Designing an Organizational Culture Model in the Projects Environment: a Constructivist Approach*

Diseño de un modelo de cultura organizacional en el ámbito de los proyectos: una aproximación constructivista**

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Abstract

Specific behaviors and attitudes shown by people participating in an organization's projects have contributed to their success and have constituted a subculture (Kendra & Taplin, 2004; Morrison, Brown & Smit, 2006; Stare, 2012). The relationship between culture and project effectiveness has been studied by individualizing some cultural traits or by using constructs that need to be complemented (Stare, 2012). With the purpose of constructing a model that groups these cultural aspects, the present investigation took the constructivism as epistemological reference and used like method of application, the constructivist grounded theory. It was based on the literature review and the constrastation between the theory and the reality of the projects, through questionnaires and interviews with project leaders, team members and project stakeholders in 82 organizations located in Bogota, Colombia, belonging to different sectors of the industry. Patterns of attitudes and behaviors were determined and allowed to design a conceptual model of four dimensions: governance, learning, relationship between stakeholders and organizational integration. The dimensions group eight categories and thirty two cultural variables. The study extends the theory in organizational culture and in project management. At the practical level, it provides a framework that helps organizations identify the cultural aspects that need to be improved to achieve more successful projects. Future research can be oriented to statistically validate the model and establish its relationship with indicators of project effectiveness.

Keywords: Organizational Culture, Projects Environment, Constructivist Grounded Theory, Social Constructivism.

Resumen

Comportamientos y actitudes específicos mostrados por personas que participan en los proyectos de una organización han contribuido a su éxito y han constituido una subcultura (Kendra & Taplin, 2004; Morrison, Brown, & Smit, 2006; Stare, 2012). La relación entre cultura y efectividad de los proyectos ha sido estudiada identificando algunos rasgos culturales o usando constructos que requieren ser complementados (Stare, 2012).

It links the psychological perspective with the study of organizational culture and the project management within the epistemological framework of social constructivism. The study is registered in the project management research group of the EAN.

**El presente artículo es el resultado de la primera fase desarrollada en la tesis doctoral titulada: "Construcción de una cultura organizacional en el ámbito de los proyectos y su aplicación al sector de la Tecnología de la Información en Colombia". Enlaza la perspectiva psicológica con el estudio de la cultura organizacional y la gestión de los proyectos en el marco epistemológico del constructivismo social. Se encuentra inscrita en el grupo de investigación de dirección y gestión de proyectos de la EAN.

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Con el propósito de construir un modelo que agrupe estos aspectos culturales, la presente investigación tomó el constructivismo como referencia epistemológica y utilizó como método de aplicación, la teoría fundamentada constructivista. Se partió de la revisión de la literatura y la constrastación entre la teoría y la realidad de los proyectos, mediante cuestionarios y entrevistas a líderes de proyecto, integrantes de equipo y funcionarios relacionados con la gestión de los proyectos en 82 organizaciones ubicadas en Bogotá, Colombia, pertenecientes a diferentes sectores de la industria. Se determinaron patrones de actitudes y conductas que permitieron diseñar un modelo conceptual de cuatro dimensiones: gobernabilidad, aprendizaje, relacionamiento entre grupos de interés e integración organizacional. Las dimensiones agrupan ocho categorías y treinta y dos variables culturales. El estudio extiende la teoría en cultura organizacional y en gestión de proyectos. A nivel práctico, provee un marco de referencia que ayuda a las organizaciones a identificar los aspectos culturales que se deben mejorar para obtener proyectos más exitosos. Futuras investigaciones pueden orientarse a validar estadísticamente el modelo y establecer su relación con indicadores de efectividad de los proyectos.

Palabras clave: Cultura Organizacional, Proyectos Ambientales, Teoría Fundamentada Constructivista, Constructivismo Social.

Introduction

The cultural aspects shared by the project stakeholders[1] have been identified as part of a subculture inside the organization (Bryde, 2003; Kendra & Taplin, 2004; Stare, 2012). This subculture is characterized by certain attitudes and behaviors framed by social psychology (Ouchi & Wilkings, 1985): the stakeholders share a language related to project management (Kendra & Taplin, 2014), the organization recognizes that projects have to be managed (Bryde, 2003) and offers support (Alladwani, 2002; Janz & Pattarawan, 2003) and people understand the importance of using tools, methodologies and best practices during the development of the projects (Milosevic & Patanakul, 2005).

However, some features of organizational culture are considered barriers to project management, such as lack of leadership to promote project management policies or provide resources actually available to projects (Loo, 2002). Others features can positively impact the management of projects and their results, such as the level of interaction between areas (Pinto, 2010), the involvement of stakeholders (Rowlinson & Cheung, 2008), the degree of empowerment (Seibert, Silver, & Randolph, 2004) and the ease of sharing and using knowledge in the development of the projects (Janz & Pattarawan, 2003).

The problem to which this research responds is framed by the limitation found in the number of academic studies that characterize the subculture of projects (Kendra & Taplin, 2004; Morrison, Brown, & Smit, 2006; Stare, 2012) and the need to study the attitudes and behaviors of the stakeholders involved in the projects (Stare, 2012). The constructs proposed so far about a project organizational culture offer a partial explanation of the components of this subculture that need to be complemented (Stare, 2012). In addition, some studies only address certain cultural aspects in isolation way.

The author propose to group these isolated cultural aspects in a model that gives response to the following research question: What are the characteristics of an organizational culture that facilitate the effectiveness in the management of projects?

