# The development of scientific training in Peru

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Compilers

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# Prologue

## THE DE VELOPMENT OF RESEARCH TRAINING IN PERU

Training for research and technological innovation are main pillars in the competitive development and socioeconomic growth of a country, where universities are of great importance, since they promote education and updating of knowledge, development of talents, science, technology and research; as a consequence, this will achieve a country with qualified professionals for its own benefit as a society. Research has occupied the attention of the scientific society for being a guide for obtaining skills, communicative competences and its implication in professional growth. (Pompa-López and Pérez-López, 2018).

Education is fundamental for the construction of a knowledge society with a high impact on a country's economy; it allows the acquisition of competencies to train a qualified and specialized labor force that is capable of evaluating and processing events with scientific rigor, as well as of proposing solutions to the main problems that impede a country's socioeconomic development. Hence the value of scientific and technological research, innovation and the promotion of the State-university-industry linkage.

In our country there is a limited development of research and technology with respect to Latin America, that is why the National Council of Science, Technology and Technological Innovation (Concytec) has been promoting the development of scientific publications such as research projects, experimental development or technological innovation, whether scientific articles, books or book chapters, also grants subsidies for applied research and technological development.

The Peruvian university has had to make changes for continuous improvement in education, this thanks to the University Law (No. 30220) enacted in 2014, which prioritizes the development and promotion of research, where it was stipulated that Peruvian universities would be evaluated for licensing, one of the requirements was that teachers are researchers, have equipment, infrastructure and economic resources for sustainable development and promotion of research.

In this sense, the new law also stipulates that in order to obtain professional titles and academic degrees it is a requirement to have carried out and approved a research project or thesis, which obliges universities to promote and manage strategies for the education, training and high specialization of their teaching staff, as well as to promote the career of research professors. It also implies allocating greater economic resources to achieve not only licensing and institutional

accreditation, but also a sustainable increase in scientific production for the positioning of the university nationally and internationally.

The Peruvian university needs to transform itself by creating research bodies, prioritizing the generation of alliances with national and international institutions that are benchmarks for their development in research and innovation, in order to take advantage of their experience both in management and in the development of strategies for education, training and capacity building in innovation, development of teachers, researchers in training and students. It is also essential to review and evaluate the academic programs and the contents taught in the subjects related to research training, as well as to ensure that the teachers in charge of teaching them are the most suitable for this purpose.

The Peruvian university has the great challenge of evolving, with the speed of transformation demanded by current times, and the obligation to build itself as an institution that trains highly specialized professionals with the capacity to solve the main problems that affect the economic and social development of the country. In addition, it must contribute to the generation of humanistic and scientific knowledge, technological development and technological innovation in a sustainable manner, so a profound change must be carried out that allows not only to comply with the legal requirements to provide a quality educational service, but to achieve the

recognition of society for its quality and contribution to the benefit of the society to which it owes.

The aim of this book is to describe and analyze the situation of research and development in Peru, particularly in higher education and the response of this sector to the current pandemic so that education became remote where information and communication technologies were key players in pedagogy as a component of research, knowledge, communication, cooperation, collaboration and simulation of environments and different circumstances, however the digital divide became evident in our country. Technology was not only used in the education sector, but in all sectors for teleworking and other services, therefore the use of artificial intelligence (AI) in public management is mentioned.

It also covers topics on leadership in the quality of teacher human relations, organizational development, work environment in educational management, management skills and job satisfaction in basic education, videoconferencing as a means of strengthening learning in university students in Peru, leadership in public management and the reform of the electoral system and political representation in Peru and Latin America.

Similarly, the pandemic forced the health system to make rapid changes, this health emergency has highlighted the

shortcomings of the health sector in Peru and has had a significant impact on all institutions, public and private, therefore the topic on the management of outpatient contact points in times of Coronavirus is developed, This paper describes the strategies implemented at the points of care that made it possible to attend the insured population affected by the coronavirus and at the same time provide preventive care aimed at reducing the gap in outpatient care, with the support of remote work such as teleconsultation and telemonitoring. These actions made it possible to attend the most vulnerable population whose care, treatment and operations were cut off.

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## 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 is 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 < **α** ), 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 $\alpha$ 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 | gl | Sig. | 95% confidence interval | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower limit | Upper limit |
| Threshold | [Y_Educational_Management = 1] | -3,802 | ,750 | 25,712 | 1 | ,0000 | -5,271 | -2,332 |
| | [Y_Educational_Management = 2] | -,459 | ,512 | ,803 | 1 | ,3770 | -1,462 | ,545 |
| Location | [X1_Organizational_Development=1] | 18,371 | 1,143 | 258,428 | 1 | ,0000 | 16,131 | 20,611 |
| | [X1_Organizational_Development=2]. | -,245 | ,786 | ,097 | 1 | ,7555 | -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 | ,1335 | -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/opcion/article/view/31971/33208. https://www.produccioncientificaluz.org/index.php/opcion/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