for which the communal development plans of each of the communities and statistical information recorded in the national municipal system in relation to urban green spaces were used, It was found that the municipalities cannot execute the actions proposed due to lack of budget, and that there are no regulatory aspects for the implementation of the recommended actions, in addition to identifying as the main problem the lack of green areas, the existence of micro dumps, the presence of uncultivated land, and the deficient maintenance of green areas (p. 25).

For Pérez (2018) it is important to identify and analyze the laws, regulations and urban development programs that are linked to the presence and conservation of green areas

in public recreational spaces. He also mentions that urban law is a primary topic of urban studies that allows the analysis of state intervention in the characteristics of urban development, since public recreational spaces with vegetation in cities provide extensive environmental and social benefits to the inhabitants. (p. 671). Dias, Vidal, Seixas and Maia, (2021) mention that in Portugal, green areas do not possess great importance in the Municipal Master Plans (PDM), although certain municipalities proposed territorial analysis, which resulted in greater attention to these spaces, sustainability strategies are weak. (p.46).

Garcia, De Hoyos and Avila, (2020) presented their article, environmental metabolism, care and conservation of urban green areas, which seeks to conserve urban green areas as a possibility to reestablish balance in the environmental metabolism of cities and contribute to generate awareness towards their care and conservation through a conceptual framework and a linked scheme. (p. 71). Souza and Amorim, (2019) to study the variables that dynamize urban space and interfere in its quality, standardized environmental analysis procedures and established structured methodological models based on existing attributes in the landscape, susceptible to qualitative measurement. (p. 64)

Urban green areas are defined as land space of large, medium or small size, which can be used for recreational,

ecological or aesthetic purposes. Mpofu (2013) Proper management and planning of green areas contribute to human well-being through ecological - socioeconomic functions and values (p. 105). For Kabisch, Korn, Stadler and Bonn (2017) In modern cities, people acquire a chronic level of stress, added to the little physical activity practiced and exposure to noise; therefore, good planning in the maintenance of urban green areas, especially attention to parks and other green spaces, have the ability to serve as a foster environment for the improvement of physical and mental health, as well as being an area for the promotion of physical activity, with attenuation of noise and heat (p. 21).

Currently, Comas is a district that over the years and the passing of mayoral periods, its green areas have been neglected. Burbano, Triguero and Costa (2018) The preservation of our environment is a task that commits all people, particularly companies that work in this aspect, considering the reuse of materials, or in case they are not, have the ecological characteristics in order to a commitment to the preservation of biodiversity (p. 16).

The research used a quantitative approach, using field observation as a technique, assessing the current state of the district's green areas through a checklist based on 22 evaluation items. The checklist took into account the different aspects to evaluate the situation of the green areas, facilitating the concentration of data and

subsequent analysis, on the other hand, field notes were used to guide the research towards the research objective.

A diagnosis of the current situation of the green areas of the district of Comas was made through an observational analysis of these urban spaces and thus it was possible to find the problem areas, based on on-site visits to the main parks in order to compare them. The choice of these green areas was made by applying stratified purposive sampling, which consisted of taking the cases grouped according to the zone to which they belonged and then, as a research criterion, a checklist was made of approximately 20% of the number of parks in each zone, thus making a face-to-face visit to 76 parks throughout the district, using a cell phone with a 12 Megapixel camera with a location locator to obtain photographic evidence in the observational fieldwork, in addition to the respective field notes, which were prepared on manual boards to obtain more information on the items evaluated. The 22 evaluated items were evaluated based on a rating scale, these were: 0 = Does not exist, 1 = Poor, 2 = Bad, 3 = Fair, 4 = Acceptable and 5 = Excellent. The evaluation considered the items corresponding to the parks, having as general indicators the general condition, cleanliness, irrigation; then indicators of the plant species that make up the park such as: lawns, trees and ornamental plants. The other items consider accessibility and social value for the community. Regarding the condition of the parks, 6.6% are very bad, 26.3% are bad, 21.1% are fair, 38.2% are

acceptable, and 7.9% are excellent. Regarding cleanliness, 5.3% of the parks are not clean, 6.6% are very bad, 22.4% are bad, 23.7% are regular, 32.9% are acceptable and 9.2% are excellent. Regarding irrigation, it can be observed that in 26.3% of the green areas observed there is no irrigation, 2.6% is bad, 13.2% is bad, 25% is regular, 25% is acceptable and 7.9% is excellent. The other observational findings for the diagnosis of the problem are shown in the following table:

Table 1. *Basic Qualitative Aspects of Parks in the District of Comas.*

Category	Does not exist	Lousy	Malo	Regular	Acceptable	Excellent
State	0,0%	6,6 %	26,3 %	21,1 %	38,2%	7,9%
Cleaning	5,3%	6,6 %	22,4 %	23,7 %	32,9%	9,2%
Irrigation	26,3%	2,6 %	13,2 %	25,0 %	25,0%	7,9%
Meadows	19,7%	7,9 %	18,4 %	26,3 %	23,7%	3,9%
Trees	0,0%	0,0 %	9,2%	32,9 %	50,0%	7,9%

Ornamentals	19,7%	2,6%	6,6%	30,3%	34,2%	6,6%
Roads	6,6%	1,3%	11,8%	36,8%	39,5%	3,9%
Ramps	22,4%	0,0%	6,6%	28,9%	39,5%	2,6%
Slabs	52,6%	1,3%	0,0%	21,1%	22,4%	2,6%
Gyms	93,4%	0,0%	0,0%	3,9%	2,6%	0,0%
Mesh	86,8%	0,0%	1,3%	3,9%	5,3%	2,6%
Others	98,7%	0,0%	0,0%	1,3%	0,0%	0,0%
Booths	94,7%	0,0%	1,3%	1,3%	1,3%	1,3%
Salons	98,7%	0,0%	0,0%	1,3%	0,0%	0,0%
Parking	82,9%	1,3%	1,3%	13,2%	1,3%	0,0%

Lighting	3,9%	1,3 %	10,5 %	48,7 %	31,6%	3,9%
Benches	40,8%	0,0 %	6,6%	25,0 %	25,0%	2,6%
Murals	67,1%	0,0 %	1,3%	26,3 %	3,9%	1,3%
Children's games	64,5%	0,0 %	7,9%	13,2 %	13,2%	1,3%
Tachos	72,4%	0,0 %	6,6%	9,2%	11,8%	0,0%
Bathrooms	94,7%	0,0 %	0,0%	1,3%	2,6%	1,3%
Signage	65,8%	0,0 %	7,9%	18,4 %	6,6%	1,3%

Source: Own elaboration.

During the tour, it was observed that in zones 5 and 12 of the district, the green areas are fed by treated water from the wastewater treatment plant (WWTP), with adequate sustainable maintenance of those spaces, as well as the gardens of the central berms of Avenida Revolución and the parks that are fed by a network of pipes from the central network. In zones 7 and 9, where the water resource comes

from tubular wells, the condition of the green areas is optimal. The green areas in zone 11 are in good condition due to the participatory action of the Parks and Gardens Committees; however, in zones 1, 2 and 3, the condition of most of the parks and gardens is deplorable due to the lack of irrigation and sustainable care because of the lack of water.

It is notorious, the bad use that people give to green areas, considering that when they are in good condition people use them for recreation, sports, even to plant fruit trees, however, the dumping of waste in the vast majority of parks, which are generated from homes and people who have the habit of taking their waste to green areas; we can cite for example the dumping of debris, dead pets and other waste. This bad practice is damaging the work done by workers in the area, as well as negatively affecting the state of the green areas, often causing the death of tree species that are present in those urban spaces and the recovery process that is carried out by workers, becomes a slow process that is affected by the bad practices of society. Coinciding with Guzmán (2017), who found as one of the most important problems, the absence of green areas and the existence of micro dumps, as well as the presence of wastelands and a lack of maintenance of green areas. (p. 6)

On the other hand, the irrigation problem, due to the lack of water, considering that, in the district of Comas, irrigation is currently unsustainable in most of its parks and gardens with greater impact on the parks, which are irrigated with cistern supply because they are performing the frequency of irrigation every 4 or 5 months for having only two cisterns for all the parks in the district which is insufficient. The municipality should seek new sources of funding, in addition to enforcing the payment of taxes, which are the main source of funding, through prompt payment and regularization campaigns, in exchange for citizens' commitment to environmental care. It should also allocate more financial resources to the green areas sector, for a better allocation of personnel, as well as the improvement of its equipment and technology in order to have the capacity to carry out effective sustainable maintenance in urban green spaces.

Conclusions

There is an urgent need for water for irrigation of green areas in the district of Comas, which causes a large number of parks to be in unsustainable drought conditions, with 26.6% of irrigation in the district's parks non-existent, requiring new sources of water, as well as the rational use of water, through technical irrigation, reuse of wastewater and use of tube wells, to be sustainable over time.

The non-existence of lawns and ornamental plants is evident in 19.7% respectively, which is based on the non-existent irrigation of the district's urban green areas, in

coexistence with 50% of the district's trees, which are in acceptable condition and still survive the adverse conditions. The cleanliness of the green areas is deficient, considering that the inhabitants themselves are the ones who throw garbage in their green areas, noting that there is no cleanliness or that the state of cleanliness is between very bad and bad.

References

- Arbonés, I., Lozano, D., & Marcén, C. (2019). Validation of an observational tool to assess physical activity in urban green areas. *Culture, science and sport*, 14(42), 251-263. DOI: <http://dx.doi.org/10.12800/ccd.v14i42.1339>
- Blancarte-Siqueiros, R., Pérez-Verdin, G. and Cortes-Ortiz, A. (2019) The relationship between quality of life, sense of belonging and green spaces in urban environments in the city of Durango, Mexico. *Revista Chapingo, Serie Ciencias Forestales y del Ambiente*. 26 (1), 97-111. Doi: 10.5154/r.rchscfa.2019.03.023
- Burbano, L., Triguero, L. and Costa, M. (2018). The application of training for analysis on Ecológicos Airport lounges. *Iberoamerican journal of education*. 1(1). DOI: <https://doi.org/10.31876/ie.v1i1.1>
- Carrus, G., Scopetelli, M., Laforteza, R., Colangelo, G., Ferrini, F., Salbitano, F., Agrimif, M., Portoghesif, L.,

- Semenzatog, P. and Sanesi, G. (2015). Go greener, feel better? The positive effects of biodiversity on the well-being of individuals visiting urban and peri-urban green areas. *Landscape and Urban Planning*, 134, 221-228. Doi:10.1016/j.landurbplan.2014.10.02
- Da Rocha, N., Moura, A., Hanson, H., Kumble, P. and Hussein, J. (2018). The relationship between green areas and slope: a case study of the city of Prague. *Desegnarecon*. 11 (20), 10.1-10.14. DOI: <https://doi.org/10.20365/disegnarecon.20.2018.10>
- Dias, R., Vidal, D., Seixas, P. and Maia, R. (2021). The green spaces and sustainability concerns in 3rd generation Municipal Master Plans: Comparative analysis of metropolitan areas in Portugal. *Cidades*, (41), pp. 44-70. DOI: 10.15847/cct.19810.
- Dutra, A. and Dutra, S. (2020). As áreas verdes na metrópole do hinterland: parques urbanos no planejamento urbano de Goiânia nas décadas de 1930 e 1940. *Revista de História Regional*. 25(2). Doi: 10.5212/Rev.Hist.Reg.v.25i2.0008
- Epelde, L., Salazar, O., Martín, I., and Garbisu, C. (2020). Variables affecting the diversity of soil organisms in green areas of the city of Donostia-San Sebastián. *Ecosystems*, 29(1), 1881. <https://doi.org/10.7818/ECOS.1881>.