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1. The term stakeholder has been translated into Spanish, as grupos de interés o interesados. Stakeholders are defined as individuals or groups internal or external to the organization that can affect or be affected by the project (Kerzner, 2001).

Therefore, the objective of the research is to design a model of organizational culture in the projects environment that allows to identify the cultural features supporting the successful of the projects. The resulting model responds to the need to broaden the identification of the attitudes and behaviors of the stakeholders in the projects (Stare, 2012), justifying the realization of the present investigation.

This paper contributes to knowledge in the area of project management and organizational culture, extending the existing theory. It is a guide for other researchers who want to take constructivism as an epistemological reference and who need to use the method of constructivist grounded theory. The results will allow to realize an empirical study to validate the model components from a statistical perspective. They offer the possibility of develop further investigations to identify whether there are cultural differences that affect the management of the projects between organizations of different economic sectors.

Literature review

Organizational Culture and Project Management

The organizational culture is a set of assumptions, beliefs and values that define the behavior of individuals (Cameron & Quinn, 2011; Schein, 2009). However, these features may differ and be shared by people of functional areas who have similar knowledge or experience, leading to the concept of subculture (Martin, 1992). Particularly, people involved in projects share certain traits that characterize them, forming a subculture (Kendra & Taplin, 2004). To refer to this subculture, various terms exists such as project culture (Bryde, 2003; Kendra & Taplin, 2004), project management culture (Wang, 2001) and project organizational culture (Stare, 2012).

> The organizational culture associated with the project stakeholders defines a subculture that has components as a common language (Bryde, 2003; Karlsen, 2011; Kendra & Taplin, 2004) and psychological elements framed in a series of attitudes and behaviors that favor the success of the projects.

One aspect that characterizes the project organizational culture is the use of a common language (Bryde, 2003; Karlsen, 2011, Kendra & Taplin, 2004;). Kendra & Taplin, 2004 conducted a qualitative research in the technology division of a manufacturing company, finding that stakeholders in projects shared words with specific meanings related to project management. This finding is confirmed by the PMI Lexicon, which is a dictionary of 145 words used in the field of proyects (Project Management Institute –PMI-, 2017).

Project organizational culture entails the existence of a positive attitude of people towards the use of project management practices (Karlsen, 2011; Kendra & Taplin, 2004). This attitude leads to the application of processes, tools and techniques of project management (Ajmal & Koskinen, 2008; Kendra & Taplin, 2004;, Morrison & Brown, 2004; Teller, 2013), the following of policies related to these (Karlsen, 2011) and the documentation of project information (Stare, 2012). However, the extent to which people adopt project management practices depends on the efforts of the organization to engage them in projects (Fernandes, Ward, Araujo, Loureiro, & Braga, 2014).

Another aspect in the project organizacional culture, is the support gived by the executives to the projects. This implies the existence of an awareness of the organization regarding the need to manage projects (Bryde, 2003; Teller, 2013). This support is manifested by the provision and allocation of resources to projects (Karlsen, 2011), their participation to solve problems and the definition of priorities set for the project portfolio (Stare, 2012). Aladwani (2002) showed in her research that a better performance of the projects depends on the support of the executive level. Thamhain (2013) found positive correlations between the level of recognition that the executive level gives to the work performed on the projects and their success.

A project-oriented culture promotes the respect to the authority of the project manager by the stakeholders (Bryde, 2003). Stare, 2012 stated that the authority of the project manager at the company, will be a reflection of the importance of project management in this. In fact, in organizational structures such as projectized and matrix, it is given a position to the project manager with more or less authority, depending on whether their resources are assigned exclusively or not (PMI, 2017).

The involvement of stakeholders promoted by the organization in the projects, translates into their level of commitment during the life cycle of the project (Kerzner, 2001) and is a characteristic of a project organizational culture. According to Bourne (2013), each stakeholder brings a value proposition derived from their knowledge or the resources with which they contribute to the project. Jones and Harrison (1996) measured in their study the relationship between the team's degree of involvement and project success, finding that project success depends on the degree of involvement of team members.

Empowerment is considered a feature of organizational culture (Denison, Janovics, Young, & Cho, 2006). Empowerment from the psychological perspective, focuses on the will of an individual to perform their tasks and from the structural perspective, the focus is on the autonomy that individuals are allowed, on the responsibility delegated to them to carry out their tasks and their participation in decision making (Wall, Wood, & Leach, 2004). Seibert et al. (2004) found evidence of significant correlations between psychological empowerment and team satisfaction with project work.

Organizational learning is defined as the organization's orientation to create, acquire and transfer knowledge (Mueller, 2014), from a cognitive belief in its usefulness in resolving a problem or making a decision (Schmitz, Rebelo, Gracia, & Tomás, 2014; Templeton, Lewis, & Snyder, 2002). Janz and Pattarawan (2003) found positive relationships and dependency between the team members' tendency to explain or teach others and the satisfaction of people with project work and project performance. The latter was measured based on compliance with the scope, timeline and stakeholder requirements with respect to project outputs.

Social Constructivism and Organizational Culture

Constructivism considers human beings build their reality by means of the sense they give to their experiences and they learn from them rather than being passive recipients of these (Cobern, 1993). The individuals in the organization make an interpretation of what is happening around them and their own experience, giving it a meaning (Astley, 1985). For this reason, the constructivism is used as the epistemological framework to direct the work in this investigation.

