



# **Education climates: construction of a conceptual framework suitable to study the training of professionals in Higher Education**

*Climas de formação: construção de um quadro conceitual adequado ao estudo da formação de profissionais na Educação Superior*

*Climas de formación: construcción de un cuadro conceptual adecuado al estudio de la formación de profesionales en la Educación Superior*

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## **Abstract**

The strong changes which occurred in higher education — namely the insistence on social relevance of training's social relevance towards employment and professional activity — resulted

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in the growing importance of training environments. The guiding idea is that effective learning also depends on a series of learning opportunities that are beyond what a teacher can offer his students in a classroom. The adopted denominations and utilized concepts are many, — “organizational climate”, “organizational culture”, “school climate”, “epistemic culture”, “professional knowledge landscape”, among others — and each captures, in its own way, partial aspects of the study field. Starting from reviewing literature about said concepts and establishing relationships between them, we intend to present a theoretical-conceptual frame that we call “professional training climates”, which has the potential to provide elements towards a systemic ecological analysis of the complexities inherent to the formative processes of professionals in Higher Education regardless of their professional field.

**Keywords:** Professional education climate. Higher Education. Organizational climate and organizational culture. Epistemic culture. Professional knowledge landscapes.

### **Resumo**

*As fortes mudanças que têm ocorrido em relação à Educação Superior — nomeadamente a insistência na relevância social da formação para a atividade profissional e o emprego — têm resultado numa maior importância dada aos ambientes de formação. A ideia orientadora é a de que a aprendizagem efetiva depende também de um conjunto de oportunidades de aprendizagem que vão para além do que o professor possa fornecer aos estudantes numa aula. As denominações adotadas e os conceitos utilizados para o estudo desses ambientes são diversos — “clima organizacional”, “cultura organizacional”, “clima de escola”, “cultura epistêmica”, “paisagem do conhecimento profissional”, entre outros — e captam, cada um à sua maneira, aspectos parciais do campo em estudo. Tomando como ponto de partida uma revisão de literatura sobre os referidos conceitos e o estabelecimento de relações entre eles, pretende-se apresentar um quadro teórico-conceitual que denominamos “climas de formação profissional”, que tem o potencial de fornecer elementos para uma análise sistêmico-ecológica das complexidades inerentes aos processos formativos de profissionais na Educação Superior, independente da área de formação.*

**Palavras-chave:** *Climas de formação de profissional. Educação Superior. Clima e cultura organizacional. Cultura epistêmica. Paisagens do conhecimento profissional.*

## Resumen

*Los fuertes cambios que han ocurrido en relación a la educación superior — expresamente la insistencia en la relevancia social de la formación para la actividad profesional y el empleo — tienen resultado en una mayor importancia dada a los ambientes de formación. La idea orientadora es a de que el aprendizaje efectivo depende también de un conjunto de oportunidades de aprendizaje que van hacia además de lo que el profesor pueda suministrar a los estudiantes en una clase. Las denominaciones adoptadas y los conceptos utilizados para el estudio de esos ambientes son diversos — “clima organizacional”, “cultura organizacional”, “clima de escuela”, “cultura epistémica”, “paisaje del conocimiento profesional”, entre otros — y captan, cada uno a la su manera, aspectos parciales del campo en estudio. Tomando como punto de partida una revisión de literatura sobre los referidos conceptos y el establecimiento de relaciones entre ellos, se pretende presentar un cuadro teórico-conceptual que denominamos “climas de formación profesional” que tiene el potencial de suministrar elementos para un análisis sistemático-ecológica de las complejidades inherentes a los procesos formativos de profesionales en la educación superior, independiente del área de formación.*

**Palabras Clave:** *Climas de formación de profesional. Educación Superior. Clima y cultura organizacional. Cultura epistémica. Paisajes del conocimiento profesional.*

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## Introduction

Contemporary society requires continuous changes of educational systems. Deep and intense transformations in recent decades have let institutional benchmarks unstable (MAGALHÃES, 2009), the same institutional benchmarks that were the basis for constructing social and professional identities. In higher education, part of these requirements arise from, and at the same time are due to, the emphasis on social relevance of education for the professional activity. Accordingly, more and more eyes turn to initial training courses and their interveners – curriculum, educators, students, policies, all related to local and global contexts.

