

TRANSFORMATIONAL LEADERSHIP IN AN ORGANIZATION IN CHANGE: A CASE STUDY IN PORTUGUESE ARMY (COMBINED ARMS SCHOOL)

LIDERANÇA TRANSFORMACIONAL NUMA ORGANIZAÇÃO EM MUDANÇA: UM ESTUDO DE CASO NO EXÉRCITO PORTUGUÊS (ESCOLA DAS ARMAS)

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Abstract

Leadership is considered a major asset for organizations, and transformational leadership has been identified as an effective way to address organizational change processes, because, in its purest form, transformational leadership is about leading an organization through change.

The central theme of this work is the study of transformational leadership and its relationship with organizational change in the military context. For that effect, we chose as case study for the development of our research, the Combined Arms School, a staff training Unit of the Portuguese Army recently established in result of the merger of extinct Units, therefore subject to a thorough process of change with individual and organizational consequences.

We resorted to the application of two instruments for data collection by questionnaire at the Combined Arms School, to evaluate how the leadership styles of direct supervisors influence the organizational change process underway.

Our findings allowed us to conclude that the Officers and Sergeants of the Combined Arms School perceive in their direct supervisors primarily traits of transformational leadership,

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and that this constitutes an influencing factor in how they perceive the undergoing change process and in their readiness for change.

Keywords: Transformational leadership, organizational change, Portuguese Army Combined Arms School

Resumo

A liderança assume-se como um dos principais ativos das organizações e a liderança transformacional tem sido identificada como uma forma eficaz de encarar os processos de mudança organizacional, pois, na sua forma mais pura, trata sobre liderar uma organização através da mudança.

O tema central deste trabalho é o estudo da liderança transformacional e a sua relação com a mudança organizacional, em contexto militar. Para tal, escolhemos como caso de estudo a Escola das Armas, Unidade de formação de quadros do Exército Português, recentemente criada fruto da fusão várias Unidades, estando assim sujeita a um profundo processo de mudança, com reflexos individuais e organizacionais.

Recorreu-se à aplicação de dois instrumentos de recolha de dados por questionário, no sentido de avaliarmos de que forma o estilo de liderança exercido pelos chefes diretos tem influência no processo de mudança organizacional em curso naquela Unidade.

Os resultados obtidos permitiram concluir que, os militares da Escola das Armas percebem nos seus chefes diretos maioritariamente traços de liderança transformacional, e que tal se constitui num fator influenciador na forma como percebem o processo de mudança em curso e estão predispostos para tal.

Palavras-chave: Liderança transformacional, Mudança organizacional, Escola das Armas.

Introduction

In the current organizational context dominated by uncertainty, the challenges faced by the Armed Forces are great. The intrinsic characteristics of the military profession and the multiplicity of missions that they must fulfil in a context of increasing budgetary constraints and of cuts on human resources, which are a fundamental pillar of the Institution, increase the complexity of their organizational context in a climate of change.

The transformation processes undergone by the Portuguese Armed Forces, including in the current moment, thus lack effective and highly competent leaders who are able to understand and implement the necessary changes in the most appropriate manner, with a view to the future of the organization, while ensuring support to the processes required for achieving that future.

There is consensus in the business world that effective leadership constitutes one of the most important assets in performance and organizational change and that, depending on the strategies adopted, top management is responsible for the success or failure of the change process. Kotter (1996, p. 184) states that, without competent management, the organizational change process can get out of hand, and that the great challenge facing businesses is leadership through change.

On the other hand, transformational leadership, considered an effective leadership style, has become a *sine qua non* in modern organizations, critical to survival in a climate of change. There have been numerous investigations in the area, focused on analysing specific contexts and on establishing a relationship with other variables, such as, for example, a leader's behaviour, motivation, satisfaction and the performance of followers (Yukl, 2010, p. 279).

More recently, we found an increasing number of works focusing on establishing a relationship between transformational leadership and aspects of organizational change, which is justified not only by the fact that organizations are constantly changing, in a dynamic and continued process, but also because transformational leadership is demonstrably appropriate for these situations.

Although the Portuguese Armed Forces are currently undergoing a process of organizational change, even if only by external imposition, we have chosen as the object of study of our work the occurrence of specific processes of organizational change in Units of this Institution, to ascertain the relationship between the presence of transformational leadership traits and the way those traits influence the ability for organizational change.

Aware that leadership is a complex process that largely depends on context, this research does not intend to mainstream answers or conclusions with regard to the Portuguese Armed Forces, not least because doing so would not be legitimate from a scientific point of view, but rather to contribute to a better understanding of the topic and to open up perspectives for future investigations.

The general aim of this study is to understand how leadership styles contribute to the organizational change process underway in the Combined Arms School, in order to assess the importance of transformational leadership in the military context and in a period of change.

This research is based on a case study and follows a quantitative and qualitative approach, resorting to an exploratory-descriptive and correlational methodology, and aiming to substantiate the previously defined conceptual framework, presenting empirical data to support the influence of leadership styles in the process of organizational change.

The exploratory work developed was essentially based on the literature and resulted in the identification of the following question: "What is the contribution and relationship of leadership to the organizational change process underway at the Combined Arms School?", which became the guiding principle for the development of all research.

1. Theoretical basis

a. Transformational leadership and the “full spectrum” theory of leadership

Burns (1978, p. 1) wrote that one of the greatest and most universal aspirations of our time is the search for compelling and creative leadership. Despite this statement being more than thirty years old, it continues to be as relevant today as it was then, as leadership remains one of the most debated topics in the organizational context.

What is, however, leadership? On the subject, Bass (1990a, p. 11) noted that “there are almost as many different definitions of leadership as there are persons who have attempted to define the concept.” As we developed our research, the lack of agreement between authors, researchers and experts in the field about what leadership really is became clear. We believe, however, that this disagreement is fully justified by the complexity of the phenomenon, which involves, in addition to leaders and followers, their respective context or situation, rendering the concept controversial and difficult to define.

In the context of this research work, we consider the definition proposed by Lussier&Achua (2010, p. 6), who state that leadership is “the influencing process of leaders and followers to achieve organizational objectives through change.”

The concept of “transformational leadership” was used for the first time by James Downton, in a paper entitled *Rebel Leadership: Commitment and Charisma in the Revolutionary Process*, emerging as a major approach to leadership, as evidenced in the emblematic work *Leadership* (1978) by James MacGregor Burns.

Burns (1978) thus introduced for the first time the concept of transformational and transactional leadership, arguing that leadership went far beyond a simple leader-led relationship, assuming that the organizational context was also a key element in the entire process. While transactional leadership was based on a trading system, by the assignment of awards or punishments, transformational leadership was exercised by individuals acting as agents of change in the attitudes and behaviours of members of the organization, gaining their commitment and the empathy required for compliance with the organizational objectives (Goethals, Sorenson & Burns, 2004, p. 1558).