- García, E, De Hoyos, J. and Ávila, V. (2020), Metabolismo ambiental. Care and conservation of urban green areas. *Revista Contexto*. 14 (20). DOI: <http://dx.doi.org/10.29105/contexto14.20-5>
- Gómez, N. and Velázquez, G. (2018). Association between public green spaces and quality of life in the municipality of Santa Fe, Argentina. *Cuadernos de Geografía: Revista Colombiana de Geografía*. <http://dx.doi.org/10.15446/rcdg.v27n1.58740>
- Guzmán, J. (2017). La Gestión Municipal de áreas verdes en el gran Santiago Problemáticas, inversión y resultados a nivel comunal. *Fundación Mi Parque*. <https://bit.ly/319S3yS>
- Kabisch, N., Korn, H., Stadler, J. and Bonn, A. (2017). Effects of urban green space on environmental health, equity and resilience. Theory and Practice of Urban Sustainability Transitions. *Springer Open*. DOI: 10.1007/978-3-319-56091-5_11
- Malca, N. (2012). Contribution of urban green areas to the environmental quality of the district of Comas-Lima, as of 2011. *Universidad Nacional Mayor de San Marcos*. <https://revistasinvestigacion.unmsm.edu.pe/index.php/iigeo/article/view/4192>
- Martínez-Soto, J., Montero, M., & De la Roca, J. (2016). Psychoenvironmental effects of green areas on

- mental health. *Interamerican Journal of Psychology*.
<https://doi.org/10.30849/rip/ijp.v50i2.93>
- Mpofu, T. (2013). Environmental challenges of urbanization: a case study for open green space management. *Research Journal of Agricultural and Environmental Management*, 2 (4), 105-110.
<https://bit.ly/2GVq2UO>
- Paেকে, S. and Melgarejo, F. (2019). Monitoring advances on urban development: Analysis of green spaces registers in the metropolitan area of Santiago, Chile. *Revista INVI*, 34 (96), 129-150.
<https://revistainvi.uchile.cl/index.php/INVI/article/view/63102>
- Pérez, S. (2018) Urban legislation and green spaces for public recreation in Mérida, Yucatán, Mexico. *Demographic and Urban Studies*. 33 (3), pp. 671-698. DOI:
<http://dx.doi.org/10.24201/edu.v33i3.1813>
- Quispe, L. (2017). Situation of urban green areas in Metropolitan Lima. *Universidad Nacional Agraria La Molina*.
<http://repositorio.lamolina.edu.pe/handle/UNALM/2990>.
- Souza, M. and Amorim, M. (2019) Quality index for evaluation of public green areas. *Atelie Geografico*, 13 (1), 62-83. DOI:
<https://doi.org/10.5216/ag.v13i2.54533>

Academic analysis of electoral system reform and political representation in Peru and Latin America

José Antonio La Cotería Vega
José Antonio Carbonel Arribasplata
Yolvi Ocaña-Fernandez
Arístides Alfonso Tejada Arana
Joel Alanya-Beltran

Introduction

In recent years there have been many changes in politics, such as the inclusion of new democratic regimes, new structures of political systems, allowing citizen participation and social control. For Guillén (2011), electoral systems and the probability of reform are fundamental in democracies; the democratic regime of a nation will depend on the capacity of its electoral system to properly represent (democracy-electoral system-representation), in a democracy, the electoral system is the first component to be defined. (p.198) The objective of this chapter is to investigate the relevance of electoral reform for the political representation of the Peruvian and Latin American parliaments. For Trenz (2009) civil society has traditionally been conceptualized as the sphere of voluntary action and

participation that activates citizens and channels their voice into the system of political representation. Also in empirical terms, civil society is often perceived as acting as an opponent of elected representatives by mobilizing the direct voice of citizens. (p.36)

In a democracy, political parties try to represent in their political programs, the preferences of some segments of the electorate in relation to the main social problems. Sulmont (2018), if parties keep consistency in their programs and differentiate themselves from their competitors, "programmatic links" are being created, which favors a party system that provides clear traces for voters to make a decision that is in accordance with their interests. (p.430). For Muñoz, Domínguez, Crespo and Neira (2021), not only electoral processes are the basis of democracy, but also factors that arise from the transition of democracy such as electoral decision, participation, response to the popular will, responsibility and sovereignty (p. 172).

The methodology of parliamentary representation in Peru, Mexico, Chile, Argentina and Brazil suffers from political alternation and internal democracy in political parties that, in order to serve their ideological or economic interests, are not accountable to the citizenry, confronting ethics and morality. The reality of the political party system has caused a crisis in terms of parliamentary representation by not

promoting political alternation in the parties. Modern political parties should prioritize a representative policy and promote alternation.

This research is important because it seeks to propose to the Congress of the Republic a proposal for political electoral reform, to propose to the political parties an initiative of democratic strengthening, to propose to the diverse social actors of the country, the design of a transversal and more inclusive electoral reform, which will allow them to have greater political representation in the Parliament; Since the Peruvian electoral system has had setbacks instead of advances, causing democracy in Peruvian politics to gradually and systematically crumble; so that Peruvian politicians lost credibility before civil society due to their unethical, anti-moral and corrupt conduct; consequently, the electoral reforms were insufficient in not remedying these shortcomings.

Political Scenario

In 2019, Peru was marked by a political turning point: the constitutional closure of the Congress, today it seems a distant event compared to what the country is suffering as a result of the Covid-19 pandemic. In June 2020, Peru became the country with the second highest number of cases in Latin America, and also experienced an economic collapse, which shows the structural problems of the

country despite the democratic continuity and economic growth of the last 20 years. Paredes and Encinas (2020) in 2019 the biggest political storm occurred in Peru since its return to democracy in 2001. (p.484)

Córdova and Ponce, (2017), "The perception of grand corruption turns out to be the most damaging, when explaining the drops in the satisfaction of services." (p.233) Each initiative of the Peruvian parliament has not been enough to promote electoral reform, a situation ignored by civil society, because local press information was more oriented to the ethical issues of parliamentarians. For Vasquez (2016) "In political democracy, the media represent the space where the conglomerate of information and political expression of citizens is developed." (p.15)

For López-Hermida and Fierro-Zamora, (2016) mention that there is currently a gradual political dismissal manifested in ballot boxes and polls, present in several countries, therefore they propose to analyze electoral campaigns for the solution of this problem in electoral processes and that it be considered more than a simple electoral participation. (pp. 365-369). Likewise, Pachón, Peña and Wills (2012), mention that in Latin America the relationship of citizens with politics still constitutes a theoretical void, despite the advances there is still a notable gap in terms of citizen political participation.

(p.359) Likewise, Muñoz et al. (2021) Latin Americans express disapproval of politics in general and of their representatives, so great importance has been given to having elements that facilitate greater citizen participation in decision making, beyond elections. (p.171)

Sorensen, Hendriks, Hertting and Edelenbos (2020) mention that political leadership implies a continuous effort to ensure mutual understanding between political leaders and members of the political community of what is being represented, the key to democratic political leadership is to strengthen the dialogue between policy formulation in collaborative governance arenas and the institutions of representative democracy, such as government cabinets, representative assemblies, councils and legislative committees. (pp. 530)

On August 27, 2019, four electoral political reform laws were published in the official gazette El Peruano, laws 30995, 30996, 30997 and 30998, promoted by the Executive Branch as part of the request for the question of trust, prepared by a special commission, with the purpose of promoting participation and democratic representation; as well as, the good conduct of political parties, to revert the weak democracy.

Relevance of electoral reform for political representation

To investigate the relevance of electoral reform for political representation in the Peruvian and Latin American parliaments, a structured qualitative interview, observation, analysis, interpretation and triangulation was carried out with ten specialists, including political scientists, professors and representatives of civil society, regarding electoral reform and political representation in the Peruvian parliament. It was associated with electoral and democratic theories.

The narratives and appraisals on the relevance of the electoral law reform and political representation in parliament were obtained inferentially, posing five guiding questions a priori: What is the importance of electoral laws in Peru? Who is subject to parliamentary representation in Peru? What is the quality of Peruvian politics? How is inclusion and relevance practiced in the Peruvian parliament? What is the behavior and conformity of voters with respect to parliament?

Once the interviews were applied and the field work was temporarily set aside, the qualitative data were codified and systematized, grouped, organized in the mental maps and in the multiple descriptive and interpretative tables, by categories and for each time sample. The quality of the information could vary according to the quality of the information based on the technique of saturation of the data, which highlighted facts and gave significant

information, for which the propaedeutics, critical sense, intuition, creativity and data processing were vital, with the purpose of grouping and ordering the texts and the expressions of the people.

Strengthening and modernization of the electoral system

The preferential vote, internal democracy, parity and alternation are poorly designed and lack transversality, due to the deficiencies of the electoral reform. The induction, analysis and methodical interpretation of the data was made and contrasted with Law N° 30995 on the registrations of political organizations, and with Law N° 30996, which modifies the Organic Law of Elections, regarding the National Electoral System; however, none of these laws provide solutions in this subcategory, on which, Leyton's (2017) "Theory of electoral organization" states that the electoral system must strengthen and modernize the electoral design. (p.18)

The National Jury of Elections (JNE) and the National Office of Electoral Processes (ONPE) disassociate themselves from their administrative functions and favor certain political parties to register and expedite their process. The analysis, ideographic description, comparison and methodical interpretation of the data with the electoral reform law No. 30996, where the mechanisms to hold

accountable and sanction acts of corruption in the electoral bodies are not indicated, were carried out.

Preferential voting, doubts about parity and alternation, and the model of internal democracy in political organizations, hinder parliamentary representation. The analysis and observation of the data was carried out, and it was confronted with the law N° 30998 that modifies the law of the political organizations, being able to observe that this law does not propose criteria to promote democracy in the political parties and it is incoherent, because the preferential vote, not having open primary elections in the political parties, denaturalizes the internal democracy; therefore, the "Theory of democracy" of Annunziata, proposes to execute a democratic and integrating revolution, expressing itself in the alternation from the political organizations.