Regardless of the educational area, vocational programmes in higher education are assembled to train professionals with dispositions for the effective articulation between horizontal and vertical knowledge (BOYD, 2013), for an effective performance in complex work environments, for ethical practice, for the reflective and autonomous practice, for the investigative attitude, and for lifelong learning. They should also promote and subsidize professional socialization processes, investing in the production of knowledge, in particular by means of research, as well as creating and strengthening local and global institutional links. This complex set of articulated elements is a fundamental item to the constitution of identity of future professionals. Therefore, professional learning depends on an environment that goes beyond what the teacher can offer to students in a classroom (LOPES; PEREIRA, 2012).

The denominations and concepts used here for the study of education environments are many, — “organizational climate”, “organizational culture”, “school climate”, “epistemic culture” “landscape of professional knowledge”, among others — and each captures, in its own way, partial aspects of the study field. However, in most cases, the focus is not on the formative processes.

This article aims at presenting a theoretical-conceptual framework denominated “professional education climates”, from the contributions of those concepts that have several theoretical inspiration sources; refer to schools of different education levels and that focus on different aspects of their environments. This theoretical-conceptual framework allows us to analytically capture, in a broad perspective, the complexities of education processes in different professional fields. To that end, a literature review is presented on the concepts mentioned, whose articulation will introduce a concept of “professional education climates” and highlight its analytical potential, in a systemic-ecological perspective (MORAES, 2007), of the complexities inherent to the professional education processes in higher education.

## Organizational climate

The consensus about the origins of the conceptualization of organizational climate is fragile among authors dedicated to the topic. According to Zhang and Liu (2010), the concept was first addressed in the years of 1930, with the human relations movement, and investigators shifted their attention from “heavy” physical environment to “light” psychological environment. Kurt Lewin is a pioneer on the proposition of the concept in 1939, although with little impact, from the discussion on different types of group environments that would set based on different styles of leadership (democracy, autocracy and laissez-faire). For Badoni (2010), the first use of the term occurred by Control, in 1955, which defined it as a delicate combination of interpretations made by people in a workspace, in relationship with each other and with their own organization. In their turn, Hayes (1973) states that the first definition of the term *organizational climate* occurred in 1962 by Halpin and Croft, precisely in a study on schools, to describe the “personality” of an organization. Despite the absence of consensus about its origin, it is a fact that, from 1960s, a deepening of the organizational climate studies is seen.

In 1964, Forehand described three features of organizational climate: variation depending on the type of organization, stability, and power to affect the behavior of the members of the organization (ZHANG; LIU, 2010). Tagiuri (1968) defines the organizational climate as a relatively permanent quality of the internal environment of an organization experienced by its members, influences their behavior and is described in terms of values of a given set of characteristics of the organization. Owens and Steinhoff (1969) summarize Tagiuri's structure when identifying organizational climates as a set of characteristics that distinguishes an organization from others, and that influences the behavior of its members. For Hellrieger and Slocum (1974), it is a set of attributes that can

be perceived about a particular organization and/or their subsystems and that can be induced by the way their organization interacts with its members and its environment.

In 1974, Moss proposes a set of dimensions linked to organizational climate: commitment, cohesion, support, autonomy, organization, pressure, clarity, control, innovation, convenience (apud ALARCÓN; CEA, 2007). These dimensions are magnified by Patterson et al. (2005): employee well-being, autonomy, participation, communication, emphasis on admission, integration, support from supervisors, formalization, tradition, flexibility, innovation, focus on the outside, reflection, clarity, effort, efficiency, quality, pressure for production, performance feedback.

