Journal of Model Based Research

Specified model of the work environment in a public university in central Mexico

Arger Bund[1,*]

[1]Mexico

Abstract

The work environment, in its most general conception, alludes to biased expectations of risks and benefits around a function and in relation to the performance of a working group, but in its factorial structure, dimensions have been found that explain a moderate percentage of the variance of the construct. In this sense, the objective of this paper is to specify a model for the study of the work climate, considering the institutionalism and human capital of a public university. An exploratory study was carried out with an intentional sample of 125 administrative personnel. From a structural model it was found that the relationship climate factor explained the highest percentage of the variance (21%) and it was the reflective dimension of the construct (0.524). The inclusion of the task climate is recommended due to its link with the leadership and the collaborative climate.

Research Article

Open Access &

Peer-Reviewed Article

DOI: 10.14302/issn.2643-2811.jmbr-22-4265

Corresponding author:

Arger Bund, Mexico

Keywords:

Culture, institutionalism, leadership, network, collaboration

Received: Jul 25, 2022

Accepted: Nov 09, 2022

Published: Feb 27, 2023

Academic Editor:

Reza Razaghi, Department of Ophthalmology and Visual Sciences, University of Alabama at Birmingham, Birmingham, AL 35233, USA

Citation:

Arger Bund. Specified model of the work environment in a public university in central Mexico. (2023) Journal of Model Based Research. 2(1):1-10 https://doi.org/10.14302/issn.2643-2811.jmbr-22-4265

Introduction

This article falls within the discipline of Social Work, an area of organizational studies, but includes terminology from industrial psychology, the sociology of work and labor economics.

The objective of the present work is to specify a model for the study of the organizational climate by establishing the reliability and validity of an instrument that measures the organizational climate in a sample of administrators, teachers and students of a public university of the State of Mexico affiliated to the National Association of Faculties and Schools of Accounting and Administration (ANFECA).

The work climate, from the organizational psychological approach, refers to four factors related to relationships, supports, innovations and tasks, but only linked to their environment in the logic that a good climate will determine the balance with respect to internal resources [17].

On the other hand, from the sociology of work, organizations have only been studied in reference to the State or in relation to a labor market. Institutionalism maintains that business promotion or micro-financing policies will determine the balance between external demands and the capabilities of companies, but that bureaucratic rationality would have its limits in the emergence of human capital [8].

It will be from human development where labor economics will study organizations as asset agencies where relations of knowledge production prevail as the axes

of the creation of added values in companies [29].

Well, despite the fact that organizational psychology has advanced in the study of the work environment, it could be complemented with the assumptions of the sociology of work and labor economics to offer a comprehensive overview in the study of a seminal process for the social sciences in general. and the economic-administrative sciences in particular [31].

In this sense, the proposal of Social Work is to merge some theoretical assumptions of the three disciplines in order to explain the interrelation between state institutionalism and the work environment through the notion of human capital.

Intangible Assets Theory

The theoretical frameworks that explain organizational intangible assets are: 1) work environment theory, 2) institutionalism theory and 3) human capital theory [2].

The work environment, understood as a process of expectations of risk and benefit, usefulness and ease of use of technology in professional performance, involves areas of specialization that drive productivity and competitiveness, but far from intangible assets such as information processing capabilities, skills and knowledge [7]. It is known that the climate of relationships determines the climate of innovations, tasks and supports, but it is unknown if such an influence permeates computational skills, the perception of usefulness and the ease of use of technologies, devices and information networks [7].

In this way, the theory of the work or organizational climate decouples the creation of an intangible value such as knowledge with the dynamics of work groups and teams, but the theory of institutionalism will come to reconsider such shortcoming by proposing that the policies of business promotion or micro-credit are disseminated in the merit contest of organizations promoting human capital, mainly intangible capital such as intellectual or computer skills [16].

Institutionalism, in its most sociological essence, warns that organizations limit themselves to state designs in order to strengthen their credit portfolios or internationalize their products, which, without the sponsorship of the State, would be unlikely to be carried out [9]. In a self-managed sense, organizations dedicated to creating the maximum value of knowledge seek to become independent from the State, orienting themselves towards the formation of human capital, mainly that which produces knowledge and creates additional values for companies [23].