This concept was subsequently developed and expanded by Bass (1985) who, complementing the previous approach, argued that those two orientations do not represent opposite ends and that the best leaders possess both characteristics. Those leaders thus evidence characteristics associated with transformational leadership, acting as agents of change, urging and changing attitudes, and characteristics associated with transactional leadership, taking into account the role and requirements of the task and providing contingent rewards, positive or negative, depending on whether those tasks were successfully completed (Rosinha, 2009, p. 63).

Transformational leadership is the process by which leaders transform followers into leaders. Transformational leaders encourage change, rather than suppress it when the opportunity arises (Avolio, 1999, p. 34).

On the other hand, transactional leadership focuses on the trade-offs that take place between leaders and their followers (Northouse, 2013, p. 187), with leaders acting as facilitators, helping their followers meet goals. In this approach, leaders explain the responsibilities, tasks and performance objectives to their followers. This type of leadership seeks to maintain the current situation and motivation through a kind of contractual agreement (Bass, 1985).

Bruce Avolio and Bernard Bass, two of the most respected authors and researchers in the context of transformational leadership, sought to convey the true essence of this approach to the phenomenon of leadership through a discussion based on the interrelationship between these two styles.

In 1985, Bass presented a formal model for transformational leadership, as well as the dimensions of the associated behavioural leadership factors. This model was subsequently refined by Bass e Avolio(1994, p. 3), the result of several studies that would culminate in the development of a model of the “full spectrum” theory of leadership.

Avolio and Bass identified three dimensions in the “full spectrum” theory: transformational leadership, transactional leadership and *laissez-faire* leadership. These dimensions, when mixed, give rise to an adaptive kind of leadership that can be adjusted to the situation. The “full spectrum” model of leadership (Figure 1) and the associated styles attempt to represent the full spectrum of leadership and the relationship between a more active or passive, and a more or less effective leadership (Avolio, 1999, p. 33).

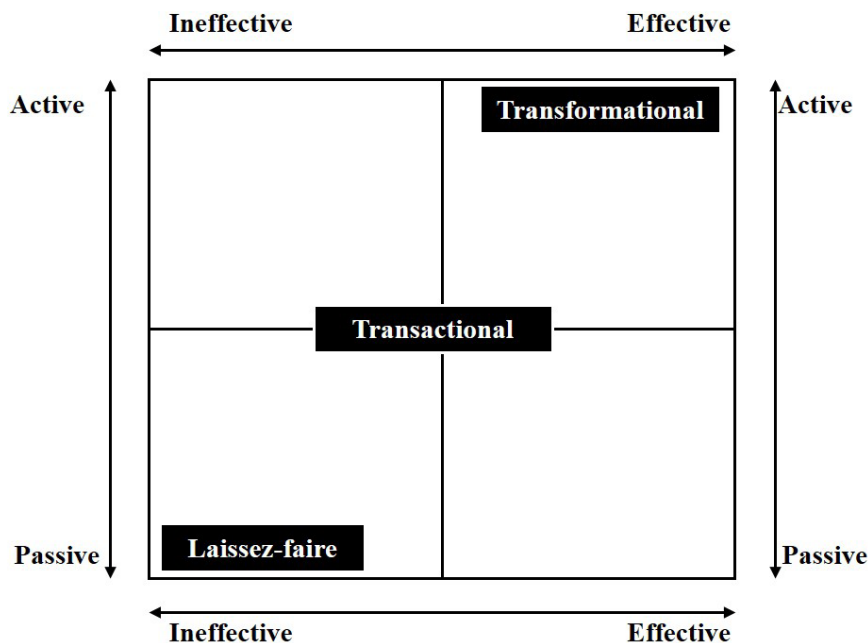


Figure 1 – “Full spectrum” theory model of leadership

Source: Full Leadership Development (Avolio, 1999, p. 33)

From the initial work by Bass (1985) and subsequent developments, five components of transformational leadership were identified: idealized influence (attributes and behaviours), inspirational motivation, intellectual stimulation and individualized consideration. Through idealized influence (attributes), leaders wield great power and influence over their followers, in such a way that the latter develop strong feelings about the former, considering them exceptional and respectable individuals, having full confidence in them and identifying with them and with their mission. In idealized influence (behaviour), leaders inspire their followers through an achievable vision, talk about their values and beliefs and are consistent with them, always taking into account the moral and ethical consequences of their decisions. Inspirational motivation is based on the motivation instilled by leaders, promoting team spirit, articulating common goals in a simple manner, contributing to a mutual understanding of what is right and important. Intellectual stimulation foresees that leaders help others be creative, innovative and to question and report problems. Followers are encouraged to question their own beliefs, assumptions and values, and even those of leaders. Individualized consideration implies the understanding and sharing in the concerns and needs of others, and treating each individual uniquely. It also seeks to provide an enabling environment that allows each individual to expand, in an attempt to maximize and develop individual potential, creating opportunities and developing organizational cultures that support individual growth (Northouse, 2013, pp. 191-193).

Transactional leadership includes contingent reward, management by exception (active) and management by exception (passive). Contingent reward is based on the fact that leaders define goals, showing recognition and allocating rewards when those goals are achieved, based on the assumption that those rewards lead to improved performances, both individually and by the group. Management by exception (active) is based on the attitudes of leaders who describe the models to be followed, punishing those who do not comply with what was previously established. It implies a strict and constant monitoring of errors and failures, so that corrective action is taken immediately upon their occurrence. Management by exception (passive) is characterized by a kind of inactivity in the face of problems on the part of leaders, who only act when problems get worse (Northouse, 2013, pp. 195-196).

Laissez-faire leadership assumes a non-leadership behaviour, where the individual in charge foregoes responsibility, avoids and delays decisions and puts no effort into helping meet the needs of subordinates (Northouse, 2013, p. 196).

For Bass (1985), although considering them distinct and independent, transactional leadership complements transformational leadership and is a requirement for effective leadership and for above-expectations performances from followers, as shown in Figure 2.