More recently, the concept is being revised. Salazar Estrada et al. (2009) define a conceptual framework of organizational climate from the perspective of the existence of a set of variables: physical environment, structural characteristics, social environment, personal characteristics, and organizational behavior. Mohan and Ashok (2011) state that the organizational climate consists of an human emotional system of an organization, including feelings and attitudes toward the system and subsystems, thus referring to relationships in all situations, more specifically to the way people actually experience such relationships. Lavian (2012) defines it as a set of perceptions that members of an organization share, reflecting how they describe and interpret the organizational environment. For the author, the term *climate* or *environment* is a metaphor to describe an environment where personal relationships emerge and develop.

Studies on the organizational climate of higher education institutions have in large part the aim to understand the individual-organization relation. They seek to generate data that provide guidelines for the reformulation of existing conditions, resulting in the improvement of levels of job satisfaction, motivation, scientific literature, and other aspects related to teaching staff and students (CAMPOS, 2002).

The organizational climate significantly influences the culture of the organization that comprises the general pattern of behaviors, beliefs and values shared by the members (SALAZAR ESTRADA et al., 2009).

Although the concepts of organizational climate and organizational culture are sometimes used interchangeably, the consensus is that there are differences that must be considered and establish the culture as one of the dimensions of organizational climate (TAGIURI, 1968).

## **Organizational culture**

Schein (1992) can be considered the most representative author in organizational culture studies. He defines it as a pattern of shared basic assumptions that a group develops when learning while addressing its external adaptation and internal integration issues, and that therefore can be taught to new members as the correct way to perceive, think, and feel in relation to such issues. Under such perspective, cultural analysis seeks to identify how people understand and interpret their experience and how these understandings connect with actions. It also aims at understanding what constitutes as normal for a group, in a negotiating process in which certain conceptions of world become natural until they are "reality" or "the norm" for them (GARCÍA ÁLVARES, 2006). Organizational culture is the social and normative amalgam that underpins an organization and holds it together (SCHEIN, 1988).

The concept of organizational culture was transported to the educational area more strongly in the 1980s, assuming the denomination of "school organizational culture". School organizational culture can be understood as something that arises from the interaction between directors, teachers, coordinators, staff and students in the daily experience. These are beliefs, values, actions and practices that constitute the cultural traits of a school. (LIBÂNEO, 2004). Nóvoa (1995) attributes it an important role of integration and external differentiation. For the author, the school organizational culture is linked to school projects. It can be said that the organizational culture of a school is one of the dimensions of the concept of school culture within the meaning of Viñao Frago (2002).

## School climate

School climate studies were originally inspired by the organizational theory that relates leadership styles with the behavior of the group. After popularization of the concept, there was a large theoretical and investigative production on organizational climate in educational institutions — the so-called “school climate” (ANDERSON, 1982) or “school organization climate” (LAVIAN, 2012).

Despite the pioneering studies in the field of organizational climate in educational context, there is little consensus about what is the school climate. From an extensive literature review on the topic, Anderson (1982) makes the following systematization: schools have something called *climate* which differentiates each school; these differences are noticeable, but difficult to describe, complex and difficult to understand; the climate is influenced but not overridden by specific dimensions of the school, such as the characteristics of students; it affects the results of students, including cognitive and emotional behavior; basic aspects of the climate could improve understanding and behavior of students.

For Wong Ho (1992), the school climate refers to the unique characteristics of a school, used to describe the subtle, elusive, amorphous and inconsistent force that shapes the behaviour of its members. This is a general concept that captures the environment of a particular school — which is lived by teachers, staff, administrators and students —, describes their perceptions about routine behaviours, and affects their attitudes and behaviors in the school, i.e. interfering in the results (HOY; SMITH; SWEETLAND, 2002).

In addition, it is possible to say that the school climate consists of material and human factors, and interactions among these factors are determinants for the school climate. Thus, it is the set of school characteristics, relationships between teachers, students, administrators, parents, and between them with the physical aspects; i.e. the climate reflects how teachers, staff, administrators, parents, and students feel regarding a certain school, from their relationships with others human



elements and with physical elements. The school climate has direct influence on the performance of students and on the productivity of teachers. (ADEOGUN; OLISAEMEKA, 2011).