The elites of the political parties do not respect the democratic criteria, using the closed primary elections to elect candidates that defend their interests. Through observation, constant comparison of data and comparing with Law No. 30998, we observe that this law does not specify any clear mechanism for the supervision and control of political parties, who use the supposed internal democracy with directed strategies; to overcome this reality, the "Theory of Greek democracy" of Ariza, states that by granting positivist freedoms to the individual,

democratic freedom is attributed to him to be part of the government.

The electoral bodies do not guarantee the electoral rights of their militants, since the parliamentary exercise is decadent and has little credibility. With the analysis, interpretation and constant comparison of the data, and comparing it with Law No. 30998, it is identified that this norm does not propose to the political parties to guarantee the electoral rights of the militants; likewise, it does not recommend the strengthening of internal democracy, the design of the electoral formulas, the modalities of political alternation and the patterns of good conduct in the parliamentary exercise; in this respect, the "liberalist theory" of Chaloud is applicable, where he points out that freedom is pure democracy and consolidates the social classes. Likewise, Cárdenas' "Functionalist theory" refers that society must be operative in its electoral and democratic rights.

The essence of the parliamentary quality has vanished, because the profile, the conduct and the moral quality of the parliamentarian is deplorable; likewise, with the interpretation, constant comparison of the data and complying with the law N° 30995, it is concluded that the same is deficient, cumbersome, without technical criteria and unclear, to improve the problematic and the results in this subcategory; Therefore, Fazio's "Theory of principles"

states that principles are equivalent to norms, value and good; the first lies in moral justification, the second in responsibility and the third is based on quality.

Political parties do not respect democracy and transgress the electoral rights of their militants; therefore, democracy is neither inclusive nor representative. Induction, interpretation and constant comparison of the data were carried out and, comparing with Law N° 30998, eight modifications of the Organic Law of Political Organizations were found, regarding internal democracy, the participation of citizens in the process of selection of candidates to popularly elected positions, through the political organizations; However, the criteria are absurd and do not identify the obstacle of the preferential vote for the practice of internal democracy, parity and alternation; likewise, the law avoided the structuring of a series of prohibitions and sanctions for unethical practices in political organizations. In this regard, Santander's "Theory of performative identity" synthesized the importance of the feminine presence and of the social sectors in contemporary political life.

Corruption, private interests and the unethical conduct of parliamentarians have generated a rejection by the population, forcing voters to cast their vote in a more conscious manner, after the necessary reflection.

Conclusions

According to political scientists, political representation has focused on the debate of ethical and moral issues of congressmen, such as corruption, the limited internal democracy of political parties, the negotiation of votes in congress and the social insignificance of the laws passed, which do not allow improving political representation in parliament. The electoral reforms in Latin America and especially in Peru, have been alien to the participation of the citizenship to please the political and economic power groups, the confusing regulatory framework and the lack of transparency of the electoral bodies, added to the impossibility of converging the different partisan interests, have not generated a greater relevance in political representation. The reform of the electoral law, by not incorporating bicameralism, political alternation with gender equality, the forms of unipersonal candidacy over candidacies by lists or slates managed by party leaderships, and the electoral formulas that lack transparency in the assignment of seats, have not allowed for an added value in political representation.

In the opinion of the political scientists interviewed, the political exercise of the congressmen generates a gap between representatives and represented, because they are not subject to the imperative mandate, added to the low educational and experience requirements for the congressional exercise, have negatively impacted political

representation, the perception of the political scientists has focused on the limitations of internal democracy, in making accountability in financing and campaign expenses transparent, the deficiencies in the competencies of their political class, which has negatively impacted political representation.

References

- Córdova, J., & Ponce, A. (2017). The types of corruption and satisfaction with public services. Evidence from the Mexican case. *Region and society*, 29(70), 231-262. <https://doi.org/10.22198/rys.2017.70.a344>
- Guillén, E. (2011). The electoral system of the congress of deputies. Constitutional principles and recent reform proposals. *Spanish Journal of Constitutional Law*. 92, <http://www.cepc.gob.es/publicaciones/revistas/revis-taselectronicas?IDR=6&IDN=1274&IDA=36122>
- Trenz, H. (2009) European civil society: Between participation, representation and discourse. *Policy and Society*, 28(1), 35-46, DOI: 10.1016/j.polsoc.2009.02.004.
- Leyton, M. (2017). The electoral system and the guarantee of governability, democracy, efficiency and effectiveness of the electoral processes in Peru. *Institute of Government and Public Management*, USMP. <https://hdl.handle.net/20.500.12727/3825>

- López-Hermida, A. and Fierro-Zamora, P. (2016) Political campaigns and citizen disaffection: approach from Chile to the effects of electoral activities on the democratic process. 19 (2). *Palabra Clave communication journal*. DOI: 10.5294/pacla.2016.19.2.2.2.
- Muñoz, J., Domínguez, M., Crespo, X., and Neira, M. (2021). Democratic culture system from informed participation in Cañar - Ecuador. *Revista Ibérica De Sistemas e Tecnologias De Informação*, 170-179. <https://search.proquest.com/scholarly-journals/sistema-de-cultura-democrática-desde-la/docview/2483103500/se-2?accountid=37408>.
- Paredes, M. and Encinas, D. (2020) Peru 2019: political crisis and institutional exit. *Revista de ciencia política*. 40(2). DOI: <https://doi.org/10.4067/S0718-090X2020005000116>
- Pachón, M, Peña, X. and Wills, M. (2012) Political participation in Latin America: an analysis from a gender perspective. *Revista de ciencia política*. 32 (2). <https://doi.org/10.4067/S0718-090X2012000200002>
- Sorensen, E., Hendriks, C., Hertting, N. and Edelenbos, J. (2020) Political boundaries: politicians at the interface between collaborative governance and representative democracy. *Politics and Society*, 39: 4, 530-569, DOI: 10.1080/14494035.2020.1743526.

- Sulmont, D. (2018) Does programmatic voting exist in elections with a weak political party system? An analysis of the 2016 Peruvian presidential election. *Revista de ciencia política* (Santiago), 38(3), 429-457. <https://dx.doi.org/10.4067/S0718-090X2018000300429>
- Vasquez, T. (2016). Political parties as factors for rational discussion. Deliberation and elections. *Mexican magazine of public opinion*, (20), 13-29. DOI: <http://dx.doi.org/10.1016/j.rmop.2015.12.001>

Videoconferencing as a means to strengthen learning among university students in Peru

Joel Alanya-Beltran
Yolvi Ocaña-Fernandez
José Antonio La Coteria Vega
José Antonio Carbonel Arribasplata
Aristides Alfonso Tejada Arana

Introduction

Teaching mathematics courses at the university presents several challenges. During virtual teaching, it has been identified that, on many occasions, the class lecture time is not enough to deepen the topics covered in the session, which leads to a negative perception of the students regarding the course. Some students even stop attending classes or withdraw from the course. Therefore, a learning reinforcement strategy should be applied in parallel to classroom teaching. This research analyzes the level of satisfaction of university students with respect to the use of videoconferencing to reinforce learning in a fourth cycle mathematics course called decision making calculus. The satisfaction questionnaire was applied to the students at the end of the cycle. The results obtained are positive towards the use of videoconferencing as a tool to reinforce their learning. In addition, they indicate that it is very

useful, motivating and improves their interest in the course. This finding allows us to affirm that the use of videoconferencing is a good alternative to reinforce learning and even to increase interaction with students in the mathematics course.

The perception that each student has of the mathematics course can be studied taking into account the affective domain (Galende et al., 2020), which states that students come with beliefs, product of their experience in previous years about the course and how they themselves plan to face it. As the class sessions progress, students begin to react emotionally to the didactics and the teacher's contribution to the student's performance (Canales and Maldonado, 2018), the difficulty of the topics seen, the errors that arise when trying to develop the exercises (Gris et al., 2019), the grades obtained after the evaluations, so these reactions can be good or bad. With the passing of the sessions, if a student continues to get the same grades, these reactions become attitudes, which can be positive or negative towards mathematics; in this sense, Means et al. (2021) relates it to the valuation, interest and appreciation that students have regarding the course and their learning. Indeed, this leads to generate anxiety in students (Bjälkebring, 2019; Cumhur and Tezer, 2019) because it is associated with tension, worry, fear and prevails the intention to pass the mathematics course, considered as the most difficult (Palacios et al., 2004) to understand.

Thus, it can be explained because some students are more attentive, participative and active during classes and, on the other hand, because another group of students possibly do not decide to continue with their studies (Franz-Odendaal et al., 2020).

ICTs show a wide progress and impact in education. This is the case of videoconferencing is playing an important role in these pandemic times by COVID-19 and was previously used in distance education courses and distance tutorials, allowing students to continue in communication with their teachers using videoconferencing (Fernandez-Repollet et al., 2018). Lately, the implementation of videoconferencing has allowed a closer interaction with students. In that sense, Jonas et al. (2019) point out that the use of videoconferencing is relevant to learning and present good results related to attitude, perception, motivation and satisfaction. In addition, it can be identified that students show great enthusiasm with this novel possibility communication both with the teacher and with other students. Likewise, Rodriguez et al. (2020) point out that students feel committed to their learning and value the fact that teaching is delivered synchronously in real time. Similarly, Gutiérrez-Esteban et al. (2018) indicates that it is possible for videoconferencing to be used to include and promote collaborative learning among students and thus improve the teaching and learning process. In addition, it should be taken into consideration that educational

learning processes today, given the emergence of 4G and 5G technologies, require the application of didactics that increase the interest of students by applying interactive habits to attract their attention.

Mathematics is learned based on practice and repetition of exercises, that is to say, it is based on learning by repetition. However, if the concepts or solution processes are not clear, it would not be possible to try to solve any mathematical exercise or problem. In this sense, the application of videoconferencing as a tool for the reinforcement of students in the improvement of their learning is a trend in universities, however, there are few studies that show its implementation in virtual contexts and the students' perception of its application in the mathematics course. Therefore, the objective of this work was to analyze the level of satisfaction about the application of videoconferencing used as reinforcement for students of the Calculus of Decision Making course in a private university in Peru between the first period of the year 2020.

The research presents a non-experimental, cross-sectional and descriptive design, since it seeks to analyze the level of satisfaction that students have with respect to the use of videoconferencing as a means of reinforcement of learning. The participants consisted of 46 students who were in the fourth year of the Engineering course and who

were taking the Calculus of Decision Making course at a private Peruvian university during the first semester of the year 2020, so it is a census sampling. The sample was selected by applying cluster sampling, since the population was already divided into sections according to the enrollment of the university. The age of the participants was within the age range of 17 to 20 years.