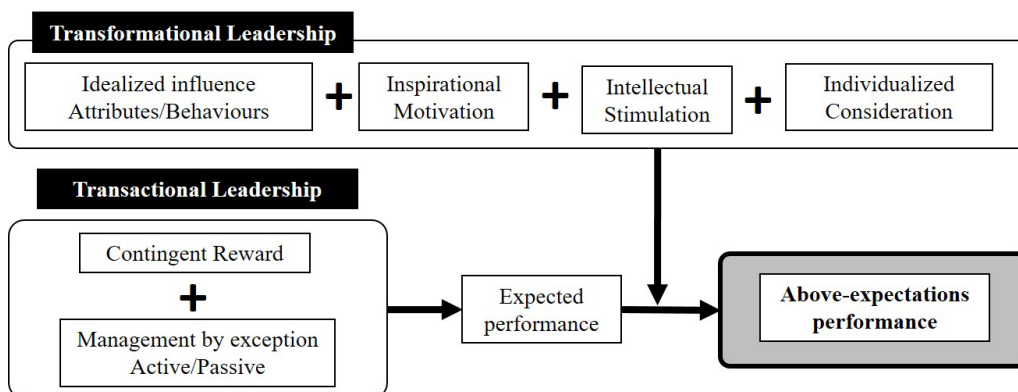


Figure 2 –Complement in transactional leadership through transformational leadership

Source: Adapted from *MLQ: Manual and Sampler* (Bass & Avolio, 2004, p. 21)

b. Organizational change

We live in an organizational world and organizations are a necessary part of society, for which they achieve numerous goals. The power and influence of these organizations, both private and public, and their impact on society has increasingly drawn attention to their operation and responsibilities. The term “organizational change” alone, despite being easily associated with changes in organizational activities, does not explain the size and type of activities that are subject to this change.

For the purposes of this study, we adopted the concept of organizational change proposed by Neiva & Paz (2007, p. 32): “Any change, planned or unplanned, in the components that characterize the organization as a whole – basic purpose, people, work, formal structure, culture, the organization’s relationship with the environment – arising from factors both internal and/or external to the organization, which have some consequence, positive or negative, to their organizational outcomes or to their survival.”

Burke (2002, p. 19) points out that organizational change is as old as organizations themselves, drawing a parallel with the organizational changes that had to be implemented for the construction of the pyramids of ancient Egypt or the Great Wall of China.

Organizational change can be seen as a path that must be followed, and it is important to understand beforehand where we want to go, as well as why and how we get there.

Kotter (1996) addresses the frequent and rapid changes that organizations have been subject to over the past decades in order to maintain a pace that allows them to keep up with competitors. While recognizing that change inevitably leads to some frustration, the author believes that most of the difficulties associated with change are preventable.

One of the greatest obstacles to the successful implementation of change in organizations is the social process known as resistance to change. This resistance is natural and is felt

both at the individual and organizational levels. Thus, leaders must be prepared to meet and deal with these resistances (Daft, 2010, p. 435). Resistance to change is the result of the tendency of an individual, group or organization, to oppose the social forces that intend to drive the system to a new state of balance (Lewin, 1947, p. 13).

The theoretical model proposed by Bouckennooghe, et al.(2009), on which this empirical study on variable organizational change is based, includes the following components for the implementation of the process: a readiness for change, a climate of change and a process of change. According to the authors, when there is a predisposition (readiness) for change, the organization is prepared to accept and cope with change and there will be little resistance. However, if the members of the organization do not have that predisposition, change can be rejected and negative reactions can ensue, such as sabotage or absenteeism.

In short, readiness for change reflects the beliefs, feelings and intentions towards the measures adopted to implement that change, as well as the perception of individuals and the organizational capability for a successful implementation (Bouckennooghe et al., 2009, pp. 561-563).

Still referring to readiness for change, the authors consider it to be a multifaceted concept, comprising three dimensions (intentional, cognitive and emotional) that take on different roles in the process that not always coincide. Intentional readiness for change reflects the extent to which team members are prepared to put their effort and energy into the change process. Cognitive readiness for change refers to the beliefs and thoughts of team members about the process of change, taking into account the respective advantages and disadvantages. And emotional readiness for change means the affective reactions to the process of change (Bouckennooghe et al., 2009, pp. 562; 591-592).

Of the various factors contributing to readiness for change, the authors identified a changing environment (internal context of change) and the process of change (how change is treated), as fundamental and prior to that dimension.

In this context, climate of change refers to the general environmental characteristics that contribute to change. It is the perception of the organization's members about the internal circumstances in which change occurs. It can be called internal change context and involves five components: general support by supervisors, trust in leadership, cohesion, participatory management and politicking. General support by supervisors is the support provided by managers regardless of the process of organizational change. Trust in leadership is based on reliable communication from top management. Cohesion is cooperation and trust in the competence of team members. It is the perception of togetherness and sharing within the organization's environment, including the willingness of members to support each other. Participatory management requires the participation of team members in decision-making discussions. Politicking portrays the perception level of political games within the organization. A high degree of politicking leads to unnecessary expense, considerable delays and unwillingness to share information and knowledge (Bouckennooghe et al., 2009, pp. 562; 591-592).

As for the change process, it illustrates the perception of how change is being conducted. It is transitory in nature and comprises three components: involvement in the change process, ability of management to lead change and attitude of top management toward change. Involvement in the change process assumes that employees have information and are involved in the decisions directly affecting them, including decisions on the organizational change process. The ability of management to lead of change is the perceived ability of management to deal with the ongoing process of change. The attitude of top management toward change refers to the degree of involvement and support by top management towards change (Bouckennooghe et al., 2009, pp. 562; 591-592).

c. Influence of transformational leadership in organizational change

Given the dynamism and competitiveness of the current environment, many organizations are changing the paradigm of their leadership styles in order to continue to succeed and be able to achieve their objectives, that is, to survive. In this context, the role of leadership is generally seen as essential for the implementation of organizational change (Kotter, 1996, pp. 175-185), and the major leadership theories emphasize the relationship between organizational change and transformational leadership (Bass, BM, 1985).

There is consensus among authors and researchers about the importance of transformational leadership for change, however there is still little empirical evidence of the relationship between transformational leadership and the reaction of employees and collaborators to change (Burke, 2002, p. 92). There are several studies proving the existence of a direct and positive relationship between transformational leadership and commitment to change (Chou, 2013; Liu, 2009; May-Chiun, Ramayahb & Runa, 2010), however some authors propose that it is necessary to look more closely at the mediating factors between transformational leaders and followers and the respective results (Bass et al., 2003, p. 208).

In spite of most of the models and theories of organizational change focusing on the importance of leadership at top management level, it is at middle management level that change occurs, or should occur, it is them who better understand employees, customers and the market and surrounding environment (Hills, Dye & Mills, 2009, pp. 134-135).

In this context, this study focuses its attention on the transformational leadership behaviours of middle managers and their effect on the perception of followers about the climate of change, how the process of change has been developing and, consequently, their readiness for change.

We have mentioned earlier that leaders are the main agents of change. Hence, Fullan (2011, pp. 152-154) argues that the essence of leaders during change is their ability to generate energy and passion in others through a climate of action.