According to the theory of human capital, academic training should be associated with professional training, although each time both systems differ, among other reasons, due to the transformation of market demands [20]. This is how human capital in its intellectual aspect will develop the skills and knowledge that the market demands, but based on organizational capacities and personal commitment to make it happen [19].

It is precisely in this instance where the work environment becomes relevant since, although work commitment supposes a disposition in favor of personal well-being, it also alludes to a group recognition that potentiates capacities and encourages motivation to achieve objectives and work goals [6].

However, organizations dedicated to the creation of knowledge must adjust their expectations to the talents and leadership that complement their most valuable intangible assets or intellectual capital [14]. In this way, organizations emphasize the relationships between talent, leaders and intellectuals in order to reduce their disagreements and conflicts, as well as direct their capacities towards the objectives of the organization, the tasks of the work groups and the goals of the organization. departments [15].

Organizations must refer to complex systems such as self-regulation, dissipation, adaptability, dynamism and complexity in general to overcome the imponderables and contingencies of the environment, as well as the differences between their members [12].

Once organizations have established the complex processes they require to balance external demands with their internal resources, they will foster management, production and information transfer systems where computational skills will be determinants of external demands on their capacities, such as sustainable local development. [30].

The theoretical and empirical frameworks will explain the trajectories of dependency relationships between the dimensions of the work environment in an institutional context of knowledge transfer [22].

The theories put forward on the work environment, institutionalism and human capital propose the study of a processual trajectory that goes from commitment, professional training, capacities, skills and knowledge oriented institutionally, but also based on continuous and relative training. to the innovation of knowledge that will explain the phenomenon in the public university of study. Although the theories have explained the work environment, the specificity of the public university supposes new factors and indicators that have not been explained [27].

Studies of intangible assets

Intangible assets such as knowledge networks derive from a culture of success, leadership and climate around which relationships of trust, support, innovation and goals are developed; bidirectional and horizontal with equity and solidarity [21].

Entrepreneurship is the result of the socialization of opportunities and capabilities [21]. The cited literature has shown that in the face of risks or contingencies external to organizations, they increase their capacities based on the scarcity of resources, entrepreneurship and innovation emerge as hallmarks of a labor collaboration.

Organizational studies have shown that complex companies develop climates of support, climates of innovation, climates of rules and climates of goals [1]. This is so because in the face of risk events; earthquakes, fires, frosts, landslides, droughts, plagues or corruption, organizations self-manage their resources, dissipate their capacities, adapt their resources and optimize their processes (Anicijevic, 2013).

In the case of Higher Education Institutions (HEIs), in strategic alliances with knowledge-creating organizations, such as the system of professional practices or professional service, they establish collaborative networks of academic, professional and labor training based on skills for the market. production-oriented and knowledge transfer [24].

However, before the change from the Welfare State to the Managerial State, the policies of evaluation, accreditation and certification of the quality of the processes and products have developed the new institutionalism or university governance that consists of the establishment of management systems based on the inclusion of intellectual capital [10].

It is an isomorphism that is reproduced in HEIs through values, norms, beliefs and traditions inherent in collaboration, entrepreneurship and process innovation in order to optimize resources and balance the imbalance between external demands and capacities. internal to organizations [25].

In the case of complex institutions and organizations such as HEIs, self-regulation, dissipation, adaptation and dynamism are preponderant factors in their culture, structure and work environment of

tasks, support, collaboration and innovation, although the contingencies and risks of the environment make them more isomorphic, in this process they differ by their degree of conflict mediation, assertive communication, knowledge management, productivity and competitiveness [13].

More specifically, the literature has identified in knowledge management or codification of knowledge and skills the main factor of the organizational climate oriented to the formation of intellectual capital and its transformation into an intangible asset [11]. In this management instance, organizations self-regulate their knowledge and skills in order to adapt to changes in the environment, emerging intellectual capital as transformative leadership in a dynamic of prediction, prescription and prevention of risk events [28].