The class sessions consisted of only two hours per week. The schedule for the reinforcement classes was coordinated with the group of students and was carried out using videoconferencing for an hour and a half. During this time, in the first half hour, the students' doubts about the exercises performed in class were answered. Then, in the remaining time, additional exercises were solved in detail, which were already prepared in a slide with animations. Doubts about each exercise were answered at the end of the solution of each exercise. Finally, the solution of the exercises was shared with the students so that they could practice it.

To measure the level of student satisfaction with the use of videoconferencing as a means of reinforcement of learning, a questionnaire was developed, which identified three dimensions: learning environment, the role of the virtual teacher and the role of the student. This questionnaire had twelve Likert-type items. To ensure the validity of the instrument and thus ensure that the

questions could satisfy the considerations of wording and relevance, an expert judgment review was requested by experts external to the research work. Once the observations and modifications of the questions in the questionnaires had been corrected, a second review was requested by the experts, who made no additional observations and gave their approval, indicating that the instrument was sufficient and applicable. These instruments were applied in a pilot test to a group of 22 students and the instrument was tested for reliability with Cronbach's Alpha and a reliability coefficient of 0.95 was obtained. The results concluded that the questionnaire is reliable.

For data analysis, a descriptive analysis was performed corresponding to the results of the student satisfaction questionnaire for each of the dimensions, for which the average and standard deviation were calculated. To interpret the weighted mean, a scale of 1 to 5 was used, where 1 is very low and 5 is very high. Bar graphs and tables were used to show the results.

Satisfaction in the use of videoconferencing

After applying the satisfaction questionnaire about the use of videoconferencing by students, results were obtained showing that the respondents expressed a high level of satisfaction in the use of videoconferencing with an

average of 3.86. This finding reveals that the respondents perceive themselves satisfied with the use of videoconferencing as a means of strengthening learning. In addition, the respondents were satisfied with the contents of the videoconference session (3.72 average and 1.18 standard deviation), they are also satisfied with the quality of the virtual teacher's dictation (3.78 average and 1.18 standard deviation), and a high level of perception in the student's attitude (4.1 average; 1.05 standard deviation).

In addition, it is observed that the dimension with the lowest average is the one that corresponds to the contents of the videoconference. This indicates that planning and preparation of the materials by the subject coordinators is necessary.

The results of the indicators of the content dimension of the videoconference session show that each of the indicators of the content dimension of the videoconference session reached a high level of satisfaction. The lowest indicator was the one corresponding to the organization of the session with an average of 3.65. In addition, each of the indicators of the dimension of the quality of the virtual teacher's dictation reached a high level of satisfaction. The lowest indicator was the one corresponding to the ability of the teacher to use the platform with an average of 3.70, each of the indicators of the student's attitude dimension

reached a high level of perception. The lowest indicator was the one corresponding to active participation with an average of 3.93.

Sudden change in virtual education

Particularly, in this research the students perceive a greater freedom and interest, given that, being reinforcement sessions, they are aware of how to solve it and thus understand the topic seen in a class session. This is reflected by the high interest and attention during the development of the videoconference, which, according to the results, motivated the students to continue practicing since they were able to solve their doubts and at the same time understand the solution of each of the solved exercises.

An important result corresponds to the fact that the students perceived the teacher's mastery of the subject, given that a determining factor is the methodological and knowledge mastery at the time of solving the reinforcement exercises, since it is important to show confidence during their development.

However, the lowest indicator refers to the coherence in the development of the reinforcement session, which may be due to the lack of time in the preparation and approach of the exercises to be solved, which could be due to the

sudden change to a purely virtual education, which modified the class design initially thought to be developed in a face-to-face manner.

Conclusions

This research was carried out due to the implementation of videoconferencing to be able to perform mathematics reinforcement exercises seen in class. The results contribute to reinforce the idea of a tutoring program directed by the teachers of the course as a fundamental component that is needed in higher education institutions or educational centers. Providing reinforcement after engineering mathematics classes is essential to improve student learning. The research conducted allowed to know that the students present a high interest in the course by the presence of the videoconference counseling sessions, which are performed synchronously, which coincides with what was indicated by (Parikh et al., 2019), which evidenced that its use was valued by the students and was acceptable and effective. The active participation of students during synchronous virtual classes allows them to be interested in the topic developed, in this case, in the practical reinforcement exercises. The results obtained indicated that the videoconference allowed them to actively participate in the session, which is affirmed by Lee et al. (2018), who indicates that videoconferencing has important pedagogical benefits, allowing the creation of an interactive learning environment. In addition, the results

of Weiser et al. (2018) indicate that students present a greater interest by actively participating in the videoconference sessions in the moments that the teacher asks them to ask questions, comment or interact with him or with their peers given that it is a synchronous session. The videoconference added to the use of other digital tools and the interaction of the teacher allow an increase in student interest and can generate processes of cognitive satisfaction especially in these contexts of mandatory social isolation. One of the main limitations of this research is the difficulty to carry out the virtual classes given by the connection of the students, which influenced the normal development of the reinforcement class, since the students could feel uncomfortable and would not be able to work with the same naturalness with which they would have done it in normal conditions and that would affect their attitude towards the course or towards the same tool. It would also be interesting to work the reinforcements using complementary digital tools to apply them individually or even perform collaborative work during the class session. Another interesting line of research would be to identify the teacher's perception of the reinforcement sessions, seeking to collect aspects such as work overload, time in the elaboration of materials, stress or burnout.

References

Bjälkebring, P. (2019). Math Anxiety at the University: What Forms of Teaching and Learning Statistics in Higher

Education Can Help Students With Math Anxiety?
Frontiers in Education, 4.
<https://doi.org/10.3389/feduc.2019.00030>.

Canales, A., & Maldonado, L. (2018). Teacher quality and student achievement in Chile: Linking teachers' contribution and observable characteristics. *International Journal of Educational Development*, 60, 33-50.
<https://doi.org/10.1016/j.ijedudev.2017.09.009>

Cumhur, M., & Tezer, M. (2019). Anxiety about mathematics among university students: A multidimensional study in the 21st century. *Cypriot Journal of Educational Sciences*, 14(2), 222-231.
<https://doi.org/10.18844/cjes.v14i2.4217>

Fernandez-Repollet, E., Locatis, C., De Jesus-Monge, W., Maisiak, R., & Liu, W. (2018). Effects of summer internship and follow-up distance mentoring programs on middle and high school student perceptions and interest in health careers. *BMC Medical Education*, 18(1), 1-6.
<https://doi.org/10.1186/s12909-018-1205-3>.

Franz-Odendaal, T., Blotnicky, K., & Joy, P. (2020). Math Self-efficacy and the Likelihood of Pursuing a STEM-Based Career: a Gender-Based Analysis. *Canadian Journal of Science, Mathematics and Technology Education*, 20(3), 538-556.
<https://doi.org/10.1007/s42330-020-00105-7>

- Galende, N., Arrivillaga, A., & Madariaga, J. (2020). Attitudes towards mathematics in secondary school students. Personal and family factors. *Culture and Education*, 32(3), 529-555. <https://doi.org/10.1080/11356405.2020.1785156>
- Gris, G., Dos Santos Palombarini, L., & Dos Santos Carmo, J. (2019). A systematic review of relevant variables in the production of errors in mathematics. *Bolema - Mathematics Education Bulletin*, 33(64), 649-671. <https://doi.org/10.1590/1980-4415v33n64a10>
- Gutiérrez-Esteban, P., Yuste-Tosina, R., Delicado-Puerto, G., Arias-Masa, J., & Martín-Espada, R. (2018). Synchronous virtual tools to develop and evaluate cooperative learning in an online learning community. *International Journal of Continuing Engineering Education and Life-Long Learning*, 28(2), 115-129. <https://doi.org/10.1504/IJCEELL.2018.096019>
- Jonas, C., Durning, S., Zebrowski, C., & Cimino, F. (2019). An Interdisciplinary, Multi-Institution Telehealth Course for Third-Year Medical Students. *Academic Medicine*, 94(6), 833-837. <https://doi.org/10.1097/ACM.0000000000002701>.
- Lee, J., Nakamura, Y., & Sadler, R. (2018). Effects of videoconference-embedded classrooms (VEC) on learners' perceptions toward English as an international language (EIL). *ReCALL*, 30(3), 319-336. <https://doi.org/10.1017/S095834401700026X>

- Means, B., Wang, H., Wei, X., Young, V., & Iwatani, E. (2021). Impacts of attending an inclusive STEM high school: meta-analytic estimates from five studies. *International Journal of STEM Education*, 8(1), 1-19. <https://doi.org/10.1186/s40594-020-00260-1>.
- Palacios, A., Hidalgo, S., and Maroto, A. (2004). Why is mathematics rejected? Evolutionary and multivariate analysis of relevant attitudes towards mathematics. *Revista de Educación*, 334, 75-98. DOI: 10.4438/1988-592X-0034-8082-RE
- Parikh, S., Bostwick, J., & Taubman, D. (2019). Videoconferencing Technology to Facilitate a Pilot Training Course in Advanced Psychopharmacology for Psychiatrists. *Academic Psychiatry*, 43(4), 411-416. <https://doi.org/10.1007/s40596-019-01050-w>.
- Rodríguez, C., Herrada, M., Béjar, V., Gili, G., & Castele, V. (2020). The research and teaching of discourse markers in SFL classroom. *RILCE*, 36(3), 967-973. <https://doi.org/10.15581/008.36.3.967-93>
- Weiser, O., Blau, I., & Eshet-Alkalai, Y. (2018). How do medium naturalness, teaching-learning interactions and Students' personality traits affect participation in synchronous E-learning?. *Internet and higher education*, 37, 40-51. <https://doi.org/10.1016/j.iheduc.2018.01.001>

The use of information and communication technologies in the modernization of the administration of justice system in Peru

Arístides Alfonso Tejada Arana

José Antonio La Cotería Vega

Yolvi Ocaña-Fernandez

Joel Alanya-Beltran

José Antonio Carbonel Arribasplata

Introduction

A modern State requires a technologically advanced justice system that is an essential element for the defense of individual interests in society. The modernization of the system of administration of justice today requires the use of ICT, which includes having a modern computer platform, with a team of professionals who make use of interoperability and integrate networks, servers, computers, and various operating systems among others, in this case study I refer to the use of technological innovation which facilitates access to justice, generating a degree of speed, predictability, immediacy, as well as a proven procedural economy in the administration of justice. When it comes to facing the challenges of

globalization and the information age, Justice should not be part of the problem but a solution.