Transformational leaders thus seek to assist and guide their team, caring about their development, self-esteem and well-being. They strive for organizational excellence, adopting new management models and work philosophies to enhance the motivation of their followers and therefore individual and organizational performance.

2. Characterization of the object of study

The creation of the Combined Arms School was approved by the Order of Minister of National Defence in July 3, 2013, with effect from 01 October 2013. This new Portuguese Army Unit absorbed the training that had until that moment been administered to the military personnel of the Permanent Staff of the Army in the respective Practical Schools, resulting in the closing down of the Practical Schools of Infantry (Escola Prática de Infantaria – EPI), Artillery (Escola Prática de Artilharia – EPA), Cavalry (Escola Prática de Cavalaria – EPC), Engineering (Escola Prática de Engenharia – EPE), Communications (Escola Prática de Transmissões – EPT) and the Military Centre of Physical Education and Sports (Centro Militar de Educação Física e Desportos – CMEFD).

It is located in Mafra, in the premises of the EPI and CMEFD, and it occupies four different areas: the Mafra Convent and the Alto da Vela (the former EPI facilities), the São Januário barracks (former CMEFD facilities) and the Mafra Military Grounds (Tapada Militar de Mafra). On the whole, it offers a diverse set of infrastructures for training, offices and quarters, which were subject to recent intervention to improve their conditions of use.

On October 7, 2013, at the “Lieutenant Colonel Magalhães Osório” Parade in Mafra, the activation ceremony of the Combined Arms School took place, presided over by the General Chief of the Army Staff (CEME), General Artur Neves Pina Monteiro. In his speech, the General CEME stated that “the single School model now built includes a network organization centred in the Combined Arms School, which will be the repository of knowledge and where essentially technical training will take place, combined with additional tactical training, to be administered in Training Centres located in operational Units selected for their human and material resources”.

To fulfil its mission, the School received military and civilian employees of the dissolved Units and other Army Units to build up its organic staff, in a total of 522 military and civilian employees.

The challenges faced by this new Portuguese Army Unit are huge, in terms of bringing together the cultures and work processes of dissolved Units, contributing to the quality and efficiency of their product, the training of staff. In the words of the Commander of the Combined Arms School during his inauguration ceremony: “The fact that these six units, with different traditions, cultures and practices are now joined in the same space is both a challenge and an opportunity. A challenge of preserving the identity of each Arm while creating an inter-Arms culture that promotes the synergies inherent to their combined employment, avoiding gaps and duplication of work (...)”.

3. Research methodology

a. Variables and model of analysis

The independent variables came into being through the constructs proposed by Bass and Avolio (2002) on the “full spectrum” leadership theory, which includes transformational

leadership (five components and twenty items), transactional leadership (three components and twelve items), *laissez-faire* leadership (one component and four items) and the outcomes of leadership (three components and nine items).

The constructs proposed by Bouckennooghe, Devos and Van den Broeck (2009) were used as dependent variables in the context of organizational change, covering the climate of change (five components and eighteen items), the process of change (three components and fifteen items) and readiness for change (three components and nine items).

The model of analysis (Figure 3) prepared for the empirical research thus comprises three main parameters: concepts, associated dimensions and indicators. All these elements were provided by the respective theoretical models and the variables, which are no more than the “raw material” for research, result from the combination of those parameters. The relationship between the variables at play thus allowing us to find the answers required to validate the hypotheses listed below:

- Hypothesis 1: Subordinates mostly perceive in the leadership of their direct supervisors characteristics associated with transformational leadership, to a lesser extent characteristics associated with transactional leadership, and to a very low degree, characteristics associated with *laissez-faire* leadership.
- Hypothesis 2a: The organization’s internal environment is favourable to the organizational change process.
- Hypothesis 2b: The members of the organization feel involved and confident in the ability of their leaders to lead the organizational change process.
- Hypothesis 2c: The members of the organization demonstrate the individual and organizational ability to successfully implement change.
- Hypothesis 3: Transformational leadership has a positive influence on the perception by subordinates of the climate of change.
- Hypothesis 4: Transformational leadership has a positive influence on the perception of subordinates about the way the organizational change process is being implemented.
- Hypothesis 5: Transformational leadership has a positive influence on the readiness for change demonstrated by subordinates.

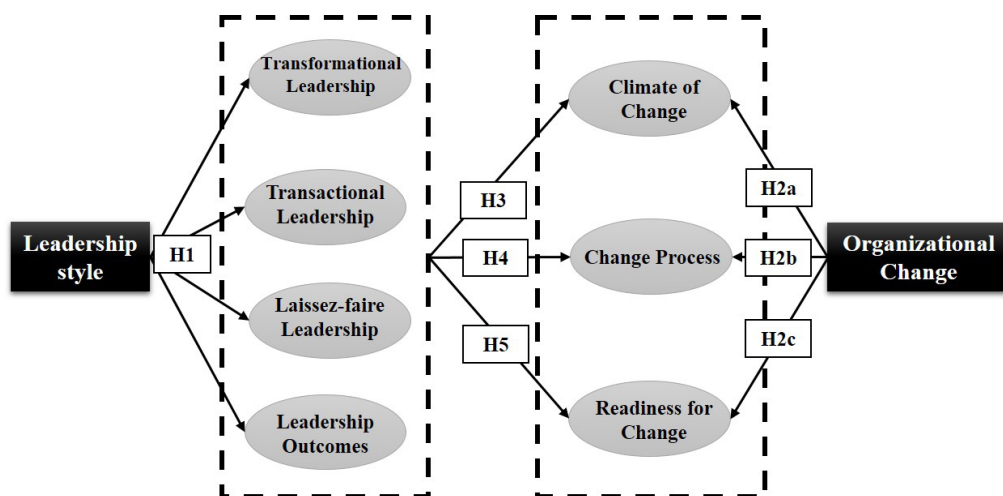


Figure 3 – Model of Analysis

Source: (Garcia, 2014)

a. Participants

The research population selected for application of the questionnaire surveys were the Officers and Sergeants serving at the Combined Arms School, in a total of 205 military, with a response rate of 40% of respondents, that is, 82 military. These numbers did not include top and key middle leaders, with whom individual interviews were conducted. Of those surveyed, 45.1% were Sergeants, 24.4% were Junior Officers, 15.9% were Captains and 14.6% were Senior Officers. The most represented age range was between 41 and 50 years (35.4%), whereas only 3.7% of respondents belonged to the older age bracket (51 to 60 years old).

b. Procedure

Data collection for this research work was performed through a questionnaire survey, using two previously validated separate instruments, and that fit the theoretical conceptions concerning transformational leadership (Bass & Avolio, 2002) and organizational change (Bouckennooghe et al., 2009)

In order to facilitate the implementation of the instruments, it was decided to integrate them into a single questionnaire, prepared on the Moodle platform of the Institute of Higher Military Studies (Instituto de Estudos Superiores Militares - IESM), and a hyperlink was sent to the official email addresses of recipients, which included an introductory explanation.