Method

The specification of the model arose as a need to adjust the four dimensions of the work environment with respect to studies that identify a fifth factor related to corporate social responsibility, although others relate the environment to leadership styles. The selection of the literature was made based on the repositories: Dialnet, Latindex, Publindex, Redalyc and Scielo from 2010 to 2018, as well as the inclusion of the keywords for considering them leaders in Latin America and focused on local problems.

Given that the literature identifies in 2018 four preponderant instruments for measuring the organizational climate; Task Climate Scale (ECT-7), Support Climate Scale (ECA-7), Innovation Climate Scale (ECI -7), Relationship Scale (ECR-7) with reliability levels above the minimum required of 0.700 but less than the optimum of 0.900; as well as validity factorial structures between 0.450 and 0.680 that increased the fit of the model due to the influence of the sample size and the volume of items on the chi-square parameter, these scales were complemented with the information extracted from experts.

Therefore, the specification of a model for the study of the organizational climate in HEIs was established considering that the theoretical, conceptual and empirical frameworks focus their attention on the academic, professional and labor training of human capital that will be transformed through collaborative alliances. with organizations that create knowledge in intangible assets .

It was essential to gather the opinions of teachers, researchers, professionals and trainers regarding the skills that the international market in general and the local market in particular require for the case of students of the division of administrative economic sciences, mainly of actuarial degrees. , marketing and administration who carry out their social service or practices in private and public hospitals in a town in central Mexico.

In the process of building the agenda of academic, professional and labor competencies, a contingent scenario of evaluation, accreditation and certification of the quality of the processes and products was assumed between the HEIs and the organizations that signed the collaboration agreement.

The discussion among the expert judges took place in the facilities of a HEI in central Mexico as part of the established collaboration agreement. The Delphi technique was used to establish the codes and data that allowed the construction of the collaboration agenda, mainly in terms of academic, professional and labor skills for the labor market.

The discussion was developed in three rounds from which the data was integrated, the concepts were redefined and the assumptions of competency-based training were confronted. Once the agenda was established, their budgets were translated into reagents in order to carry out a pilot and selective study of the items that would make up the scale for the second phase of the study.

Once the documentary agenda was confronted based on the review of the literature regarding the agenda of experts subtracted with the Delphi technique, a non-experimental, cross-sectional and exploratory study was carried out, intentionally selecting 125 administrators from a public university, affiliated to the ANFECA of area five.

Once the Work Climate Scale of [7] was generated, which includes four dimensions related to the climate of relationships, support, innovations and goals. Each item is answered with one of five options ranging from "not at all in agreement" to strongly in agreement".

The confidentiality of the results was guaranteed in writing and it was reported that they would not negatively or positively affect their work-administrative status. The information was processed in the Statistical Package for Social Sciences (IBM-SPSS-AMOS for its acronym in English, version 25.0). Mean, standard deviation, alpha, sphericity, adequacy, factor weights, goodness of fit, and residuals were estimated.

Results

Table 1 shows the psychometric properties of the construct, which exceed the minimum required correlation of 0.60 (alphas from 0.765 to 0.795, respectively).

The percentage of total explained variance accumulated 56% of the total explained variance, evidencing the inclusion of at least one other factor , such as the task climate, whose inclusion would increase the explained percentage of the construct. We proceeded to estimate the structure of correlations and covariances in order to observe the emergence of a second-order factor common to the four established factors that the literature identifies as work environment (see Table 2).

M = Mean, D = Standard deviation; F1 = Organizational Climate of Relations, F2 = Organizational Climate of Supports, F3 = Organizational Climate of Innovations, F4 = Organizational Climate of goals: * p < .01; ** p < .001; *** p < .0001

Source: Prepared with study data

Once the factors were established, the contrast of their dependency relationships was estimated.

The adjustment parameters ⌈ χ 2 = 124.31 (16df) p = 0.007; GFI = 0.970; RMSEA = 0.008⌋ suggest acceptance of the null hypothesis regarding the fit of the revised theories and findings with respect to the observed data.