Particularly, social constructivism provides a conceptual framework for addressing research in the field of organizational culture, where the researcher is an actor more than an information processor that only watches the organization and reports its findings (Mir & Watson, 2000). The author has identified some cultural aspects that can favor or hinder the development and effectiveness of the projects in their professional work, confirming the results of the researches realized by Pinto (2010) and Loo (2002).

Given that constructivism has its origins in the positivist epistemology, in the interpretative epistemology and empiricism (Oyegoke, 2011), there is a link between constructivism and project management based on its orientation to solve problems (Oyegoke, 2011;

People learn from the environment that surrounds them, to adapt to others in the social context of the organization, in which the executive level is a model of attitudes and behaviors (Schein, 2009). There is empirical evidence of the relationship between organizational cultural characteristics and the effectiveness of project management (Janz & Pattarawan, 2003; Jones & Harrison, 1996; Seibert et al., 2014).

Pollack, 2007). Therefore, constructivism as epistemological framework has application in the areas of organizational culture and project management.
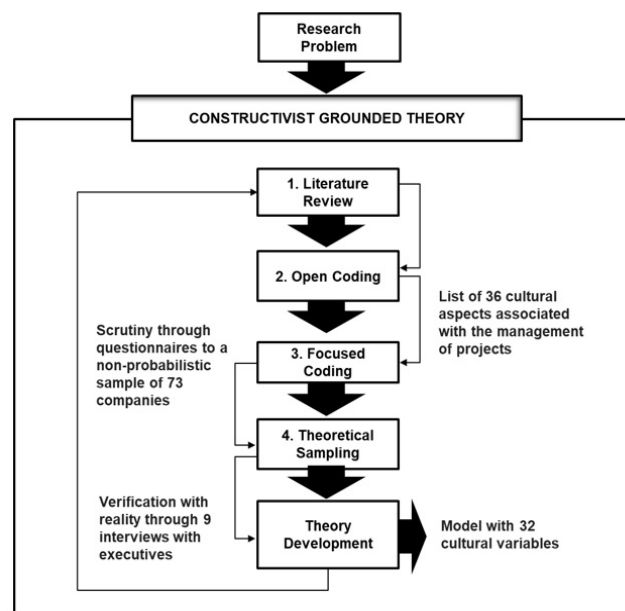
Constructivist Grounded Theory

The method of grounded theory was created by Glaser and Strauss (1967) as a basis for social science qualitative research. Grounded theory is useful when the available theories do not explain a problem or they do not cover the participants, context or sample of interest (Creswell, 2013). Charmaz (2008) associated the grounded theory method with social constructivism on an epistemological level, calling this link as constructivist grounded theory (Mills, Bonner, & Francis, 2006). Charmaz (2008) argues that the researcher builds categories of data, from its interpretation of the specific context.

The constructivist grounded theory method takes into account the views of participants in research for both data analysis and presentation (Charmaz, 2008). While the original method of grounded theory suggests that there is an inherent meaning to data (Glaser & Strauss, 1967), the constructivist perspective proposes a construction process between the researcher and participants (Charmaz, 2008). This author recognizes that the researchers have a theoretical knowledge and their concepts should be subject to scrutiny. In this sense, Thornberg (2012) argues that the research process and its product in the constructivist grounded theory method, can use existing theories as tools that help the researcher to define a reference framework, being consistent with the principles of social constructivism.

Research Methodology

The constructivist grounded theory was the method selected to design the organizacional culture model because it allows to set the model components from the collective interpretation made by the researcher and those in the investigation (Charmaz, 2008). Taking into account the approaches of Charmaz (2008) and Thornberg (2012), the author established five stages in this research. These steps are in order: (1) literature review, (2) open coding, (3) focused coding, (4) theoretical sampling and (5) theory development. The five steps shown in Figure 1, are executed sequentially and cyclically.
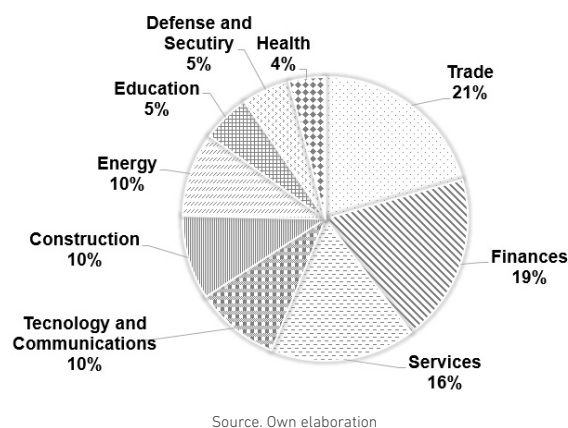

Source. Own elaboration

Figure 1. Stages of the Constructivist Grounded Theory Method in this research

The objective of the literature review was collecting and organizing information related to cultural aspects associated to the effectiveness of project management. It sought to acquire an understanding of how different authors have studied and defined organizational culture and effectiveness in managing projects. This stage was structured by a logical search pattern, which began identifying culture models that have empirical evidence of their relationship with organizational effectiveness. The process continued with the review of proposals made by various authors regarding the existence of a subculture among project stakeholders. Finally, aspects used to measure effectiveness in project management were reviewed.

The second stage corresponding to the open coding, implied the selection of the aspects that define an organizational culture in the projects environment. Within the scope of this research, these cultural aspects are formed from an explicit demonstration readily observable of behaviors and attitudes. It takes into account the definition of organizational culture realized by Schein (2009), in which there are a number of assumptions that are in a tacit and inner level, but have their expression in an external level through behaviors and attitudes that are shared by people belonging to a subculture.