All questions were closed and compulsory. The questionnaires were sent, along the lines described above, to all Officers and Sergeants of the Combined Arms School, with the exception of top and key middle management, in a total of 205 military personnel.

In an attempt to maintain the ethics of this work, permission was previously requested from the respective authors for the use and application of the questionnaires. In the case of the Multifactor Leadership Questionnaire (MLQ5X), this was done initially through the Mind Garden Company that owns the respective copyright, and all the required documents were made available in Portuguese. Because of the prior existence of a research paper (Rosinha, 2009) where the questionnaire was translated and adapted to the Portuguese military context, authorization was requested from the respective author to use that version, which was subsequently given. Regarding the Organizational Change Questionnaire (OCQ)¹, permission from the authors was requested by email, in the person of Dave Bouckennooghe, whose answer was affirmative for academic purposes.

Also regarding the OCQ, and because there is currently no Portuguese version, a translation was produced from the original English version of the instrument. Subsequently, a different translator produced a retroversion of the text into English. This procedure allowed us to correct the meaning of some questions.

In order to identify possible difficulties in interpreting and adapting the language to the military context, to students of the Joint Staff Course 2013-1014 were asked to perform the respective pre-test. This procedure allowed us to identify some questions that were difficult to understand and collect a significant number of suggestions, proving a huge contribution to the refinement of the instruments, particularly in relation to the OCQ. It also allowed us to measure the average time for completing the questionnaire.

After the process of authorization by the authors for the questionnaires had been concluded, as well as their respective consolidation, the process of implementation began, which occurred during the month of February 2014. Prior to the whole process, the necessary authorization was obtained from the commander of the Combined Arms School to carry out the questionnaires and procedures.

c. Measuring

Transformational leadership. Measured by the version of the MLQ5X translated into Portuguese by Rosinha (2009). This questionnaire identifies, in a 360° perspective, the presence of variables relating to leadership style (transformational leadership, transactional leadership and *laissez-faire* leadership), and assesses the relationship between these leadership styles and the organizational variables relative to the outcome of leadership (extra effort, effectiveness and satisfaction). The MLQ5X comprises 45 items assessed on a five point Likert scale (0 - never and 4 - Often).

¹ *Organizational Change Questionnaire – Climate of Change, Processes, and Readiness (OCQ-C, P, R).*

Table I – Dimensions, components and indicators of the QML5X

Dimension	Components
Transformational Leadership	Idealized Influence (attribute)
	Idealized Influence (behaviours)
	Inspirational Motivation
	Intellectual Stimulation
	Individualized Consideration
Transactional Leadership	Contingent Reward
	Management by Exception (active)
	Management by Exception (passive)
Laissez-faire Leadership	<i>Laissez-faire</i>
Leadership Outcomes	Extra effort
	Effectiveness
	Satisfaction with leader

Source: (Garcia, 2014)

Organizational change. Measured by the version of the OCQ translated into Portuguese by Garcia (2014). A questionnaire that identifies the circumstances in which change occurs (climate of change or internal context of change), how that specific change is executed (change process) and the individual level of readiness for change (Bouckennooghe et al., 2009, p. 591). The OCQ comprises 42 items, assessed on a five point Likert scale (0 - Strongly disagree and 4 - I completely agree).

Table II – Dimensions, components and indicators of the OCQ

Dimension	Components
Climate of Change (internal context)	General support from supervisors
	Trust in leadership
	Cohesion
	Participation by management
	Politicking
Change Process	Involvement in the change process
	Ability of leaders to lead change
	Attitude of top management towards change
Readiness for change	Intentional readiness for change
	Cognitive readiness for change
	Emotional readiness for change

Source: (Garcia, 2014)

In order to complement the quantitative data collected through the questionnaire surveys, a serie of individual interviews were conducted to the top and key middle leaders of the Combined Arms School.

4. Presentation of the data and interpretation of results

a. Validation of the measuring instruments

The data were analysed using the SPSS 22.0 software.

In order to measure the reliability of the items in each instrument, we used Cronbach's alpha, an internal consistency coefficient that measures the level of coherence evidenced by the answers of respondents to each of the questionnaire items. The value of the inter-item correlations varies between 0 and 1, and a possible score is the one proposed by Pestana & Gageiro (2008, pp. 529-530)

The value obtained for the totality of the variables was 0.928 in the MLQ5X and 0.948 in the OCQ, which represents an excellent internal consistency.

Table III – Internal consistency analysis

Instrument/Dimensions	Nº items	Cronbach's Alpha	Classification (Pestana & Gageiro, 2008)
Multifactor Leadership Questionnaire (MLQ5X)	45	0,928	Excellent
Transformational Leadership	20	0,972	Excellent
Transactional Leadership	12	0,732	Good
Laissez-faire Leadership	4	0,889	Very Good
Leadership Outcomes	9	0,966	Excellent
Organizational Change Questionnaire (OCQ)	42	0,948	Excellent
Climate of Change	18	0,812	Very Good
Change Process	15	0,934	Excellent
Readiness for change	9	0,937	Excellent

Source: (Garcia, 2014)

b. Perceived leadership styles

To obtain the data on the perception of leadership styles by direct supervisors, descriptive statistics were applied to the independent variable (Leadership Style - MLQ5X).

Within the dimensions associated with leadership type, the highest mean values relate to "transformational leadership" (2.77), followed by "transactional leadership" (2.11) and "laissez-faire leadership" (1.03), however "transactional leadership" presents the smallest standard deviation value (0.36).

Within the components of each dimension (leadership categories), it is worth noting the positive meanvalues for “idealized influence (attributes)” and “idealized influence (behaviour)” (2.90), both characteristic of transformational leadership. The lowest mean values correspond to “*laissez-faire* leadership” (1.03) and “passive management by exception” (1.45), the latter a feature of transactional leadership. The MLQ5X also measures the “outcomes of leadership” in the “extra effort”, “efficiency” and “satisfaction with the leader” components. The “outcomes of leadership” component is generally good, with special emphasis on “efficiency” (3.03).

Given the above, Hypothesis 1 is validated: “Subordinates mostly perceive in the leadership of their direct supervisors characteristics associated with transformational leadership, to a lesser extent characteristics associated with transactional leadership, and to a very low degree, characteristics associated with *laissez-faire* leadership.”