The empirical studies that have brought the concept of organizational climate for school organizations are generally dedicated to one or more specific aspects, focusing on relations between different groups (teachers, students, directors), against a background of leadership issues, educational outcomes, satisfaction with the organization, participation and involvement, among others. These studies, especially of quantitative character, and performed with questionnaires, under various designations tend to distinguish open and closed climates, pressure for control, or pressure for development, where the leaders' behavior and human relationships occupy a prominent position. Regarding levels of education about which the research focus, there is a clear predominance of basic education.

## **Education climates**

### **Education climates in technical areas**

The concern with updating the knowledge and skills of technical professionals, such as engineers, in the context of technological innovation, motivated Kozłowski and Hults (1987) to investigate the effectiveness of the concept of "updating climates", understood as a specific dimension of the education climate. They conclude that the concept is useful for understanding the factors that facilitate performance and technical competence. Tannenbaum (1997) describes conceptually and empirically how some aspects of a work environment influence the continuous learning of its members. The author identified the existence of specific learning environments, and concluded that organizations with stronger learning climates demonstrate greater organizational effectiveness, but without education climate to entirely set the organizational learning.

Tracey and Twes (2005) show evidence of the validity of a measure used in investigations of education climates: *General Training Climate Scale* (GTCS). For the authors, although there are many variables influencing the effectiveness of education programmes, the education climate has the potential to influence individual performance improvements as well as to institutionalize these improvements. Thus, the education climate can play a critical role in the substantiation of more comprehensive changes. For the authors, to clarify the education climates allows one to identify potentials and barriers to the success of education programmes, enabling investments in strategic areas and increasing the odds of success.

Lather (2009) argues that the impact of education is moderated by multiple factors. They propose to consider three stages of education processes — namely pre-education, education and post-education — that make up the education climate. Educators have a more significant control over the first two categories, and the control over the third category is minimal. Only when the three categories, properly interrelated, are well understood by the educators the results are effective. For the author, the education climate is also the result of the interaction between those who being educated and those responsible for the education in a given context, which can be favorable or unfavorable. A favourable climate is manifested by a high degree of teamwork, trust and commitment between educator and students.

According to the study by Lather (2009), the feelings of educators originate primarily from three factors - those from educators themselves (mastery of the content to be worked, level of motivation and preparedness); students (previous knowledge on the contents and involvement in the education program); and the organization (resources, time and importance given to the education program). In its turn, the feelings of students originate from individual (individual priorities, personal situation and comfort level), group (level of connection between the group, group dynamics, prior association between the members of the group), pedagogical (ability to relate to the educators, sync, structuring, and programming methodology), and organisational (organizational

support, work context in which the education will be implemented, positive or negative perception of the results of performance enhancement and evaluation) factors.

In summary, Lather (2009) assumes that a favourable education climate does not result solely from qualities of educators, but the cumulative result of the efforts and commitment of educators, students and the organization.

### **Concept of education climates in an educational context**

A set of articles published from 2003 in the Portuguese context disseminated the idea of education climate in the educational context, more specifically in the initial training of teachers. Such articles originated as part of project FIIP (*Formação Inicial e Identidades Profissionais: currículo e identidades profissionais de base*), conducted by researchers at the University of Porto. The project aimed to study dimensions of impact of initial education in the professional identity of teachers. For this purpose, biographies were collected from teachers and former teachers of the 1st cycle of Basic Education<sup>1</sup> trained in the 1970s, before and after April 25th, 1974<sup>2</sup>, and in 1980s and 1990s, in public or private schools, before and after the implementation of the Educational System Reform; study plans of the different training schools concerned; and legal documents, publications and other documents of general framework to contextualize the period. Express curriculum (theoretical and practical components) and the hidden curriculum were elected as dimensions to characterize the type of education.

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<sup>1</sup> The first cycle of Basic Education in the Portuguese education system corresponds to the first four years of Elementary School I in the Brazilian education system.

<sup>2</sup> Date of the deposition of the dictatorial government and that started a process that culminated with the deployment of a democratic regime.