Thirty-six cultural aspects associated with project management were found in the literature review. Taking into account that on the constructivist perspective it is necessary to understand how individuals identify and differentiate aspects of organizational culture that affect the project management effectiveness, the objective of third stage corresponding to the focused coding was to determine: (a) cultural aspects whose interpretation differs between the theoretical framework and practical experience and (b) characteristics that have not been identified in the review of the literature.

It was defined as the study population, organizations that have formalized project management methods. It was selected a nonrandom sample of people belongs to organizations of various industry sectors located in the city of Bogotá, Colombia. Responses from 73 companies whose staff conducted postgraduate studies in project management at one University were obtained. The reason for this selection was to ensure knowledge of the discipline of project management by participants (Stare, 2012). Three different types of stakeholders were included: The 26% were project leaders, 47% were team members and 27% were stakeholders in general. The 79% of responses corresponde to private organizations and 21% correspond to public organizations. The Figure 2 shows the detail of the sectors to which the data belong. The most represented sectors were trade, finance and services.

Source. Own elaboration

Figure 2. Distribution of questionnaires by economic sectors.

The researcher used the constructivist grounded theory method, determining a group of cultural characteristics based on the literature review that was subjected to the scrutiny regarding its validity, in the reality that the stakeholders of the projects live in their day to day. The questionnaires and interviews were the techniques used to collect the information.

A semi-structured questionnaire was used to obtain information on the perception of respondents and how they interpret the cultural criteria. The information was collected between May and October 2015. The questionnaires were answered electronically. The questions were divided into three parts: (1) identification of the person and role in the projects, (2) characterization of the organization (3) aspects of the organizational culture that are related to project management. The participants should select those cultural aspects affecting the projects management in their organizations. It was requested an explanation of the selected cultural aspects and a description of specific situations presented within their organization representing the chosen cultural characteristic. Given the responses received in the focused coding phase, some cultural characteristics were adjusted or eliminated, leaving thirty-two cultural variables.

The theoretical sampling validated the existence of cultural aspects through the perception of people who have direct involvement in the projects management and have administrative positions in their organizations. A non-probability sampling was conducted between internal stakeholders with different roles. The selected organizations have formal project management practices and they are located in Colombia with headquarter in Bogotá: 88% of organizations has offices in other cities. The size of these companies varied from 15 up to 15,000 permanent employees and are in the market between 9 and 93 years.

The selection of the economic sectors of the organizations corresponds to the same economic sectors of the questionnaires obtained in the focused encoding stage: (1) Commercial, (2) Financial, (3) Services, (4) IT and Communications, (5) Construction, (6) Energy, (7) Education, (8) Defence and Security and (9) Health. The 67% of companies were private and 33% were public. The 22% of organizations are projectized and implement their services and products through the creation of projects and the 78% have functional structures, where members of the organization perform daily operations and projects tasks in parallel.

Nine stakeholders were interviewed. They have been working between 5 and 32 years in their companies: 33% women and 67% men. The participants were people directly related to the implementation of projects in their organization to ensure that participants have an understanding of the critical aspects that affect the projects (Stare, 2012) and the organizational vision expected from people with administrative positions (Morrison & Brown, 2004). Contact with companies was done through an association of engineers and a company dedicated to provide consulting services in project management. Interviews were conducted between November 2015 and March 2016.

In the invitation to participate in the research it was explained that the study was part of a thesis in the doctorate program in project management carried out by University EAN and that it had its backing. The character of confidentiality of the work was also clarified, with the commitment that only final results would be published, as a consequence of the analysis of the information and no detailed data that would allow identifying the people or organizations participating in the interviews.

The duration of the interview was about an hour and a half. The interview was semi-structured. A guide was used to develop the interview. The guide consisted of these items: (a) description of the organization and the participant, (b) characterization of projects and (c) analysis of the cultural aspects that generate success or failure in the projects. The description of the organization included open questions about its mission and the type of services and products offered, the number of years

in the market and the number of employees and its location. With respect to the participants, the questions were oriented to determine position, number of years in the company and participation in the development of projects of the organization.

The characterization of the project covered three questions: (a) how the projects born, (b) which projects are considered strategical and (c) what type of problems are faced in the projects. From this last question, the respondent gave examples of particular situations that allowed the researcher to identify the existence of cultural variables. Explicitly the practices realized by the organization to demonstrate cultural aspects, were registered. The author made all interviews in order to avoid bias generated by the intervention of more than one interviewer (Alavi, Kayworth, & Leidner, 2005) and ensure the same understanding of the cultural aspects related to the project management. And as a result of the feedback received in the theoretical sampling phase, common themes were determined and are described in Table 1.