For Valencia, Marulanda, and López (2018) In a society like the current one, which highlights competencies, competitiveness, speed, resource efficiency and more recently ethics in the operation of public resources, governance and good governance appear as primordial concepts to try to harmonize the changing world of companies. IT governance is a widespread term, but little understood and applied in companies, associated and confused with IT management, perhaps due to the multiple definitions that the academic society has been developing and the multiple existing frameworks of allusion. (p.250).

In Peru, the use of ICTs greatly facilitates the resolution of conflicts without the need for the parties involved to go to a court or tribunal and travel long distances. This is possible through the innovation of video-hearings, where a person can be present in a court through the Internet, using videoconferencing as an interactive communication system, which allows the simultaneous transmission of image, sound and data, enabling a full two-way communication in real time. Likewise, different advances in the use of ICTs in the administration of justice are known, but they do not have a real impact on the population due to their lack of importance.

One of the most important issues for society in general is how the administration of justice is administered and provided, especially since this is a fundamental priority in the consolidation of a true social rule of law. People expect a prompt, timely, efficient, fair and equitable administration of justice on the basis that it is there where the democratic precept of a State is evidenced, which proclaims such principles and raises them to constitutional rank, in that permanent search to guarantee citizens access to the administration of justice without any kind of limitation and obstacle, which may threaten or affect their fundamental rights and interests. "Public administrations cannot remain immobile in the face of a new social reality that also offers a brilliant opportunity to increase their efficiency and effectiveness in very specific areas such as, for example, the fight against fraud and irregularities." (Simon, 2021, p.1)

Public entities must rely on technology to achieve the differentiating factor for competitiveness, achieving efficient information flows, which can favor the quality of services and the social welfare of citizens, reducing costs, procedures and even the productivity of civil servants. There is a need to make the provision of judicial services more efficient and, on the other hand, the need to reduce the state apparatus, which has demanded the appropriation of information and communication technologies to support judicial management in the different instances of the apparatus. Simón (2021)

mentions that the public administration has used artificial intelligence for various legitimate purposes, such as risk prevention, detection of irregularities, fraud and corruption cases, support for decision making, these through police prediction systems, assistance to doctors for the treatment of diseases, to allocate grants or evaluate teachers, school dropout alert (p. 4).

The existing modernization programs have promoted processes of technological innovation, administrative management and control systems, both of the judicial offices and of the administrative support entities of the judicial branch, but it is still possible to observe the generalized backlog of justice activities and consequently, the loss of credibility in the system, the congestion in the offices, the lack of personnel and the difficult updating of information on judicial activity. Cerdá (2020) states that one of the pillars of the process of innovation in the administration of justice is technological innovation; however, respect for the rights of citizens must not be violated; on the contrary, quality and efficient services must be provided, the use of public funds must be optimized, and productivity, transparency and accountability must be increased (p.3).

Therefore, this study aims to determine to what extent the use of Information and Communication Technologies (ICT) contributes to the modernization process of the justice

administration system in Peru, in videoconferencing systems, electronic notifications and biometric readers.

Information and Communication Technologies (ICTs)

Information and communications technology (ICT) is a term currently used to refer to a wide range of services, applications, and technologies, using various types of hardware and software, often transmitted over telecommunication networks. ICTs include well-known telecommunication services such as computers, telephony, mobile telephony and fax, which are used in combination with hardware and software to form the basis of a range of other services, such as e-mail, the transfer of files from one computer to another, and, in particular, the Internet, which potentially allows all computers to be connected, thereby providing access to sources of knowledge and information stored on computers around the world.

For Benfeld (2020) Information and communication technologies (ICTs) comprise a group of interlinked devices of a tangible (electronic devices) and intangible (software) nature, which enable the immediate exchange, processing, management and storage of large volumes of information. (p.8). Herrera-Tapia and Navia, (2020) mention that they are a primary mechanism of remote social interaction of institutions and individuals, teleworking alternatives, telemedicine, remote control of processes, news dissemination, are used in the commercial and financial field, in the design of new products and solutions for all

types of companies. (p. 11). Villegas, Walle-Vazquez and Alvarez-Aros (2020) Currently to achieve a competitive advantage in an organization, it depends largely on technology, it is necessary to observe the technological trends in the context of change in which we live, this will allow to increase efficiency and profit (p.324). In addition, Arras, Torres and García-Valcárcel (2011), there is a need for trained personnel to respond to production needs, technological innovation and competition in global markets (p.3).

Undoubtedly, ICTs constitute a facilitating mechanism for change, by allowing access to all types of current information, making it possible to process and store data quickly. For Castellanos (2020) they constitute effective communication channels to spread or exchange information, connect with people or institutions; they also have a positive influence on the frequent updating of knowledge during university education, and represent an added value when entering the labor market. (p.173). Peña and Fuenmayor (2010) Its diffusion is verified on the basis of the continuous scientific and technological growth that floods the current society called of information and knowledge, given the intensive use of these resources for multiple activities. (p. 146)

For, Aguilera-Castro, Avila-Fajardo and Solano-Rodriguez, (2017) In the case of small and medium enterprises, the use of ICT increases, breaking managerial paradigms and linking in their different processes the use of technological

tools, which is going to allow them to reach higher levels of competitiveness. (p.103). Likewise, Gargallo and Pérez, (2009) ICTs in Social Economy enterprises are facilitators of product expansion, customer care and service, efficiency in responding to demand, relationships with suppliers and customers to achieve improvements in their competitive market position. (p.93).

ICTs in Peruvian justice administration

The reform of justice is accompanied by the support of ICTs, including the use of computers, videoconferencing for the testimony of witnesses located in other areas outside the jurisdiction of the court, among others, positively influencing these reform and modernization processes. New technologies are an essential, but not sufficient, condition for the enormous task of streamlining justice. For Muñoz, Díaz and Gallego (2020), the use of technologies is a much greater phenomenon, we are facing a real social change that includes behavioral models that allow us to doubt the validity of the current legal systems to solve the new situations that arise, and lead us to question to what extent the current law is applicable to the new scenarios created. (p.2).

ICTs are now part of the daily activities of a large part of the population, which is why they are used to satisfy certain needs of citizens in the provision of public and private services. For Guevara and Uc, (2020) ICTs also fulfill a social service function, such as the legal clinic, which has a welfare

component, since people who do not have the financial resources to hire a lawyer in Colombia can go to the headquarters of the law schools, where they operate, to be served free of charge by a student in the last two years of law school, advised by a lawyer by profession, a teacher at the university. (pp.80 - 81).

On the other hand, in Peru the use of ICTs, although it is just beginning to be used not only at the level of justice but in other areas, greatly facilitates the resolution of conflicts without the need for those involved to go to a court or tribunal from great distances. This is possible through the innovation of video-hearings, where a person can be present in a court through the Internet, using videoconferencing as an interactive communication system, which allows the simultaneous transmission of image, sound and data, enabling a full two-way communication in real time. In addition, video is included as a way of observing public hearings online. In Peru, the Lima Norte Supreme Court was the first to use the Internet in the development of video-hearings in judicial proceedings, in an adoption case, on December 15, 2006, where the virtual intervention of a defendant, resident in the United States, was witnessed. This was an unprecedented event in Peru and allowed the use of video to be regularized in other judicial hearings, thus avoiding the national and international displacement of important persons for the different cases.

Having mentioned the progress made in Peru in the use of ICTs, it is important to mention the positive impact that these tools can have on judicial administration in that country and the outlook for the future. It can be said that at a certain point in time the public authorities will promote the application of these means in the development of the activity of the jurisdictional bodies, and the documents issued by the jurisdictional bodies and by individuals through electronic and telematic means, in supports of any nature, will have full validity.

Despite the positive factors that make the use of ICTs in Peru a secure future, the current situation is not even close to what can be projected as a positive impact, as there are different challenges regarding the use of these tools in the Peruvian administration of justice. In Peru, the government faces several problems when implementing Information and Communication Technologies, since factors such as the scope of the projection of technology, poverty and population isolation limit in many ways that they are applied, although they facilitate the life of the population in general. The World Bank points out that the distribution of the population also poses a challenge for the effectiveness of the application of information and communication technologies. Peru is a country in which, according to the World Bank database, 22% of the population (including indigenous communities) currently lives in rural areas and most public services are dysfunctional.

All of the above factors demonstrate that the reach of technology in Peru is somewhat limited by the regions that make up the country's demographics, with families who do not even know how to use the Internet and some who cannot even obtain it because of their poverty. Information and Communication Technologies in the administration of justice should be applied throughout the nation, thus guaranteeing the facilities they offer to the general population regardless of their economic and ethnic condition.

Since the implementation of ICT is undoubtedly one of the doors of the future in improving assistance and help for citizens, it is important to offer different recommendations and improvements to the problems previously mentioned, so that Peruvians can be closer to participation and communication in their justice system and with their public institutions, obtaining the way to access content, services and applications streamlining the processes of justice.

In conclusion, in Peru, as in several developing countries, there are various advances in the use of ICTs in the administration of justice, but they do not have a real impact on the population due to the lack of importance of these technologies in families, making it necessary to increase the use of Information and Communication Technologies in the most everyday aspects of the Peruvian population so that they can also be used in important issues such as

justice. The outlook for the use of ICTs in Peru in the administration of justice is positive, but the government needs to accelerate their use so that they really become important tools available to all, without distinction.

To develop the present work, the mixed approach was used, linking quantitative and qualitative data, and triangulation was carried out in order to have the possibility of finding different paths to lead to the broadest understanding and interpretation of the phenomenon under study. For the qualitative / inductive approach, the initial immersion in the field, contextual interpretation, flexibility, questions, data collection, and for the quantitative / deductive approach, surveys, experimentation, patterns (relationships between variables), questions and hypotheses, and data collection were carried out.

The scope of the project is to evaluate the use of information and communication technologies (ICT) in the modernization of the Justice Administration System in Peru, considering the thirty-three (33) Superior Courts of Justice that exist nationwide.

The specific aspects covered by the research refer to the use of videoconferencing systems, biometric readers and the electronic notification system recently implemented in the Peruvian judicial system, by the decentralized justice bodies that are the subject of this study (Superior Courts of

Justice). Since the population to be surveyed is less than 100 collaborators, the sample is considered equal to the total population with 99 collaborators.

Application of new technologies

The Information and Communication Technologies (ICT) variable, according to the survey, reached a poor level of 26.26% and a regular level of 73.74% in the different judicial districts of the Peruvian Judicial Branch. The results were also obtained for the variable modernization of the justice administration system according to the survey, the regular level reached 100% in the different judicial districts of the Peruvian Judicial Branch.

The correlation between: information and communication technologies (ICT) and modernization of the justice administration system in the various judicial districts of the Peruvian judiciary. Spearman's Rho was determined at 0.785, this result shows that there is a high relationship between these variables, with a significance level of $p < 0.01$, which rejects the null hypothesis and accepts the alternative hypothesis. It is concluded that there is a high correlation between the following variables.