The results show that the instrument to measure the organizational climate in the HEI under study: 1) is barely reliable since its alpha levels range between 0.700 and 0.790, with those scales that exclude items and show correlations close to 0 being more consistent .80; 2) it is valid since the four items of each factor exceed the indispensable minimum threshold of 0.300; 3) suggests the inclusion of a fifth factor that the literature identifies as a climate of responsibilities in the face of risk events to explain the actions of organizations in favor of their environment and not only their adaptation to contingencies.

Therefore, the inclusion of a fifth factor will explain and predict the responses of the HEIs under study to the demands of the local and international market, provided that they establish strategic alliances with organizations that create knowledge and transform intellectual capital into intangible assets in the face of risk scenarios and uncertainty.

Discussion

The present work has specified a model for the study of the work environment based on the reliability

Table 1. Descriptive, reliability and validity of the instrument.

R	*M*	*D*	*yes*	*C*	*TO*	*F1*	*F2*	*F3*	*F4*
R1	3.18	1.16	1.41	1.31	0.772		0.300		
R2	3.04	1.00	1.54	1.45	0.775		0.304		
R3	3.08	1.08	1.23	1.49	0.770		0.306		
R4	3.05	1.09	1.02	1.50	0.776		0.300		
R5	3.06	1.02	1.36	1.27	0.765			0.302	
R6	3.07	1.03	1.53	1.42	0.768			0.304	
R7	3.01	1.05	1.61	1.46	0.760			0.301	
R8	3.00	1.08	1.20	1.37	0.761			0.305	
R9	3.02	1.09	1.81	1.54	0.760				0.317
R10	3.81	1.02	1.92	1.32	0.757				0.316
R11	3.06	1.03	1.45	1.46	0.750				0.314
R12	3.05	1.01	1.30	1.89	0.759				0.510
R13	3.02	1.02	1.42	1.01	0.782	0.301			
R14	3.05	1.04	1.57	1.45	0.780	0.305			
R15	3.16	1.05	1.59	1.65	0.779	0.308			
R16	4.05	1.00	1.52	1.38	0.770	0.302			

R = Reactive, M = Mean, D = Standard Deviation, S = Bias, C = Kurtoosis, A = Cronbach's Alpha minus the value of the item. Extraction method: main axes, promax rotation. Sphericity and adequacy ⌈$\chi 2$ = 124.36 (44df) p = 0.000; KMO = 0.780⌋. F1 = Organizational Climate of Relations (21% of the total variance explained), F2 = Organizational Climate of Supports (17% of the total variance explained), F3 = Organizational Climate of Innovations (11% of the total variance explained), F4 = Organizational climate of goals (7% of the total explained variance). All the items include the alpha value minus their estimation and include five response options: 0 = "I do not agree at all" to 5 = "I strongly agree".

Source: Prepared with study data

Table 2. Correlations and covariances between the factors.

	M	*D*	*F1*	*F2*	*F3*	*F4*	*F1*	*F2*	*F3*	*F4*
F1	23.24	14.25	1,000	0.435*	0.549**	0.658***	1,896	0.436	0.549	0.659
F2	25.49	16.50		1,000	0.549*	0.548*		1,765	0.534	0.671
F3	30.43	15.49			1,000	0.439**			1,782	0.549
F4	26.45	13.56				1,000				1,509

and validity of an instrument that measured four explanatory dimensions of 56% of the total explained variance, but the results of the study are limited by the type of study. exploratory, purposive sampling, and principal axis analysis with promax rotation.

It is necessary to contrast the model in scenarios other than the one studied in order to further specify the model which could be incorporated into the task climate to explain a greater percentage of the factorial solution of the organizational climate construct.

Carreón and García (2017) specified a model related to professional training in which they found that training and education are two fundamental pillars of the construct, but since it is a context in which a climate of emotions prevails over job training, then they recommend specifying a structure related to the work environment.