Table 1. Interview Analysys Results

Common Aspects	Analysis Results
1. Link between strategy and projects	Confirmed by 100% of interviewees. 44% of respondents raised the importance of identifying the benefits of the projects as a necessary definition for that initiatives are taken into account in the project portfolio. The remaining 56% manifest that one of the weaknesses in the formulation of projects in their organizations is the lack of a clear definition of the benefits that brings the project implementation. This situation affects the perception of projects success.
2. Involvement of stakeholders	Confirmed by 100% of interviewees. They argued the need to take into account the views of stakeholders and understand their position with respect to the projects.
3. Coordination between areas to implement projects	Confirmed by 100% of interviewees. There was a consensus regarding cooperation and support between areas which depend on the attitude of the executive level.
4. Acceptance of project management practices	Confirmed by 100% of interviewees. Only 22% of organizations provide training in personal skills required by the development of the projects. In these organizations, there is a project office which has been operating during an average of 5 years.
5. Project information management	Confirmed by 100% of interviewees. They enfatized the neccesity of facilitating access of the projects information to different stakeholders according to the levels of confidentiality required and having an automated repository of project information.
6. Requirements inherent to the development of the projects.	Confirmed by 100% of interviewees. They expressed the need to understand that projects have associated changes and risk and require immediate response from the organization.

Source. Own elaboration.

Finally, the phase of theory development was aimed to synthesize the cultural aspects that contribute to the understanding of what is an organizational culture that supports and facilitates the success of projects. For the definition of the model components, a task of conceptualization was developed. The conceptualization consists of identifying patterns (Glaser, 2002), which allow cultural characteristics are selected and divided into categories. The categories are in turn grouped into four dimensions which make the third level. The results of this work are described in the next sections.

Conceptual Model of Organizational Culture in Projects Environment

Taking into account the feedback obtained in the focused coding stage and the theoretical sampling stage, the cultural variables were agrouped into categories and dimensions to structure the model. Eight categories were determined: (1) strategic alignment of projects, (2) understanding of the projects environment, (3) adoption of project management practices, (4) valuation of knowledge associated with projects, (5) consideration of project stakeholders, (6) adaptation to problem solution, (7) cohesion among stakeholders and (8) empowerment. The variables that comprise the categories are presented in Table 2.

Table 2. Categories of the Organizational Culture Model in the Projects Environment

Cultural Categories	Variables
Strategic Alignment of Projects	Link between projects results and compliance with organizational strategy. Clear identification of the benefits generated by the projects. Addressing decisions about obtaining the greatest benefit to the project stakeholders. Objective criteria in making decisions on the portfolio of projects.
Understanding the projects environment	Interest of the executive level of the organization to participate in the project management. Commitment of the organization to provide time and resources to projects. Awareness of the organization regarding the risks projects have and the need for their administration. Flexibility of the organization with respect to changes in the projects.
Adoption of Project Management Practices	Internalization of project management policies. Dissemination and standardization of terminology project management. Consisting use of procedures, tools and techniques of project management. Monitoring of documentation standards.
Valuation of Knowledge associated with Projects	Access of the project team to useful information for project performance. Willingness of people to exchange information in the projects. Disposition of the organization to promote learning from the experience. Orientation of the organization towards generating new ideas for the development of projects.
Consideration of Project Stakeholders	Understanding the position of the stakeholders regarding projects. Attention to the views of stakeholders in decision making. Effort to understand the needs of stakeholders. Recognition of external stakeholders as partners, including suppliers, contractors and customers.
Adaptation for problem resolution	Promotion of the organization to the open expression of opinions for reaching mutual agreements. Decision making and timely actions to solve the problems that arise in the projects. Prioritization of the interests of the project to solve conflicts. Willingness of the project stakeholders to negotiate.
Cohesion among project stakeholders	Cooperation and support between areas of the organization. Existence of a common perspective among different areas for project development. Ease of coordination of project tasks between areas of the organization. Recognition from the areas of the organization with respect to the addressing of project leaders.
Empowerment	Respect to the authority of project managers. Ease of access of the project team to the assigned resources. Effort of the organization to develop the capacities to manage projects. Delegation of decision-making on projects from existing levels of authority in the organization.

Source. Own elaboration.

The cultural categories were grouped into four dimensions, to measure cultural characteristics that complement each other. Each dimension contains two categories. The result of this work is represented in the Figure 3, which offers an overview of the model components.

Source. Own elaboration

Figure 3. Components of the Organizational Culture Model in the Projects Environment

At the organizational level, the governance provides a framework for ethical decision making and management action (Müller, 2009). Derived from this framework, project governance establishes a series of guidelines for administration, including the definition of policies, standards and management procedures and parameters to be taken into account to measure the success of projects (Hadjinicolaou & Dumrak, 2017; PMI, 2013;). If these guidelines are part of the cultural context, the organization will seek to establish a correspondence between its strategic objectives and results of the projects (Kaiser, El Ardi, & Ahlemann, 2015; Shenhar, Dvir, Levy, & Maltz, 2001) and will try to understand the implications of the implementation of projects and their internal and external effects (Bryde, 2003; Yazici, 2011).

For these reasons, the categories of Strategic Alignment of Projects and Understanding the Projects Environment have banded together to form the dimension named *Cultural Governance of the Projects*. This dimension refers to the extent to which the organization defines guidelines for behavior of its members regarding the projects development. Based upon the describe arguments, it is asume that strategic alignment of projects and understanding the projects environment are related and will have a positive effect on project management effectiveness.

Proposition 1: Cultural governance of the projects as dimension consist of strategic alignment of projects and understanding the projects environment.

Proposition 2: Strategic alignment of projects is positively related to an efective project management.

Proposition 3: Understanding projects environment is positively related to an efective project management.

The teams that are formed for the execution of projects are made up of people from different areas with charges and specific functions. They must offer to the projects, their knowledge and experience from their professional training as well as knowledge and experience acquired as a result of the application in the industry sector to which the organization is limited. Because of the dynamics of work into projects, people require also be open to the ideas and experience of others with training and different language.