Analysing Pearson’s correlation coefficients (r)² among leadership style variables (Table IV), it was verified that all categories of transformational leadership have a significant positive correlation with each other, confirming the results of the research by Bass and Avolio (1994). The categories of “outcomes of leadership” also present a significant positive correlation with the categories of “transformational leadership”. The positive correlation between the categories of transformational and transactional leadership (with the exception of “management by exception passive”) is justified by the fact that both styles represent constructive aspects of leadership, and effective leaders present, to varying degrees, traces of leadership from both styles. Mention must be made of the strong correlation between “transformational leadership” and “contingent reward”, that is, in this context, military individuals associate rewards by their direct supervisors to transformational leadership.

Table IV – Correlations matrix (leadership styles)

Dimensions/Components	MED	DPD	ABM	AGS	CLT	COE	GPT	POL	PDM	EPM	CCD	ACT	PPM	PIM	PCM	PEM
Climate of Change (ABM)	2,46	0,49	1													
General support from supervisors (AGS)	2,76	1,09	0,80**	1												
Trust in top management (CLT)	1,80	0,88	0,65**	0,42**	1											
Cohesion (COE)	3,08	0,87	0,74**	0,51**	0,32**	1										
Participation by management (GPT)	2,46	0,89	0,87**	0,59**	0,57**	0,66*	1									
Politicking (OLP)	2,18	0,89	-0,45**	-0,51**	-0,60**	-0,52**	-0,52**	1								
Change Process (PDM)	2,37	0,69	0,73**	0,71**	0,78**	0,45**	0,65**	-0,71**	1							
Involvement in the process (EPM)	1,73	0,91	0,59**	0,48**	0,79**	0,30**	0,57**	-0,59**	0,86**	1						
Ability of (direct) leaders (CCD)	2,69	1,02	0,74**	0,89**	0,48**	0,45**	0,57**	-0,55**	0,82**	0,61**	1					
Attitude of top management (ACT)	2,69	0,76	0,28*	0,16	0,52**	0,26*	0,29**	-0,49**	0,58**	0,32**	0,14	1				
Readiness for change (PPM)	2,43	0,46	0,26*	0,15	0,44**	0,28*	0,10	-0,27*	0,39**	0,26*	0,22*	0,45**	1			
Intentional readiness (PIM)	3,13	0,83	0,47**	0,34**	0,59**	0,46**	0,35**	-0,47**	0,59**	0,45**	0,39**	0,53**	0,87**	1		
Cognitive readiness (PCM)	2,39	0,97	0,50**	0,43**	0,51**	0,52**	0,51**	-0,67**	0,66**	0,59**	0,48**	0,44**	0,24*	0,55**	1	
Emotional readiness (PEM)	2,53	1,15	0,40**	0,30**	0,56**	0,45**	0,30**	-0,56**	0,61**	0,49**	0,39**	0,54**	0,78**	0,79**	0,74**	1

*The correlation is significant at the 0.05 level

** The correlation is significant at the 0.01 level

MED – Mean
DPD – Deviation

Source: (Garcia, 2014)

² The classification adopted in this work is by Maroco (2007), which foresees: $0 < r < 0.29$: minor correlation/ $0.30 > r < 0.69$: significant moderate correlation/ $0.70 > r < 1$: strong significant correlation.

c. Perceived organizational change

From the descriptive analysis of the dimensions associated with perceived organizational change, under “climate of change”, “cohesion” (3.08) has the highest mean values, and “attitude of top management towards change” (2.69) and the “abilities of (direct) management” (2.69) have the highest mean values with regard to the “change process”. Under “readiness for change”, the highest mean values belong to “intentional readiness for change” (3.13).

Of all the components, the one with lower mean values was “involvement in the change process” (1.73), which indicates that most respondents do not feel involved in the process of change underway. The component with the lowest standard deviation is “attitude of top management towards change”, with a value of 0.76.

The analysis of Pearson’s correlation coefficients (r) among the variables of organizational change (Table V) identifies a significant positive correlation between most components, especially the correlations between “general support by supervisors” and the “ability of (direct) management to lead change” ($r = 0.89$, $p < 0.01$), and between “trust in top leadership” and “involvement in the process” ($r = 0.79$, $p < 0.01$), that is, greater involvement in the change process leads to a greater trust in leadership and vice versa. There is also a minor positive correlation between “general support by supervisors” and the “attitude of top management towards change” ($r = 0.16$), as well as between “ability of (direct) management to lead change” and “attitude of top management towards change” ($r = 0.14$).

Table V – Correlations matrix (organizational change)

Dimensions/Components	MED	DPD	ABM	AGS	CLT	COE	GPT	POL	PDM	EPM	CCD	ACT	PPM	PIM	PCM	PEM
Climate of Change (ABM)	2,46	0,49	1													
General support from supervisors (AGS)	2,76	1,09	0,80**	1												
Trust in top management (CLT)	1,80	0,88	0,65**	0,42**	1											
Cohesion (COE)	3,08	0,87	0,74**	0,51**	0,32**	1										
Participation by management (GPT)	2,46	0,89	0,87**	0,59**	0,57**	0,66*	1									
Politicking (OLP)	2,18	0,89	-0,45**	-0,51**	-0,60**	-0,52**	-0,52**	1								
Change Process (PDM)	2,37	0,69	0,73**	0,71**	0,78**	0,45**	0,65**	-0,71**	1							
Involvement in the process (EPM)	1,73	0,91	0,59**	0,48**	0,79**	0,30**	0,57**	-0,59**	0,86**	1						
Ability of (direct) leaders (CCD)	2,69	1,02	0,74**	0,89**	0,48**	0,45**	0,57**	-0,55**	0,82**	0,61**	1					
Attitude of top management (ACT)	2,69	0,76	0,28*	0,16	0,52**	0,26*	0,29**	-0,49**	0,58**	0,32**	0,14	1				
Readiness for change (PPM)	2,43	0,46	0,26*	0,15	0,44**	0,28*	0,10	-0,27*	0,39**	0,26*	0,22*	0,45**	1			
Intentional readiness (PIM)	3,13	0,83	0,47**	0,34**	0,59**	0,46**	0,35**	-0,47**	0,59**	0,45**	0,39**	0,53**	0,87**	1		
Cognitive readiness (PCM)	2,39	0,97	0,50**	0,43**	0,51**	0,52**	0,51**	-0,67**	0,66**	0,59**	0,48**	0,44**	0,24*	0,55**	1	
Emotional readiness (PEM)	2,53	1,15	0,40**	0,30**	0,56**	0,45**	0,30**	-0,56**	0,61**	0,49**	0,39**	0,54**	0,78**	0,79**	0,74**	1

*The correlation is significant at the 0.05 level

** The correlation is significant at the 0.01 level

MED – Mean

DPD – Deviation

Source: (Garcia, 2014)

The results achieved in the dimension “climate of change” allow us to validate Hypothesis 2a: “The organization’s internal environment is favourable to the organizational change

process.” Despite the mean values of most components being positive, the lowest value was “trust in top leadership” (1.80), an indicator of elements with low levels of trust in the organization’s top leadership. The positive mean values in “politicking” (2.18) are indicators of perceived political games within the organization. It should be noted that the existence of politicking can lead to unnecessary expenses, considerable delays and unwillingness to share of information and knowledge (Bouckennooghe et al., 2009, p. 598)

The results obtained in the “change process” dimension, that is, the perceptions of respondents about the way the change process is being handled, validate Hypothesis 2b: “The members of the organization feel involved and confident in the ability of their leadersto lead the organizational change process”. In spite of showing positive mean values in the “abilities of direct management” (2.69) and “attitude of top management” (2.69), the majority of respondents believe that their involvement and the information provided about the process of change are still low (1.73).