In specific literature (LOPES, 2003; LOPES et al., 2004; SOUSA; LOPES, 2007), the experiences, understood as components of the hidden curriculum, are discussed as a constituent of education climates. This argument is supported by Sampson (1985 apud LOPES, 2003), which states that human education is not only a discipline or norm, but fundamentally the way human relationships occur, which are social in the context of education. The education climate is based on dense convivialities and in the production of culture, as well as the involvement of students in the management of their own curriculum. Such a dimension is considered the main source of professional binding and resilience when facing obstacles in the professional practice.

When focusing in the relationship between training curricula and formation of identities in teachers' initial education, Lopes et al. (2005) identify perceptions of education climate from three categories: "school climate" (general appreciation), "educators/students relationship", and "relationship between students". The analysis allowed inferring that social relations in the school emerge as key elements in the creation of education climates.

The importance of social relations, as well as the need for personal and collective mobilization in contexts of initial training is resumed in Lopes (2008a) when discussing education policies. The author argues that the formation of collective skills of the organizational type (promoters of collaborative work) depends on education climates that instigate their exercise. It is the establishment of education climates that allow the participation of students in their own training curriculum by their initiative, but also through activities explicit in the formal curriculum of initial education courses. It implies understanding that the hidden curriculum relies in aspects that may be formally foreseeing.

When crossing the analysis of biographical interviews (used to characterize identities) and document content analysis (legislation, study plans, syllabus, academic work, evaluation sheets, etc.) used to characterize the formal and informal training curricula, the authors identified distinct education climates linked to distinct identities (LOPES 2008b, LOPES et

al., 2007). After the democratic revolution, the formal and informal curricula cover the proposals from students, learning activities outside the classroom and contextualized, cultural activities, combining conviviality and learning. In the 1980s, the participation climate gave rise to the centralization of curricular decisions, and students losing power on the participation in decision-making processes. In the 1990s, teacher training was integrated in Higher Education, a change that led to the development of a typically academic education climate – abstracting conviviality and learning – where hierarchical and competitive relations prevailed.

Lopes (2008c) advocates for the existence of a strong link between education climate and the identities of teachers, which forge the relationship of “pedagogic universe” with the “social universe” (BENAVENTE, 1990). The professionals’ identities with ability for life-long learning, autonomy and interventional skills seem to depend on which education climates combine both universes and, therefore, are focused on learning but also in mobilizing, on participation, research, students’ involvement in the management of their own curriculum, solidarity, and the production and enjoyment of culture and art (DOTTA, 2013).

## Epistemic culture

If the resource of the concept of *organizational culture*, as a dimension of organizational climate, is sufficient to account for the culture of Basic Education and Higher Education schools, establishing relationships with professional and scientific areas require a concept of *culture* that do justice to this characteristic, such as the case with the concept of *epistemic culture*. Entering into Higher Education, as a teacher or a student, is entering an epistemic culture.

Knorr Cetina (2007), a precursor of the concept, creates it as a way to replace the concept of discipline or specialty, accounting for changes inherent to the transition to a knowledge-based society. Empirical studies with the goal to understand the processes of knowledge production

allowed the author to advance to the pursuit of understanding different “*machineries of knowing*” (CETINA, 2007, p. 363) and thus establish the notion of epistemic culture.

To the author, all people associate science with knowledge, a true representation of what the world really is. However, no one knows very well how scientists or other experts come to such knowledges. The notion of epistemic culture seeks to capture internalised processes of knowledge creation and refers to sets of practices, norms and mechanisms linked by necessity, affinity and historical coincidence that, in a particular area of expertise, constitute *how we know what we know*. Her argument is the idea that science and knowledge may not be as unitary as has been thought; instead, its epistemic diversity should be considered. Knowledge as representation and technological product also loses ground to knowledge as a process, a practice. The approach of epistemic culture emphasizes practice, a practice understood within its context of production.

Guile (2008) brings the concept of epistemic culture to the field of education. Having as reference the economy of knowledge and the traditional distinction between theoretical and tacit knowledge, the author defends their interrelation in professional fields and the connection between knowledge and culture.