The level of correlation between the use of Information and Communication Technologies (ICT) contributes positively to the modernization process of the Justice Administration

System in Peru 2014-2017. Determining the Spearman's Rho of 0.700, 0.715, 0.780 respectively, this indicates that a high relationship was found, being the level of significance, $p < 0.01$, with which the null hypothesis is rejected and the alternate is accepted. It is concluded that there is a high relationship.

In the research presented "The use of information and communication technologies in the modernization of the justice administration system in Peru", it was obtained that the relationship according to Spearman's Rho is ($r = 0.785$ and $p = 0.000$), indicating a high level of correlation between the variables under study.

The result of the study gave very important data which allow to continue with the Program of Modernization of the Justice Administration System, allowing with the application of new technologies in the diverse processes that demand the administration of justice in Peru. The application of these electronic systems will make possible the automatic information, will reduce the amount of papers and documents in the offices of the Judicial Power and the possibility of their misplacement. The future perspective is that the entire legal process can be carried out through communication networks, including biometric signatures, increasing transparency in the institutions of justice.

In the Peruvian case, an important precedent in the progress of the implementation of Electronic Government in the Administration of Justice is undoubtedly the enactment of Law No. 27419, known as the "Law on Notification by Electronic Mail", which enables a new means of notification through the use of electronic mail. It is worth mentioning that there is a National Informatics System in the country, led by the National Office of Electronic Government and Informatics. This office has developed, in coordination with different entities, the Plan for the Development of the Information Society in Peru. The purpose of the National Informatics System is to ensure that informatics activities are developed in an integrated, coordinated and rationalized manner and under common regulations. In addition, its objectives are to standardize official information technology activities, to coordinate, integrate and rationalize official information technology activities, and to promote training, research and development of information technology activities.

Conclusions

The use of Information and Communication Technologies (ICT) contributes or has a positive or significant relationship ($Rho = 0.785$) ($p = 0.000$) with the process of modernization of the Justice Administration System in Peru, the proposed hypothesis could be affirmed and its participation and relationship is high. The correlation of videoconferencing systems also contributes significantly to the process of

modernization of the justice administration system in Peru, which seeks to provide courtrooms and courts of the Judicial Branch with facilities for the development of hearings through the implementation of videoconferencing rooms in the selected judicial headquarters and penitentiary establishments. It is expected that this modern equipment will contribute to reducing the procedural burden and costs by reducing the physical transportation of court personnel to the penal establishments where persons with judicial proceedings are being held. With respect to the correlation of electronic notifications, it contributes significantly to the modernization process of the Justice Administration System in Peru. Through electronic notifications applied to the administration of justice, the litigants of a process will be able to find out the content of the judicial resolutions, from the comfort of their home, office or from a public Internet booth, without the need to travel to the headquarters or domiciles of the proceedings and without the obligation to buy notification slips; in other words, saving time and money. In relation to the biometric readers, it contributes significantly to the modernization process, where it is evident that the benefits achieved reflect what was proposed in the objectives, among them we appreciate that the Judicial Branch consults the Biometric Gateway System (RENIEC), obtaining the identity, the Data Sheet and photograph of the procedural party, as well as the data validated by the National Registry of Identification and Civil Status (RENIEC) of the procedural

parties in the systems of the Judicial Branch, generating a decrease in inconsistencies in the records of the procedural parties. This reality allows to have the security of the signer's identity, reducing considerably the queues in the attention of the signatures of the free convicts among others such as litigants, witnesses, referrals, of a judicial process.

It has been proven that information and communication technologies contribute significantly to the Modernization of the Administration of Justice to face the many contemporary challenges it faces. However, it should be noted that it is not enough to focus on ICTs, but rather on the use of these technologies together with organizational and cultural change and new methods to improve justice services in Peru. In short, the use of ICTs through e-Government is not the result of introducing new world trends into the country, but rather the application of a new line of national development that maintains the main advances in modernity and improvement between the government and its actors.

References

- Aguilera-Castro, A., Avila-Fajardo, P. and Solano-Rodriguez, O. (2017) Contribution of information and communication technologies to the productivity of SMEs in Santiago Cali. *Entramado*. 13 (1), p. 102-11

<http://dx.doi.org/10.18041/entramado.2017v13n1.25106>

- Arras, A., Torres, C., García-Valcárcel, A. (2011) Information and Communication Technologies (ICT) competencies of university students, *Revista Latina de Comunicación Social*. DOI: 10.4185/RLCS-66-2011-927-130-152
- Benfeld, J. (2020). Legal profession and information and communications technologies: A necessary discussion. *Revista chilena de derecho y tecnología*, 9(2), 5-31. <http://dx.doi.org/10.5354/0719-2584.2020.53309>
- Castellanos, J. (2020), La innovación docente y las TIC desde la perspectiva de la docencia del derecho. *Revista pedagogía universitaria y didáctica del derecho*. 7(2), 167-184. DOI 10.5354/0719-5885.2020.57150.
- Cerdá, J. (2020) The modernization and digital transformation of the Administration of Justice: the role of the General Council of the Judiciary. *Journal of Law and Political Science Studies*. 31. DOI 10.7238/IDP.V0I31.3239.
- Gargallo, A. and Pérez, J. (2009), El papel de las tecnologías de la información y la comunicación en las empresas de economía social, *REVESCO. Revista De Estudios Cooperativos*, 97, 90 - 116 <https://revistas.ucm.es/index.php/REVE/article/view/REVE0909130090A/18770>

- Guevara, J. and Uc, C. (2020). Implementation of information and communication technologies in legal clinics in Colombia: An approach to the state of the art. *Revista chilena de derecho y tecnología*, 9(2), 73-104. DOI: 10.5354/0719-2584.2020.54794
- Herrera-Tapia, J. and Navia, M. (2020), Information technologies: Ally and support for organizations in a world in crisis. *RISTI: Revista Ibérica de Sistemas e Tecnologias de Informação*. 29. <https://www.proquest.com/scholarly-journals/las-tecnologías-de-la-información-aliado-y/docview/2394536702/se-2?accountid=37408>
- Muñoz, L., Díaz, E. and Gallego, S. (2020), The responsibilities derived from the use of information and communication technologies in professional health practice. *Annals of Pediatrics*. 92 (5), 307.e1-307.e6. <https://doi.org/10.1016/j.anpedi.2020.03.003>
- Peña, D. and Fuenmayor, A. (2010), Information and communication technology (ICT) tools that support access to the labor market for people with visual functional diversity. *Unica Journal of Arts and Humanities*. 11(3). 143 - 155. <https://www.redalyc.org/pdf/1701/170121969006.pdf>
- Valencia, F. , Marulanda, C. , and López, M. (2018). Information Technology Government. Use and Practices in the Public Entities of the Coffee Triangle,

in Colombia. *Information Technology*, 29(3), 249-256.
<https://dx.doi.org/10.4067/S0718-07642018000300249>

Villegas, L., Walle-Vazquez, M. and Alvarez-Aros, E. (2020),
Use of information technologies in decision-making
processes: a bibliometric analysis, *Revista Venezolana
de Gerencia*. 12(3). 323 - 341
<https://www.redalyc.org/pdf/993/99317168005.pdf>

Implementation strategies of digital government towards the modernization of the public university in Peru

Gilberto Carrión-Barco
Godofredo Pastor Illa-Sihuincha
Ricardo Edmundo Ruiz Villavicencio
Norma Alderete Campos
Griselda Gladys Vera Nuñez

Introduction

Today, governments are looking for ways to use Information and Communication Technologies (ICT) to increase the performance of public administration and its impact on society in order to renew public services. Stable, Alvarez, Bernal, and Sam-Anlas, (2020) through the creation of websites where citizens seek answers to questions related to public management and citizen services. One of the axes of this important change is the implementation of Electronic Government (EG), which has become an essential element in the information society. (p. 20). Throughout the last decades worldwide, e-government has been gaining importance, especially in developed countries such as South Korea, Australia and Denmark,

which are among the first countries to implement it. Morales-Urrutia, Morales-Urrutia, Simbaña-Taípe and Guerrero-Velástegui (2020) Studies reveal that the more investment a country makes in government institutions will denote greater innovation and application of digital tools, in order to provide quality service to society, (p.219).

When analyzing the causes that lead to the success or failure of digital government, cutting-edge research is often divided into two main areas: (i) implementation of these initiatives by government agencies and (ii) their adoption by citizens, as some of the most important. Each of these two perspectives has its own concepts, measures and theoretical models. Gil-Garcia and Flores-Zúñiga, (2020) This separation becomes significant when trying to have a comprehensive understanding of the success of digital government and when facing practical problems, as factors affecting both governments and citizens contribute to the success or failure of digital government initiatives (p.1).

As mentioned by Lee-Geiller and Lee (2019) due to the e-commerce revolutions, around the world governments have earmarked similar principles and technologies to governments by opening up their websites for more efficient information publication and more effective public service delivery. While a government website is an important venue for citizen participation in public affairs

and decision-making processes, early GE practices tended to overlook democratic purposes by focusing on the features of e-commerce and information systems. (p. 1)

Mensah (2020) mentions that in Latin America, Uruguay is the country with the best performance in GE. ranking 34th according to the e-GDI (e-Government Development Index) this country having a developing economy stands out in this part of the continent, especially for the fact of having applied public policies that implement the digitization of processes and services in government entities since 2016. (p. 1) Alvarado, Cevallos, Moran and Preciado (2019) In the Peruvian case, in relation to the quality of the information presented by the 25 regional governments through their websites, it is found that Ucayali, Piura, Junín, Cajamarca, Apurímac and La Libertad have obtained high weightings ranging from 25.4% to 23.73%; while other regions such as Amazonas, Ancash and Moquegua their results are below 17.8% (p.110).

In the local context, specifically in the National University Pedro Ruiz Gallo (UNPRG), which presents as a perspective the comprehensive training of professionals in the northern region of Peru that contribute to social development and welfare of society, to comply with the stipulated it is necessary to have clear policies that go hand in hand with the transparency of information for which it is necessary to develop a set of strategies for implementing digital

government to ensure efficiency, administrative simplification, information security, interoperability, data protection and usability of a single and reliable portal. Therefore, the objective of this research work is to develop strategies to implement the implementation of digital government that allows the modernization of the UNPRG towards an open and responsible governance with the university community.

Use of ICT's in e-Government

The modernization process of public management is based on the model of management for results at the service of citizens and on a process of change management. Thanks to digital transformation, state entities have had to reorganize their working methods and strategies to improve the efficiency and quality of services, save costs, have a dynamic of constant technological changes and improve the relationship between the entity/administration and customers/citizens. Therefore, Fernández-Portillo, Sánchez-Escobedo, Jiménez-Naranjo and Hernández-Mogollón (2015) state that e-commerce allows rethinking the objectives of the organization with a strategic approach, providing new products and markets, new distribution channels, reducing the cost of business activities and benefiting the opening of new markets. (p.106) Sandoval-Almazan (2019) Open Government is understood as a technological platform, it is part of a set of capabilities to boost governance. (p. 116).