Regarding the “readiness for change”dimension, the results obtained and the respective analysisallow us to validateHypothesis 2c: “The members of the organization demonstrate the individual and organizational ability to successfully implement change”. In this context, respondents show acceptable levels of predisposition to change, whether intentional (3.13), cognitive (2.39) or emotional (2.53).

The lowest values in cognitive readiness assume that respondents,while being prepared to put their effort and energy into the change process, have reservations about the benefits that might ensue.

d. The relationship between leadership style and the perception of subordinates about the climate of change

The results show a significant positive correlation between “transformational leadership” and “climate of change” ($r = 0.71$, $p < 0.01$), as shown in Table VI.

Table VI – Correlations matrix among variables

Dimensions of the variables	MED	DPD	LTF	LTS	LLF	ABM	PDM	PPM
Transformational Leadership (LTF)	2,77	0,81	1					
Transactional Leadership (LTS)	2,11	0,36	0,20	1				
Laissez-faire Leadership (LLF)	1,03	0,98	-0,79**	0,52	1			
Climate of Change (ABM)	2,46	0,49	0,71**	0,17	-0,60**	1		
Change Process (PDM)	2,37	0,69	0,71**	0,12	-0,56**	0,73**	1	
Readiness for change (PPM)	2,43	0,46	0,32**	0,01	-0,30*	0,26*	0,39**	1
*The correlation is significant at the 0.05 level			MED – Mean					
** The correlation is significant at the 0.01 level			DPD – Deviation					

Source: (Garcia, 2014)

With regard to the components of “transformational leadership”, these provide a significant positive correlation with all positive components of “climate of change” and a significant negative correlation with the negative component of “climate of change”, “politicking”. The correlation between “transformational leadership” and the component “trust in top leadership” ($r = 0.44$, $p < 0.01$) and “cohesion” ($r = 0.45$, $p < 0.01$), while positive, presents a lower correlation.

There is also a positive correlation between “transactional leadership” and “climate of change” ($r = 0.17$). As regards the components of “transactional leadership”, it was found that there was a significant positive correlation between “contingent reward” and the positive components of “climate of change”, a very significant positive correlation between “management by exception (active)” and the positive components of “climate of change”, a significant negative correlation between “management by exception (passive)” and the positive components of “climate of change”.

“Politicking”, a negative component of “climate of change”, is negatively correlated with all components of “transactional leadership” except “management by exception (passive)”, with a significantly positive correlation.

Regarding “laissez faire leadership”, the respective correlation with the positive component “climate of change” is significantly negative, as expected. On the other hand, there is a positive and significant correlation of this dimension with “politicking”, from which can be concluded that there is an link between both variables, that is, when leaders are perceived as more *laissez-faire*, subordinates, in addition to having a less favourable perception of the climate of change, admit the existence of power games within the Combined School of Arms.

“Transformational leadership” is the type of leadership with higher correlation values, that is, the military personnel who perceive their direct supervisors as mostly transformational are also those who perceive the organization as possessing internal features which contribute positively to the process of change.

From the analysis of the scatter plot for the variables resulting from a simple linear regression, while it did not present a totally homogeneous configuration, it could be verified that the model provides a linear relationship between variables. The coefficient of determination³ ($R^2 = 0.502$) confirms that in this study there is an acceptable adjustment between “transformational leadership” and “climate of change”, with this value meaning that 50.2% of the variance of the “climate of change” variable is explained by the “transformational leadership” variable.

Given the above, we are able to validate Hypothesis 3: “Transformational leadership has a positive influence on the perception by subordinates of the climate of change”.

³ In the case of social sciences, for R^2 values > 0.500 , the appropriateness of the model to the data is considered acceptable (Maroco, J, 2007, p. 564).

e. The relationship between leadership style and the perception of subordinates about the process of change

In this context, we identified a significant positive correlation between the dimensions “transformational leadership” and “change process” ($r = 0.71$, $p < 0.01$). With regard to its components, there is a significant positive correlation with the “change process” components ($r = 0.80$, $p < 0.01$) with the exception of the “attitude of top management towards change” component, with a 0.16 correlation.

The correlation between the “transactional leadership” and “change process” dimensions also presents a low value ($r = 0.12$). In the correlation between components, we find that there is a significant positive correlation between the components of the “change process” and “contingent reinforcement” with the exception of “attitude of top management towards change”, which presented a virtually null correlation with the “transactional leadership” components. There is also a significant negative correlation between the “change process” and “management by exception (passive)” components ($r = -0.42$, $p < 0.01$).

The dimensions “*laissez-faire* leadership” and “change process” present a significant negative correlation ($r = -0.56$, $p < 0.01$), including at the component level, except for “attitude of top management towards change”.

In this case, the military personnel who perceive their direct supervisors as primarily transformational are also those with a more positive perception of how the process is being conducted.

It is also worth noting that with regard to the “ability of direct management to lead change”, “*laissez-faire* leadership” presents a correlation to “transformational leadership” that is opposite but almost equal in range.

The analysis of the output of the linear regression, including the scatter plot between the variables “transformational leadership” and “change process” helps us to understand their relationship, with the model showing a linear relationship between the variables. The percentage of variance of the “change process” variable explained by “transformational leadership” (50.9%), which corresponds to the obtained coefficient of determination, is very close to that of “climate of change”,

Given the above, we are then able to validate Hypothesis 4: “Transformational leadership has a positive influence on the perception of subordinates about the way the organizational change process is being implemented”.

f. The relationship between leadership style and subordinates’ readiness for change

Like the previous dimensions, “readiness for change” also presents a positive correlation ($r = 0.32$, $p < 0.01$) with “transformational leadership”, although to a lesser extent. The component analysis allows us to identify homogeneity in the values presented by the correlation between the variables. In this context, the component with a slightly stronger

correlation is “inspirational motivation” ($r = 0.39$, $p < 0.01$), thus working as the main driver of readiness for change.