In turn, the project management requires the understanding of an own vocabulary of these knowledge area (Kendra & Taplin, 2004), the participation in management practices that differ from the practices associated with the mission of the organization and a willingness of people to record the work done in the projects and follow documentation standards (Bryde, 2003; Morrison & Brown, 2004; Stare, 2012). The projects are perfect scenarios for learning or be forced to raise new ideas to solve a problem or propose different decision alternatives.

The management information required for the realization of the projects and the knowledge generated during the life cycle of these, leads the author to group the categories of *Valuation of Knowledge associated with Projects* and *Adoption of Project Management Practices* in a dimension called *Learning in the Projects Environment*. This dimension refers to the degree to which the organization promotes learning during the development of projects and appropriates the knowledge generated, considering it an asset to be protected. Based upon the describe arguments, it is asume that adoption of project management practices and valuation of knowledge associated with projects are related and will have a positive effect on project management effectiveness.

Proposition 4: Learning in the projects environment as cultural dimension consist of adoption of project management practices and valuation of knowledge associated with projects.

Proposition 5: Adoption of project management practices is positively related to an efective project management.

Proposition 6: Valuation of knowledge associated with projects is positively related to an efective project management.

The development of multidisciplinary projects involves the interaction of internal and external people with different positions, needs and expectations for the project (Thamhain, 2004). Understanding these differences will enable the project team and its leader to direct their efforts to guide people around the project objectives (Verma, 1997). The existence of different points of view with respect to the results to be achieved with the project or the way to carry them out, can affect how stakeholders

The projects are perfect scenarios for learning or be forced to raise new ideas to solve a problem or propose different decision alternatives.

in the projects are related and the attitude manifested openly in meetings that require their participation (Verma, 1997).

Consequently, the attitude assumed by the stakeholders can help or hinder the normal development of activities in the projects. Particularly solving problems and implementing changes require consensus (Rezvani et al., 2016) mostly because the measures taken generally involve the participation of various stakeholders. In fact, Best, Smit and Faber (2013) identified a type of intervention made by leaders during project implementation consisting of connecting people to create a synergy between them, so they can take actions when deviations are detected in the expected results.

Therefore, the author has grouped the categories of *Consideration of Project Stakeholders* and *Adaptation for Problem Resolution* in a dimension named *Relationship between Stakeholders*. This dimension refers to the willingness of the organization to build the necessary synergy among the projects stakeholders, allowing overcome obstacles that arise and achieve the project objectives. Based upon the describe arguments, it is asume that consideration of projects stakeholders and adaptation for problem resolution are related and will have a positive effect on project management effectiveness.

> Proposition 7: Relation between stakeholders as cultural dimension consist of consideration of projects stakeholders and adaptation for problem resolution.
>
> Proposition 8: Consideration of project stakeholders is positively related to an efective project management.
>
> Proposition 9: Adaptation for problem resolution is positively related to an efective project management.

Organizations need to develop internal projects parallel to tasks related to its mission (Morrison & Brown, 2004). This has two implications. The first is to assemble teams made up of people from different areas that need to perform specific tasks in projects, which may or may not be related to the activities of their normal functions in their rol (Morrison & Brown, 2004). And the second implication is that the people who make these teams require specific competences of project management (PMI, 2013), resources and authority to make decisions (Tabassi, Argyropolou, Roufechaei, & Argyropolou, 2016; Thamhain, 2004), which will enable them to achieve the objectives in projects.

Consequently, because project teams should share with people or areas that are internal or external to the same company to which they belong and face particular situations that do not correspond to the daily operation of the organization, the categories of *Cohesion between Stakeholders* and *Empowerment* have banded together to form the dimension referenced as *Organizational Integration*. This dimension refers to the efforts of the organization to form teams with the capabilities and resources to execute the assigned projects and achieve the expected results. Based upon the described arguments, it is asume that cohesion between stakeholders and empowerment are related and will have a positive effect on project management effectiveness.

> Proposition 10: Organizational integration as cultural dimension consist of cohesion between the stakeholders and empowerment.
>
> Proposition 11: Cohesion between stakeholders is positively related to an efective project management.

Organizations need to develop internal projects parallel to tasks related to its mission (Morrison & Brown, 2004).

Proposition 12: Empowerment is positively related to an efective project management.

The components of the model are described in Table 3.

Table 3. Components of the Organizational Culture Model in Projects Environment.

Dimension	Categories	Description of the categorie
Cultural Governance of the Projects.	Strategic Alignment of Projects	Degree to which people in the organization believe that the projects are really means to achieve the strategy and they act as a result of this belief.
	Understanding the Projects Environment	Degree of comprehension that members of the organization have with respect to the implications associated with the development of projects, whose implementation requires attitudes and behaviors different than those are required to perform daily operations.
Learning in the Projects Environment	Adoption of Project Management Practices	Degree to which people in the organization have internalized procedures, techniques and tools of project management and these are used in a consistent way when developing projects (Ariza-Aguilera, 2015).
	Valuation of Knowledge associated with Projects	Degree to which the organization is aware of the importance of the knowledge that is required or is generated, applied or adjusted for projects implementation.
Relationship between Stakeholders	Consideration of Project Stakeholders	Degree to which the organizational executive levels promote an attitude oriented to know, understand and take into account the stakeholders in: (a) decisions that support the development of tasks and (b) definition of expected results and criteria for considering a successful project.
	Adaptation for Problem Resolution	Disposition of the stakeholders to resolve conflicts or problems of any nature arising in the projects and prevent these affect their results.
Organizational Integration	Cohesion among Project Stakeholders	Capacity developed in different areas of the organization to work together and share resources in order to achieve the success of the projects.
	Empowerment	Degree to which the organization provides stakeholders with the tools and skills they need to develop the projects.