In the present work, it has been found that the model explains a regular percentage of the variance that could be influenced by emotions, as in the case of the specification of the professional training model, although it would be specific indicators of the relationship climate since the Literature has not established a climate of affects or emotions.

[4] chose to specify a model to explain a dimension of the work environment alluding to the climate of relationships. It is about the climate of collaboration that was indicated by four factorial dimensions linked to organizations in their complexity processes, but that in the present work could not be included since it is a more generalized study of the expectations of administrative staff in a public HEI. .

In other words, the climate of collaboration would only explain a minimum percentage of the variance of the construct when referring to aspects of competitiveness that have not been observed in public universities as if they have been documented in organizations.

[23] proposes that the study of the work environment be approached from the leadership since this is the factor that generates and perfects it and even guides it towards productivity and competitiveness through a climate of collaboration ex professed.

However, in the present work it has been proposed that leadership is an institutional remnant that organizations have considered as a starting point and not as a final destination. In this sense, the institutionalism that a charismatic or traditional leadership supposes is anchored in the conception that control is exercised from the top management and that the climate will be a result of strategic planning, but in the present work the climate of relations, the one that alludes to coexistence and commitment, explained the highest percentage of the variance with 21%.

Conclusion

The objective of the present work deals with the specification of a model, but 44% of the variance of the construct was not explained and this supposes the inclusion and consequently the empirical test of the

model in other scenarios.

In addition, the literature proposes and demonstrates that the factorial solution of the work environment is involved with leadership, culture and entrepreneurship, but above all its relationship dimensions have been further specified to guide the study towards collaboration fostered from leadership. an institutional process from which knowledge-creating organizations have begun to distance themselves.

The results show that the proposed theoretical model is adjusted to the data obtained, suggesting the non-rejection of the null hypothesis that refers to the significant differences between the four dimensions reported in the literature with respect to the relationships established between the factors found: climate of support, tasks, relationships and innovations; although the percentage of explained variance can be increased with the inclusion of a fifth factor that the literature associates with risk events: climate of corporate social responsibility.

References

1. Acar, Z. and Acar, P. (2014). Organizational culture types and their effects on organizational performance in Turkish hospitals. Emerging Markets Journal, 3 (3), 1-15 DOI: 10.5195/emaj.2014.47
2. Aguilar, JA, Pérez, MI, Pérez, G., Morales, ML and García, C. (2018). Governance of knowledge networks: Comparison of a model for the study of consensual training. Alternatives, 40, 24-50
3. Anicijevic, N. (2013). The mutual impact of organizational culture and structure". Economic Annals, 58 (198), 35-60.
4. Carreón, J. and García, C. (2017). Specification of a model for the study of vocational training and job. International Journal Advances in Social Sciences & Humanities. 5(6), 13-18
5. Carreón, J., García, C. Morales, ML and Rosas, FJ (2013). Labor commitment in social work in the health sector. Invurnus, 8(2), 15-23
6. Carreón, J., Hernández, J., Morales, ML and García, C. (2014). Discourses around a vocational training network. Tlatemoani, 16, 104-133
7. Carreón, J., Hernández, J., Quintero, ML and García, C. (2017). Reliability and validity of an instrument that measures organizational collaboration in a public university in Huehuetoca, central Mexico. Invurnus, 12(2), 9-17
8. Carreón, J., Hernández, J., Quintero, ML, García, C. and Mejía, S. (2016). Knowledge networks around organizational complexity Learning of self-regulation, dissipation, adaptability, and dynamism in the face of change. Prospective, 2(2), 57-70
9. Carreón, J., Hernández, J., Rosas, FJ, García, C., García, & Aguilar, JA (2015). Specification of a digital entrepreneurship model for human development through the intensive use of information and communication technologies. Rural Perspectives, 13(25), 123-155
10. Escobar, Roger. (2014). Neural networks, cognitive processes and behavior analysis. International Journal of Behaviorism, 2(1), 23-43
11. Fierro, E., Garcia, C., and Delgado, M.A. (2018). Specification of a model for the study of job training. 1(1), 97-127
12. Fierro, E., López, S. and García, C. (2018). Reliability and validity of an instrument that measures work commitment in a community health center. Tlatemoani, 29, 42-68