These values allow us to conclude that there is influence of the “transformational leadership” style in the “readiness for change” of subordinates, and that other factors certainly contribute to a greater extent for this predisposition.

The correlation between the “transactional leadership” and “readiness for change” dimensions is null. Analysing the correlation between components, we found that there is a significant positive correlation between “contingent reward” and the three components of “readiness for change”, but that within the respective dimension it ends up being cancelled by the existing negative correlation between “management by exception” and other components of “readiness for change”. These data indicate that “management by exception” constitutes an influential factor of “readiness for change”, albeit to a reduced extent.

The “*laissez-faire* leadership” and “readiness for change” dimensions show a negative correlation of 0.18, including at the component level. These values are indicative of the negative influence that the *laissez-faire* leadership style has on the readiness for change of subordinates, that is, the military personnel who perceive their direct supervisors as primarily *laissez-faire* are also those who are less predisposed for change.

Thus, we found that there are significant differences in correlation between the “readiness for change” dimension and the respective components, depending on the style of leadership exercised by the direct supervisor, with “transformational leadership” as the only dimension presenting positive values in this case. Despite “transactional leadership” presenting a practically null correlation, we found that its “contingent reward” component presents values very close to those obtained by the “transformational leadership” components.

Despite the “transformational leadership” values appearing in a significant positive correlation, that these values are high indicates that there are other factors influencing “readiness for change”. This is noticeable in the “transformational leadership” and “readiness for change” scatter plot where, although a positive alignment between the variables can be verified, that alignment has low significance. Notwithstanding, it is concluded that the military personnel who perceive their direct supervisors as primarily transformational are also those with greater readiness for change. The coefficient of determination ($R^2 = 0.09$) obtained by linear regression means that only 9% of the variance of the “readiness for change” variable is explained by the “transformational leadership” variable.

Given the above, we are able to validate Hypothesis 5: “Transformational leadership has a positive influence on the readiness for change demonstrated by subordinates”.

g. Analysis of the interviews

From the analysis of the interviews conducted with the top and key middle leaders of the Combined Arms School, it became clear that most respondents recognize how important they are in influencing their subordinates to achieve the proposed goals for organizational change,

and particularly in the specific case of the object of study, the creation of the Combined Arms School. With the exception of one respondent, for whom leadership style is irrelevant, all other respondents are of the opinion that leadership styles influence the individuals involved and the process of change.

When asked about their characteristics as leaders, all respondents recognized in their behaviours and attitudes leadership traits primarily associated with transformational leadership, coupled with some features of transactional leadership, namely contingent reward. All respondents stressed the importance of teamwork, of a sense of justice and of getting individuals involved in the change process. The importance given by respondents to this last factor contradicts the survey results, as the majority of respondents do not feel involved in the change process.

With regard to how this specific process of change is underway in the Combined Arms School, respondents acknowledge the existence of some constraints. To begin with, they point out that the process has not been preceded by an effective preparation phase, mentioned in all theoretical models of organizational change. The short time frame between the decision to create the Combined Arms School and its activation has certainly contributed to this state of affairs. Another constraint has to do with military culture, in this case with the six subcultures involved, some of them very marked and distinct, and the challenge is to unite them in a single project without losing their respective identity. Despite these constraints, the opinion was unanimous that the process is proceeding in a positive way, and it has been possible to learn and subsequently correct procedures, whether individual or organizational, towards the consolidation and successful implementation of this organizational change process.

With regard to the acceptance and participation of subordinates in the change process, all respondents stated that, despite internal resistance, a normal occurrence in these situations, their subordinates are up primarily facilitators of change.

Conclusions

The attempt to understand the phenomenon of leadership and its importance in organizational success has been the driver of observation, study and documentation in the field throughout history. In this context, the study of leadership has focused on successful and unsuccessful organizations, whether military or civilian, in order to find the right combination of qualities required in a truly transformational leader.

The phenomenon of change has become, meanwhile, a core aspect of leadership and management in modern organizations and is undoubtedly a current issue. We can state that leadership and change go hand in hand and are an inseparable part of organizations. Organizations which, when confronted with the need for change, must face this challenge not as a problem but as an opportunity, and the ability to exploit these opportunities must come primarily from their leaders, who must, as one of their main tasks, promote change to ensure organizational success.

The Portuguese Army, as an agent of the society where it operates, cannot be oblivious to this reality, and not withstanding the modernization of weapons and equipment, the reorganization of structures and the adoption of new tasks and missions, human resources are still its main focus and the main driver to meet these new challenges.

The main results achieved in this research confirm the proposed model of analysis, pointing to the influence of leadership styles, particularly transformational leadership, in the organizational change process. These results are consistent with the theoretical design and with the studies conducted on these two constructs, and point to transformational leadership being suitable to an organizational environment characterized by a volatile internal and external climate, and where the ability to adapt and a sense of change are imperative to organizational success and survival.

It was thus verified, with regard to the Combined Arms School, that:

- Subordinates mostly perceive in the leadership of their direct supervisors characteristics associated with transformational leadership, to a lesser extent characteristics associated with transactional leadership, and to a very low degree, characteristics associated with *laissez-faire* leadership.
- The organization's internal environment is favourable to the process of organizational change.
- The members of the organization feel involved and have trust in the ability of their leaders to drive the organizational change process.
- The members of the organization demonstrate individual and organizational capacity to implement that change successfully.
- Transformational leadership has a positive influence on the perception of subordinates about the climate of change, that is, the military personnel that perceive their direct supervisors as primarily transformational are also those who perceive the organization as possessing internal characteristics that positively contribute to the change process.
- Transformational leadership has a positive influence on the perception of subordinates about the change process, that is, the military personnel who perceive their direct supervisors as primarily transformational are also those who have a more positive perception of how the change process is being conducted.
- Transformational leadership has a positive influence on the readiness for change of subordinates, that is, the military personnel who perceive their direct supervisors as primarily transformational are also those with greater readiness for change.

The main constraints of this research are related to the sample size, for which reason we recommend caution in mainstreaming the results of the analysis.

Another constraint underlying this research is related to the fact that it has only been conducted during the change process. The research leading to the validation of the OCQ was carried out in the respective organizations before and during the change, so the authors advise that it is preferable to administer that questionnaire in this manner.

We believe that this research work is a contribution to increase the scientific knowledge about the dynamics of leadership and organizational change in the national military context. In practical terms, we consider that the methodology followed and the results achieved constitute an instrument of great interest to the Command of the Combined Arms School, in that they provide a snapshot of the current situation and allow the adoption of measures or the implementation of actions deemed necessary to promote effective leadership styles and develop the required mechanisms to improve the organizational change process underway. Indeed, the study reflects the importance of transformational leadership in the development of the organizational change process.

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