Source. Own elaboration

Conclusions

The study answered the research question related to the characteristics of an organizational culture associated to an effective project management. The use of constructivist grounded theory method allowed the extension of existing theory about the subculture that make up the stakeholders of the projects in organizations. The result was the design of a conceptual model of Organizational Culture in the Projects Environment. Patterns of attitudes and behavior associated with the effectiveness of project management in organizations were identified. These are the base of a model composed of thirty-two cultural variables, eight categories and four dimensions.

This study offers several contributions to Academia. It extends theory on organizational culture and project management from the perspective of psychology. It provides an evidence of the use of constructivist grounded theory method, which can guide the work of other researchers in different subjects of social sciences and project management. Also, it opens the possibility of additional research in this line of work.

The linkages between cultural aspects and project management effectiveness were identified and postulated in twelve propositions. The results of this research will allow to realize empirical studies to validate the model components, determine their relations with effectiveness project management indicators and identify whether there are cultural differences that affect the management of the projects between organizations of different economic sectors.

The proposed model helps organizations to identify cultural aspects to be changed to have more successful projects. In this sense, this study offers an initial base for developing tools and practices aimed to improve the cultural aspects which are part of the daily operations inside the organizations, in areas as cultural governance of the projects, learning in the projects environment, relationship between project stakeholders and organizational integration.

References

Ajmal, M. M., & Koskinen, K. U. (2008). Knowledge Transfer in Project-Based Organizations: An Organizational Culture Perspective. *Project Management Journal*, *39*(1), 7-15.

Alavi, M., Kayworth, T., & Leidner, D. (2005). An Empirical Examination of the Influence of Organizational Culture on Knowledge Management Practices. *Journal of Management Information Systems*, *22*(3), 191-224.

Aladwani, A.M. (2002). An Integrated Performance Model of information System Projects. *Journal of Management Information Systems*, *19(*1), 185-210.

Bourne, L. (2013). *Gestión de Stakeholders: Gestión de grupos de interés*. Bogotá: Ediciones EAN.

Ariza-Aguilera, D.A. (2015). Valores Éticos y Trabajo en Equipo en los proyectos: Una competencia para Garantizar la Sostenibilidad Organizacional. *Daena: International Journal of Good Conscience*, *10*(2), 25-36.

Astley, W.G. (1985). Administrative Science as Socially Constructed Truth. *Administrative Science Quarterly*, *30*(4), 497-513.

Best, A., Smit, J., & Faber, L. (2013). Interventions and their Relation to Organizational Culture and Project Management. Procedia - Social and Behavioral Sciences, *74*(29), 329-338.

Bryde, J.D. (2003). Modelling Project Management Performance. *The International Journal of Quality and Reliability Management*, *20*, 228-253.

Cameron, K., & Quinn, R. (2011). *Diagnosing and changing Organizational Culture based on the Competing Values Framework*. San Francisco, CA: Jossey-Bass.

Charmaz, K. (2008). Constructionism and the grounded theory method. In J.A. Holstein and J.F. Gubrium (Eds.), *Handbook of constructionist research* (pp. 397–412). New York: The Guilford Press.

Cobern, W. W. (1993). Constructivism. *Journal of Educational and Psychological Consultation*, *4*(1), 105-113.

Creswell, J. (2013). *Qualitative Inquiry and Research Design. Choosing Among Five Approaches*. United States of America: Sage Publications.

Denison, D.R., Janovics, J., Young, J., & Cho, H. (2006). Diagnosing Organizational Culture: Validating a Model and Method. *Working Paper, Denison Consulting Group*; Retrieved from: http://www.denisonconsulting.com/resource-library/diagnosing-organizational-cultures-validating-model-and-method.

Fernandes, G., Ward, S., Araujo, M., Loureiro, A.B., & Braga, A. (2014). Perceptions of different stakeholders on improving and embedding Project Management Practice on organisations. *Procedia Technology*, *16*, 957-966.

Glaser, B.G., & Strauss, A.L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research.* New York, NY: Aldine De Gruyter.

Glaser, B. (2002). Conceptualization: On theory and theorizing using grounded theory. *International Journal of Qualitative Methods*, *1*(2), 1-31.

Hadjinicolaou, N., & Dumrak, J. (2017). Investigating Association of Benefits and Barriers in Project Portfolio Management to Project Success. *Procedia Engineering*, *182*, 274 – 281.

Janz, B. D., & Pattarawan, P. (2003). Understanding the Antecedents of Effective Knowledge Management: The Importance of a Knowledge-Centered Culture. *Decision Sciences*, *34*(2), 351–384.

Jones, M.C., & Harrison, A.W. (1996). IS project team performance: An empirical assessment. *Information & Management, 31*(2), 57-65.

Kaiser, M. El Ardi, F., & Ahlemann, F. (2015). Successful Project Portfolio Management beyond Project Selection Techniques. *International Journal of Project Management*, *31*, 817-829.

Karlsen, J. T. (2011). Supportive culture for efficient project uncertainty management. *International Journal of Managing Projects in Business*, 4(2), 240–256.

Kendra, K., & Taplin, L. (2004). Project Success: A Cultural Framework. *Project Management Journal*, *35* (1), 30-45.