For, Dawes (2013) Digital government encompasses all public sector actions through the use of ICTs, such as government operations, public services, policy making and democratic processes. (pp. 53-54). For Tarapanoff (in Suaiden, 2016, 10) Technology is a transcendental component for changes, especially the use of technology over information, speed, effectiveness and quality institute decisive elements of competitiveness.

In relation to the theoretical bases, the use of ICTs in poverty reduction can be divided into two types: for-profit and not-for-profit. The first type includes online services offered by the State to citizens, such as distance education and e-learning. In the second type are the services proposed by the private sector or their consolidation, such as microfinance or support for the creation of new businesses. Pirni, Giampellegrini and Raffini (2019) mention that the Digital Agenda for Europe (DAE) identifies the resources needed to face the economic crisis among the opportunities coming from the growth of the digital economy, inspired by the growth of ICT use in all fields of daily life: from business to work, from play to communication and, in particular, in free self-expression. This requires the completion of the digital single market both in terms of infrastructure allowing fast connection, trust and security of the system; it also requires

strengthening the digital skills of citizens and the interoperability of systems. (p. 474)

It is essential to have a State that responds to the interests and objectives of society, a modern State, oriented to the achievement of results and at the service of the people, that ensures the welfare and prosperity of the population. The modernization of the State is a permanent process aimed at achieving a more efficient, effective, transparent and inclusive public administration, focused on achieving concrete results that positively change the quality of life of the population.

Digital government towards the modernization of the public university in Peru

Bounabat (2017), mentions that the changes brought about by globalization have been induced by related networks, markets and information systems. The resulting knowledge revolution provokes governments to implement Government Systems (e-Government) to efficiently cope with the growing requirements of citizens and organizations in an increasingly dynamic environment. (p.8) For Seguí, García, Romero and Villalonga, (2008) digital government emerges as a tool for the fulfillment of corporate social responsibility. On the other hand, the knowledge society has in the information and communication technologies (ICT) one of its main

characteristics. (p. 158). González-Bustamante, Carvajal and González (2019) These major changes towards an information society have had an impact on the behavioral patterns of individual and collective actors, in the different types of organizations, whether public or private, which have begun to relate and develop around the generation, processing and transmission of information. (p. 98).

With regard to digital government, this is given by the tactical use of data in public administration using digital technologies for the foundation of public value, developing in an environment made up of public sector actors, citizens and other stakeholders, who help with the implementation of initiatives and design actions, creation of digital services and content, confirming a great respect for the rights of citizens and people within the digital ecosystem. In the same line, digital government is a good opportunity to increase the welfare of citizens by invigorating public support from a State that, through the use of ICTs, is much closer and smarter.

Penalva-Verdù and Català-Oltra (2020) There are few studies on e-governments in smaller municipalities that deal with their models and phases of development, and those that integrate the identity dimension of expression of local community life are nonexistent, which is why it is essential to develop their e-Governments, where with

digital social networks, a virtual place is provided, so as to communicate the image that the government aspires to transmit, including an extensive relationship environment that involves symbolic exchanges, self-presentation, political positioning and marketing. (p.24).

This research is justified, since through the use of ICT and through these the digital government in the UNPRG will improve internal processes, provide transparent information, with bureaucratic efficiency and giving confidence in the citizenship, in this way there will be a better management and integration of systems and interoperable computer applications of the entity, allowing to offer the community better services and information. It is also vital that the UNPRG is aligned to the Digital Government Law, which determines the governance framework of digital government.

The research was of a propositional type with a descriptive scope and a quantitative approach, the design used was non-experimental cross-sectional, the population consisted of administrative workers of the UNPRG, this universe of workers totals 186 public servants of the entity. The sample consisted of administrative workers of the Central Offices of Degrees and Titles, Human Resources, Institutional Image, General Secretary, Information Infrastructure and Admission of the UNPRG, being a total

of 39 administrative workers, these being those who directly influence the digital government due to the processing and generation of information for the university.

The technique used was the survey and the data collection instrument used was the questionnaire, which was structured with 14 items with Likert-type response options, it was developed through an online digital tool and its application was carried out virtually in a synchronous manner, with which the required information was obtained from the administrative servers of the main Central Offices of the UNPRG. The information obtained was deposited in a Microsoft Excel spreadsheet and then processed by means of the statistical software SPSSv24, with this software the different levels presented by the variable Modernization of the Public University and each of its dimensions (Labor Commitment, ICT Application, User Service) were obtained. Finally, the reliability of the instrument was measured with the Cronbach Alpha statistic through the SPSSv24 statistical software. The reliability measure yielded a value of 0.744, which indicates that the instrument is quite reliable.

Perception of modernization levels

A descriptive analysis of the data collected was carried out. The survey applied to 39 public servants of the main central offices of the UNPRG allowed us to know the perception of the levels of modernization of the public university,

obtaining results both in a comprehensive manner and in each of its dimensions, which are detailed below in the tables of frequencies and percentages, providing a clear vision of the difficulties they present and the aspects to improve.

Table 2 *Level, frequency and percentage of the variable Modernization of the public university.*

Level	DV: Modernization of the Public University	
	Frequency (fi)	Percentage (%)
Deficient	3	7.7%
Regular	30	76.9%
Efficient	6	15.4%
Total	39	100.0%

Source: Own elaboration

Table 1 shows the results obtained for the variable modernization of the public university, where the preponderant level is regular with 76.9% of the administrative workers of the UNPRG, while 15.4% indicate that the modernization of the public university is efficient.

The results for each of the dimensions of the variable Modernization of the public university are shown in Table 2, which shows that most of the administrative workers of the UNPRG rate their work commitment, the application of

ICTs and user service as regular, evidencing the aforementioned problem.

Table 3 *Levels and percentages of the dimensions of the variable Modernization of the public university.*

Level	Percentage (%)		
	Labor commitment	ICT application	User service
Deficient	30.8%	15.4%	23.1%
Regular	56.4%	64.1%	66.7%
Efficient	12.8%	20.5%	10.3%
Total	100%	100.0%	100%

Source: Own elaboration

In relation to the work commitment dimension, the respondents indicate that 56.4% of the UNPRG's administrative workers rate their commitment to the organization as regular, while 30.8% indicate that their commitment to the organization is deficient. Regarding the application of ICT in the university, 64.1% of those surveyed stated that they were at a regular level and 20.5% rated it as efficient. Finally, the user service dimension was rated as deficient by 23.1% of respondents and as fair by 66.7%.

In light of the results obtained, strategies were developed to launch the implementation of digital government to

modernize the UNPRG towards open and accountable governance with the university community in the region and the country.

The proposal aims to bring the UNPRG closer to citizens through ICTs with suitable, participatory and inclusive access, which will strengthen digital government, ensuring its interoperability and access to data in order to improve user services.

Through the development of strategies in the implementation of digital government, it is possible to reflect on the regulations related to the subject, while the results of the survey applied to administrative workers of the UNPRG made it possible to demonstrate the limited training of workers in the use of ICT, lack of knowledge in the use of free software applications and other computer tools to do a better daily work, as well as ignorance of the regulations related to digital government.

Also, it was observed that the entity's employees have little commitment to customer service, which may be due to a lack of knowledge of good practices and customer treatment agreements, or may be due to a lack of training on the part of the authority on duty.

Among the strategies to be implemented are the following:

- Engage managers for the implementation of digital governance at the university.
- Formulate policies to promote the appropriate use of ICTs in the university faculty.
- To provide a high quality educational service using the benefits and capabilities of ICT.
- Promote the participation of the university community in state-funded innovation project competitions in order to generate resources to improve the university's information technology infrastructure.
- Engage managers, teaching staff, administrative staff and students to collaborate and cooperate with the licensing and accreditation of the University.
- Develop sustainable public investment projects for the construction, implementation and adaptation of environments and laboratories for university education.
- Promote best practices and put in place policies to retain skilled IT personnel.
- Efficient transparency in the management of the university's public budget.

The current state of user services at the UNPRG is implemented without considering the current regulations (Law ^{No.}27806 on Transparency and Access to Public Information, 2003) since the entity is experimentally

managing access to information and the implementation of digital government; for which 23.1% of the administrative staff considers this service to be deficient and 66.7% considers it to be fair, which results in a negative image for the institution.

Conclusions

The results of this study will help formulate strategies to implement digital government in UNPRG, so it is recommended the diagnosis made in the Central Offices of Degrees and Titles, Human Resources, Institutional Image, General Secretary, Computer Infrastructure and Admission of the UNPRG, through the data collection instrument, it is corroborated that the administrative staff is not prepared to offer a good service to the user mainly due to lack of commitment to the entity to perform their work. The adequate application of the strategies in the implementation of digital government in the UNPRG, requires in large part the commitment and predisposition of the directors, teaching staff and administrative staff, therefore, it is necessary to work in a structured and united manner to achieve the institutional objectives. It is necessary to estimate the possible impact of the proposal, the updating of the transparency portal, the implementation of online services and all the technology put at the service of the user, if necessary using improvement actions in favor of the university community.

References

- Alvarado A., Cevallos V., Moran V. and Preciado O. (2019). Peruvian e-government model: citizen services in regional government portals. *Visionario Digital*, 3(3), 100-116.
<https://doi.org/10.33262/visionariodigital.v3i3.656>.
- Alvarez, I. and Marín, R. (2020) E-commerce and global production networks [Comercio electrónico y redes de producción global] *Ekonomiaz*, (98), pp. 278-295.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85104254348&partnerID=40&md5=ba2166eedd6edf8c4433be703324606a>
- Bounabat, B. (2017). From e-Government to digital Government : Stakes and Evolution Models. *Electronic Journal of Information Technology*, 10, 8-21.
<http://www.revue-eti.net/index.php/eti/article/view/117>
- Penalva-Verdù and Català-Oltra, (2021). The Use of Languages by Valencian Business-to-Consumer Service Companies in their Telematic Communications. *HERMES - Journal of Language and Communication in Business*, (61), 23-40.
<https://tidsskrift.dk/her/article/view/127913>
- Dawes, S. (2013). Advances in e-government: The connection between practice, knowledge and research. *Public Management and Policy*, 22, 49-67.

http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-10792013000400002&lng=es&tlng=es.