## **Professional knowledge landscapes**

Concerned with narratively studying educational phenomena, in particular the construction of teachers’ professional knowledge, Clandinin and Connelly (1995) established a set of terms — understood as “words with meaning through the context-of-use” (ADLER; VAN DOREN, 1972 apud CLANDININ; CONNELLY, 2004): stories to live by, teacher’s knowledge, sacred stories, secret stories, cover stories, and professional knowledge landscapes, among others.

The idea was to understand through the stories of those involved the way professional environments and training format teachers’

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professional knowledge and how much they interfere in their work. The authors make use of the term *landscape* to account for an in-situation relational context, full of conceptions and preconceptions, which are to be seen narratively:

The landscape metaphor is particularly well suited to our purpose. It allows us to talk about space, place and time. Furthermore, it has a sense of expansiveness and possibility of being filled with diverse people, things and events in different relationships. [...] Because we see the professional knowledge landscapes as composed of relations among people, places and things, we see it as both an intellectual and a moral landscape (CLANDININ; CONNELLY, 1995, p. 4-5).

The landscape of professional knowledge is composed by sacred stories – theoretical knowledge, the result of research in certain contexts and with distinct epistemological bases, packaged to teachers as texts, curriculum materials and professional development workshops; stories about school, from school, from teachers and about teachers; secret stories — not told out of the classroom, but lived inside them as safe spaces; cover stories — with the purpose to fit into the plot of the school, to feel safe outside the classroom; and some stories that may collide with the stories of others, collisions that also shape the landscape.

Therefore, the landscape is composed of inside and outside of the classroom, out of places of the landscape, and experiences of the landscape everywhere, both in the past and in the present. In summary, the historiated lives of teachers are molded on and by the landscape (CLANDININ, 2002).

New curricula, requirements for innovation, new plans on inclusive education, new technologies, new policies, new perspectives regarding parents involvement, new students, new colleagues — continuously — build and rebuild the established school landscape. Narrative research seeks to understand how the landscapes of the schools form and how those connected to the school, especially teachers, are formed by these landscapes. It is a true “parade” of changes (CLANDININ; HUBER, 2005) that give

shape and meaning to the school landscape and the professional knowledge landscape of teachers.

### **Education climates in higher education on the connection of concepts**

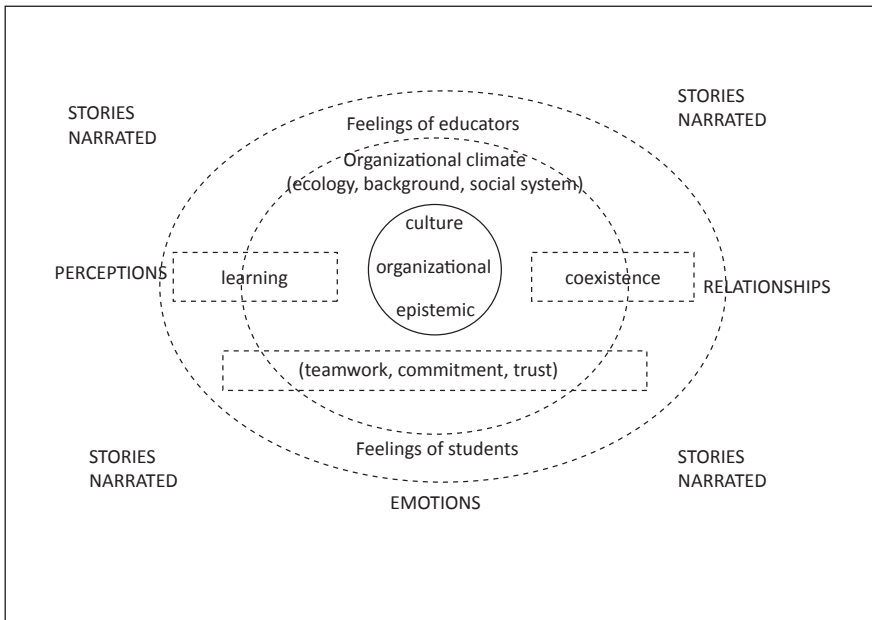
In Figure 1, the concept of “education climates” for study of initial training environments (in Higher Education institutions) is represented in indistinguishable professional fields, consisting of contributions from studies conducted with all concepts above mentioned.