Kerzner, H. (2001). *Strategic Planning for Project Management using a Project Management Maturity Model*. United States of America: Jhon Wiley & Sons.

Loo, R. (2002). A multi-level causal model for best practices in project management. *International Journal of Project Management*, *20*(2), 93-98.

Martin, J. (1992). *Cultures in Organizations: Three Perspectives*. New York, NY: Oxford University Press.

Milosevic, D., & Patanakul, P. (2005). Standardized project management may increase development project success. *International Journal of Project Management*, *23*, 181-192.

Mills, J., Bonner, A., & Francis, K. (2006). The development of constructivist grounded theory. *International Journal of Qualitative Methods*, *5,* 25–35.

Mir, R., & Watson, A. (2000). Strategic Management and the Philosophy of Science: The Case for a Constructivist Methodology. *Strategic Management Journal*, *21*(9), 941-953.

Morrison, J. M., & Brown, C. J. (2004). Project management effectiveness as a construct: A conceptual study. *South African Journal of Business Management*, *35* (4), 73–94.

Morrison, J. M., Brown, C. J., & Smit, E. v. d. M. (2006). A supportive organizational culture for project management in matrix organizations: A theoretical perspective. *South African Journal of Business Management*, *37*(4), 39-54.

Müller, R. (2009). *Project Governance*. Burlington: Gower Publishing Company.

Mueller, J. (2014). A specific knowledge culture: Cultural antecedents for knowledge sharing between project teams. *European Management Journal*, *32*(2), 190-202.

Ouchi, W.G., & Wilkins, A. L. (1985). Organizational Culture. *Annual Review of Sociology*, *11*, 457-483.

Oyegoke, A. (2011). The constructive research approach in project management research. *International Journal of Managing Projects in Business*, 4(4), 573-596.

Pinto, J.K. (2010). *Project management: Achieving competitive advantage*. New Jersey: Prentice Hall.

Pollack, J. (2007). The changing paradigms of project management. *International Journal of Project Management*, *25*(3), 266-274.

Project Management Institute (PMI). (2017). *A Guide to the Body of Knowledge Project Management PMBOK*. Pennsylvania: PMI.

Project Management Institute (PMI). (2013). *Organizational Project Management Maturity Model-OPM3*. Pennsylvania: PMI.

Rezvani, A., Chang, A., Wiewiora, A., Ashkanasy, N. M., Jordan, P. J., & Zolin, R. (2016). Manager emotional intelligence and project success: The mediating role of job satisfaction and trust. *International Journal of Project Management*, *34*(7), 1112-1122.

Rowlinson, S., & Cheung, Y. K. F. (2008). Stakeholder management through empowerment: modelling project success. *Construction Management and Economics*, *26*, 611-623.

Seibert, S.E., Silver, S.R., & Randolph, W.A. (2004). Taking empowerment to the next level: a multiple-level model of empowerment, performance, and satisfaction. *Academy of Management Journal*, *47*(3), 332–49.

Schein, E. (2009). *The Corporate Culture Survival Guide*. San Francisco: Jhon Wiley and Sons.

Schmitz, S., Rebelo, T., Gracia, F. J., & Tomás, I. (2014). Learning culture and knowledge management processes: To what extent are they effectively related?. *Revista de Psicología del Trabajo y de Las Organizaciones, 30*(3), 113-121. doi: 10.1016/j.rpto.2014.11.003.

Shenhar, A. J., Dvir, D., Levy, O., & Maltz, A. C. (2001). Project Success: A Multidimensional Strategic Concept. *Long Range Planning*, *34*(6), 699-725.

Stare, A. (2012). The impact of a project organizational culture and team rewarding on project performance. *Journal for East European Management Studies*, *17*(1), 40-67.

Tabassi, A., Argyropolou, M., Roufechaei, K., & Argyropolou, R. (2016). Leadership Behavoir of Project Managers in sustainable Construction Projects, *Procedia Computer Science*,*100*, 724-730.

Teller, J. (2013). Portfolio Risk Management and its Contribution to Project Portfolio Success: An investigation of Organization, Proccess, and Culture. *Project Management Journal*, *44*(2), 36-51.

Templeton, G. F., Lewis, B. R., & Snyder, C. A. (2002). Development of a Measure for the Organizational Learning Construct. *Journal of Management Information Systems*, *19*(2), 175-218.

Thamhain, H.J. (2004). Linkages of project environment to performance: lessons for team leadership. *International Journal of Project Management*, *22*(7), 533-544.

Thamhain, H.J. (2013). Building a Collaborative Climate for Multinational Projects. Procedia - Social and Behavioral Sciences, *74*(29), 316-328.

Thornberg, R. (2012). Informed grounded theory. *Scandinavian Journal of Educational Research*, *56*, 243–259.

Verma, V. (1997). *Managing the project team*. Pennsylvania: Project Management Institute.

Wall, T.D., Wood, S.J., & Leach, D.J. (2004). Empowerment and performance, in Cooper, C.L. and Robertson, I.T. (eds). *International Review of Industrial and Organizational Psychology*, John Wiley, Chichester, pp. 1–46.

Wang, X. (2001). Dimensions and Current Status of Project Management Culture. *Project Management Journal*, *32*(4), 4-17.

Yazici, H.J. (2011). Significance of Organizational Culture in Perceived Project and Business Performance. *Engineering Management Journal, 23*(2), 20-29.