Fernández-Portillo, A. , Sánchez-Escobedo, M. , Jiménez-Naranjo, H. , and Hernández-Mogollón, R. (2015). The importance of Innovation in e-Commerce. *Universia Business Review*, (47),106-125. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84942093843&partnerID=40&md5=f516fe1a28a74306279c957830798108>

Gil-Garcia, J., and Flores-Zúñiga, M. (2020). Towards a comprehensive understanding of digital government success: Integrating implementation and adoption factors. *Government Information Quarterly*, 37(4), 101518. <https://doi.org/10.1016/j.giq.2020.101518>

González-Bustamante, B., Carvajal, A. and González, A. (2019), Determinants of e-government in municipalities Evidence from the Chilean case, *Centro de investigación y docencias económicas*, <http://dx.doi.org/10.29265/gypp.v29i1.658>

Lee-Geiller, S., and Lee, T. (David). (2019). Using government websites to enhance democratic E-governance: A conceptual model for evaluation. *Government Information Quarterly*, 36(2), 208-225. <https://doi.org/10.1016/j.giq.2019.01.003>

Mensah, I. (2020). Impact of Government Capacity and E-Government Performance on the Adoption of E-

Government Services. *International Journal of Public Administration*, 43(4), 303-311.
<https://doi.org/10.1080/01900692.2019.1628059>

Morales-Urrutia, X., Morales-Urrutia, D., Simbaña-Taípe, L., and Guerrero-Velástegui, C. (2020). E-government performance from a global comparative perspective. *Revista Iberica de Sistemas e Tecnologias de Informacao*, 29, 214-224. DOI: 10.17013/risti.29.0.

Pirni, A., Giampellegrini, P. and Raffini, L. (2019) "Digital transformation and egovernment. For a research agenda on the Liguria Region". *OBETS. Journal of Social Sciences*, 14(2): 471-490.
doi:10.14198/OBETS2019.14.2.07.

Sandoval-Almazan, R. (2019), Open government and transparency in Mexico: 2015-2018 longitudinal study, *Innovar Magazine*, 29 (74). 115-131.
<https://doi.org/10.15446/innovar.v29n74.82097>.

Seguí, E., García, G., Romero, A., and Villalonga, I. (2008). Innovation in the governance of Spanish rural savings banks: evaluation of corporate governance. *CIRIEC-España, Revista de Economía Pública, Social y Cooperativa*, (60),155-178. http://ciriec-revistaeconomia.es/wp-content/uploads/6006_Segui_et_al.pdf

Stable, Y., Alvarez, E., Bernal, L., & Sam-Anlas, C. (2020). State of web accessibility of e-government portals in Latin America. *Libraries: Annals of Research*, 16(1), 7-

22.<http://revistas.bnjm.cu/index.php/BAI/article/view/44/41>.

Suaiden, E. (2016). The future of information systems in an open government regime and transparency law. *Ibersid: Revista De Sistemas De Información Y Documentación*, 10(2), 45-51. <https://www.ibersid.eu/ojs/index.php/ibersid/article/view/4386>

Fernando Isaías Aguilar Padilla
Universidad César Vallejo, Lima, Perú,
dr.mba.fernandoaguilar@gmail.com
ORCID:0000-0002-0634-0028

Tito Orlando Chunga Diaz
Universidad César Vallejo, Lima, Perú,
tchunga@ucvvirtual.edu.pe,
ORCID:0000-0003-2933-6715

Joel Alanya-Beltran
Universidad Tecnológica del Perú, Lima,
Perú,
c18121@utp.edu.pe,
ORCID:0000-0002-8058-6229

Adolfo Cacho Revilla
Universidad Nacional Toribio Rodríguez de
Mendoza, Chachapoyas,
adolfo.cacho@untrm.edu.pe,
ORCID:0000-0001-8335-4274

Moraima Angelica Lagos Castillo
Universidad Nacional Federico Villarreal,
Lima, Perú,
mlagosc@unfv.edu.pe,
ORCID:0000-0003-4304-3134

Héctor Raúl Santa María Relaiza
Universidad César Vallejo,
hsantamariar@ucvvirtual.edu.pe
ORCID:0000-0002-4546-3995

Amado Fernández-Cueva
Universidad César Vallejo,
fcuevaa@ucvvirtual.edu.pe,
ORCID:0000-0002-5307-3583

María Isabel Denegri Velarde
Universidad César Vallejo, Lima, Perú,
mdenegrive11@ucvvirtual.edu.pe
ORCID:0000-0002-4235-9009

Lida Ivonne Lima Cucho
Pontificia Universidad Católica del Perú,
Lima,

llima@puccp.edu.pe,
ORCID:0000-0001-7958-7593

Norma Alderete Campos
Universidad César Vallejo,
nalderete@ucvvirtual.edu.pe,
ORCID:0000-0002-3754-7196

Mercedes Alejandrina Collazos Alarcón
Universidad César Vallejo,
mcollazos@ucv.edu.pe,
ORCID:0000-0002-5656-2243

Miriam Corina Castro Rojas
Universidad Nacional Federico Villarreal,
mcastror@unfv.edu.pe,
ORCID:0000-0003-3547-9026

Kony Luby Duran Llaro
Universidad César Vallejo, Trujillo, Perú,
Kony27_teacher@hotmail.com,
ORCID:0000-0003-4825-3683

Deny Giovanna Calvo De Oliveira
Universidad César Vallejo,
doliveira@ucvvirtual.edu.pe
<https://orcid.org/0000-0002-8907-676X>

Luis Humberto Bejar
Universidad Católica Santa María de
Arequipa,
lbejar@ucsm.edu.pe,
ORCID:0000-0002-9579-8785

Helga Ruth Majo Marrufo
Universidad César Vallejo, Lima, Perú,
hmajo@ucv.edu.pe,
ORCID:0000-0002-5557-4269

Rosa Ysabel Bazan Valque
Universidad César Vallejo, Chiclayo, Perú,
rosa.bazan@untrm.edu.pe,
ORCID:0000-0002-1674-6136

River Chávez Santos
Universidad César Vallejo, Chiclayo, Perú,
river.chavez@untrm.edu.pe,
ORCID:0000-0001-7946-2846

Calderón Chávez Roberto Gabriel Rolando
Universidad César Vallejo, Lima, Perú,
branding.btl@gmail.com,
ORCID:0000-0002-3427-5163

Flórez Ibarra Jannett Maribel
Universidad César Vallejo, Lima, Perú,
jflorez9@yahoo.es,
ORCID:0000-0003-4166-6733

Ancaya Martínez María del Carmen Emilia
Universidad César Vallejo, Lima, Perú,
maryancaya@gmail.com,
ORCID:0000-0003-4204-1321

Pauta Guevara Ricardo Arturo
Universidad César Vallejo, Lima, Perú,
rpauta_35@hotmail.com,
ORCID:0000-0002-1084-4835

Freddy Antonio Ochoa-Tataje
Universidad César Vallejo, Lima, Perú
fochoa@ucv.edu.pe,
<https://orcid.org/0000-0002-1410-1588>

Ena Elizabeth Cuba Mayuri
Universidad Privada César Vallejo, Lima,
Perú
enacuba@hotmail.com,
<https://orcid.org/0000-0002-3096-632X>

Zulema Daria Leiva Bazan
Universidad Tecnológica del Perú, Lima,
Perú
c22336@utp.edu.pe,
<https://orcid.org/0000-0002-0416-4526>

Yolvi Ocaña-Fernandez
Universidad Nacional Mayor de San
Marcos,
yocanaf@unmsm.edu.pe,
ORCID:0000-0002-2566-6875

José Antonio Carbonel Arribasplata
Universidad César Vallejo, Lima, Perú,
carbonel1980@yahoo.com,
ORCID:0000-0001-5908-4550

Arístides Alfonso Tejada Arana
Universidad César Vallejo, Lima, Perú,
atejadaa@ucvvirtual.edu.pe,
ORCID:0000-0002-8905-3082

José Antonio La Cotería Vega
Universidad César Vallejo, Lima, Perú,
calidadyexcelencia@gmail.com,
ORCID:0000-0002-5365-8653

Olinda Sabina Reyes Colquicocha
Universidad César Vallejo, Lima, Perú,
oreyesc@ucv.edu.pe,
ORCID: 0000-0002-6694-1183

Zuly Cristina Molina Carrasco
Universidad César Vallejo, Chiclayo, Perú,
mcarrascozc@ucvvirtual.edu.pe,
Orcid: 0000-0002-5563-0662

Sergio Alex Alvarez-Gutierrez
Universidad Peruana de Ciencias
Aplicadas, Lima, Perú,
pcmesalv@upc.edu.pe,
ORCID: 0000-0002-1388-7363

Kelly Myriam Jiménez de Aliaga
Universidad César Vallejo, Lima, Perú,
kmjimenez@ucv.edu.pe,
ORCID:0000-0002-8959-265X

Roque Juan Espinoza Casco
Universidad César Vallejo, Lima, Perú,
roquespinozac@gmail.com,
ORCID:0000-0002-1637-9815

Jeidy Gisell Panduro Ramirez
Universidad Tecnológica del Perú,
C21289@utp.edu.pe,
ORCID:0000-0001-9512-4329

Benjamín Roldan Polo Escobar
Universidad Toribio Rodríguez de
Mendoza, Amazonas, Perú.
benjamin.polo@untrm.edu.pe,
<https://orcid.org/0000-0001-5056-9957>

Sara Edith Castillo Olsson
Universidad César Vallejo, Lima, Perú,
edithcastilloolsson@gmail.com,
<https://orcid.org/0000-0001-5094-3347>

Martin Albino Solis Tipian
Universidad César Vallejo, Lima, Perú,
msolist@ucv.edu.pe,
ORCID:0000-0003-3748-8479

Francis Esmeralda Ibarguen Cueva
Universidad César Vallejo, Lima, Perú,
francisibarguen@gmail.com,
ORCID:0000-0003-4630-6921

Osmart Raul Morales Chalco
Universidad Nacional del Callao,
ormoralesc@unac.edu.pe,
ORCID:0000-0002-5850-4899

Gilberto Carrión-Barco
Universidad Tecnológica del Perú,
C14051@utp.edu.pe,
ORCID:0000-0002-1104-6229

Godofredo Pastor Illa-Sihuincha
Universidad César Vallejo, Lima, Perú,
gillas@ucvvirtual.edu.pe,
ORCID:0000-0002-2532-3194

Ricardo Edmundo Ruiz Villavicencio
Universidad César Vallejo, Lima, Perú,
reruizvi@ucvvirtual.edu.pe,
ORCID:0000-0002-1353-1463

Griselda Gladys Vera Nuñez
Universidad Privada San Juan Bautista,
Lima, Perú, griselda.vera@upsjb.edu.pe,
ORCID: 0000-0002-4021-7621

ISBN: 978-9942-33-479-4



CAEIN

CENTRO DE ALTOS ESTUDIOS
INTERNACIONALES