13. Figueroa, O., Fierro, E., Martinez, J., Chavez, JC, and Garcia, C. (2017). Governance of the economy 4.0: Contrasting a model of the perceptual determinants of self-employment. Gepu, 8(2), 47-59

14. García, C, Carreón, J. and Hernández, J: (2014). The professional training of human capital in the climate change civilization. International Journal of Social Science Research, 10(1), 107-125

15. Garcia, C. (2013). The network of knowledge in a university with systems of professional practices and administrative technological social service. Foundations in Humanities, 14(1). 135-157

16. Garcia, C. (2015). The knowledge network in a university with a system of professional practices and administrative technological social service. Tlatemoani, 18, 32-55

17. García, C., Carreón, J. and Hernández, J. (2017). Governance of human development: Contrasting a model of the perceptual determinants of the perception of the intention to use the Internet in users of a public library in Mexico City. Interconnecting Knowledge, 2, 39-56

18. García, C., Carreón, J., Hernández, J., Limón, GA, Morales, ML and Bustos, JM (2013). Perceptual determinants of the intention to use the Internet for the development of human capital. Business Forum, 18 (1), 95-117

19. García, C., Carreón, J., Sandoval, FR, Bustos, JM, and Aguilar, JA (2016). Structure of the work culture in a public health promotion institution. Arequipa, 6 (1), 291-304

20. García, C., Mejía, S., Hernández, J., López, S. and Salinas, R. (2015). Reliability and validity of an instrument that measures organizational culture relative to academic institutionalism. Hispano-American Notebooks of Psychology, 15 (1), 45-52

21. Garcia, Cruz., Carreon, Javier., Hernandez, Jorge. and Salinas, Rocio. (2016). "Governance of the actors and networks of technological innovation." In Maria, Quintero., Sales, Jesus. and Velazquez, Elisa. (Coord.). Innovation and technology challenges for its practical application in companies. (pp.79-94). Mexico: Miguel Ángel Porrúa-Uaemex.

22. Hernández, J., Carreón, J., Bustos, JM and García, C. (2018). Organizational cyberculture model in knowledge innovation. Managerial View , 18(2), 235-253

23. Molina, HD, Cruz, MG, Carreón, J. and Rojano, SA (2017). Importance of managerial leadership in the organizations: A reflection on a Mexican photovoltaic industry thorough an empirical framework proposal. International Journal Advances in Social Science & Humanities, 5(11), 1-4

24. Omotayo, Osibanjo. and Adenike, Adiniji. (2013). "Impact of organizational culture on human resource practices: a study of selected Nigerian private universities." Journal of Competitiveness, 5 (4), 115-133 DOI: 10.7441/joc.2013.04.07

25. Pérez, G., García, C. and Carreón, J. (2018). Knowledge networks around organizational development in a public university in the state of Mexico. Invurnus, 13(2), 26-35

26. Saansongu, Ezekiel. and Ngutor, Darious. (2012). "The influence of corporate culture of employee commitment to the organization." International Journal of Business and Management, 7(22), 1-8

27. Sánchez, A., Hernández, TJ, Quintero, ML, Espinoza, F., & García, C. (2018). Knowledge networks around the learning of educational organizational complexity. Hologrammatics, 15(28), 223-253

28. Sánchez, A., Molina, H., Carreón, J. and García, C. (2018). Comparison of a job training model.

Interconnecting Knowledge, 3 (5), 37-73

29. Sánchez, A., Quintero, ML and García, C. (2017). Complexification of a sexist labor management model. Social Sciences, 3(4), 24-37
30. Sánchez, R., Villegas, E., Sánchez, A., Espinoza, F., and García, C. (2018). Model for the study of organizational clarity and corporate social responsibility. 22 (74), 467-483
31. Vazquez, E., Carreon, J., and Sanchez, A. (2017). Knowledge networks around the strategic alliances of micro coffee producers. International Journal Environment, Agriculture & Biotechnology, 2(6), 3294-3302