The concept of *organizational climate* (translated for non-higher education school organizations by the concept of *school climate*), which includes the *organizational culture* as one of its nuclear components is considered the basic space, to which other concepts add to better account for *professional training climates* in higher education institutions. The concept of *epistemic culture* combines itself to the concept of *organizational culture*, contemplating the particularity of the relationship that, in institutions of higher education, education has a professional and/or scientific area with specific characteristics, with impact on the processes of education.

The studies reviewed in the framework of the specific term *education climate*, in the corporate or educational context, contribute so irreplaceable for the necessary integration of formative processes in the conceptualization of climate.

From studies on enterprise context, we have the idea of transferability (i.e. to promote individual performances in a sustained manner in the context of training and in postgraduate training contexts); the idea of updating climate influencing the continuous learning and organizational effectiveness; and the idea that climate education is the synthesis of pre-formative processes, formative and post-formative, and teamwork, trust and commitment are elements of a favorable climate, which depend on the quality of the educators but also the efforts and cumulative commitments of educators, students and the organization.





**Figure 1** - Theorization model of initial higher education climates in professional fields

The studies in the educational field meet (and complement) some of these aspects, in particular the idea of portability — when the climates associate learning to conviviality, professional identities formed, more than others, have as their principle lifelong learning; on students' participation in curriculum management, seen as a means to ensure innovation dynamics and continuous learning; when considering as formative spaces (outside class or outside of school), devices (teamwork) and non-conventional activities, demonstrating an association between conviviality and learning.

The concept of *landscape* gives a narrative style to the climate and, in doing so, rewrite the dimensions of education climate for the field of narrative research, accentuating perceptions, feelings and

interrelations expressed in language, and thus highlighting singular and shared meanings, contexts and plots. Simultaneously, it offers to climate studies a new methodology centered on the experience of actors and its language. This is an important contribution, since quantitative climate studies never managed to converge their results with the real organizational "feel".

In this sense, the idea of education climates is inserted in a systemic-ecological perspective, i.e. parties interrelate in a dialectic way affecting the dynamics of the whole (MORAES, 2007), and it can be accessed from the perceptions of the human elements directly involved in training programs/courses, based on their relationships with each other and with other elements of the education context. To the collection of perceptions, the analysis of documents must be added – formal curriculum, supporting texts for disciplines, texts of law, student portfolios, lesson plans, syllabus, assessments, among others.

### **Final considerations**

Driven by the growing consensus about the importance of education and knowledge, Higher Education is subject to a set of challenges arising from massification and differentiation processes, production/dissemination of information and knowledge, employment restrictions, economic growth, ongoing social and cultural development (BRUNNER, 2003). Curricular structures and pedagogical relationships are sometimes anachronistic, and collide with the current training demands, especially regarding new characteristics of the public who access Higher Education - people of different ages, with restricted cultural capital, working students, people who interrupted their studies and resumed later, professionals who elect or are forced to enter a second career, among others. To meet these challenges, Higher Education should meet the demands of opportunities, skills, levels of performance, and not only access and

certification. (THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, 2000).

This challenging landscape that consists and comprises Higher Education requires increasing investment in effective alternatives for study, and intervention in processes involved in vocational training at this level of education. In fact, some studies suggest the existence of a strong relationship between education climate, formal learning and transfer of knowledge and skills for work contexts (LOPES; PEREIRA, 2012; TRACEY; TEWS, 2005). It is important to stress the fact that the essence of education climate is comprised by interrelationships that give a high degree of complexity and subtlety to its analysis. However, in spite of the complexity inherent to the climate, as well as the processes of research that aims at studying it, it becomes clear that their identification and understanding is crucial from a diagnosis and intervention perspective, since it can provide a broad scope for the improvement of vocational training courses/programs.

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