



IUL School of Social Sciences
Department of Social and Organizational Psychology

The Effect of Teamwork Engagement on Team Learning and Team Adaptation in Tourism Sector

Mariana Gravelho de Carvalho

Dissertation submitted as partial requirement for the conferral of

Master in Social and Organizational Psychology

Supervisor:

PhD Ana Margarida Passos, Associate Professor, Department of Human Resources and Organizational Behavior, ISCTE Business School

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Resumo

O objetivo do presente estudo foi o de avaliar o impacto do *teamwork engagement*, enquanto fator contextual de natureza afetiva e motivacional, em duas dimensões de eficácia em equipa (aprendizagem em equipa e adaptação em equipa). Colocou-se a hipótese de que a relação entre a aprendizagem em equipa e adaptação em equipa era moderada pelo *teamwork engagement* e que a adaptação em equipa era mediadora da relação entre a aprendizagem em equipa e eficácia em equipa. Participaram neste estudo 23 equipas (99 indivíduos). Estes estavam inseridos em diferentes unidades de *hostels* na Área Metropolitana de Lisboa. Globalmente, os resultados suportaram as hipóteses da influência direta dos processos de aprendizagem na adaptação em equipa, tal como do desempenho adaptativo das equipas na eficácia. Os resultados não suportaram a hipótese do papel moderador do *teamwork engagement* na relação entre aprendizagem em equipa e adaptação em equipa. Contudo, a hipótese relacionada com o efeito de mediação da adaptação em equipa na relação entre a aprendizagem em equipa e eficácia em equipa foi confirmada. Portanto, estes resultados refletem a importância do trabalho em equipa, em particular dos mecanismos de adaptação e processos de aprendizagem na eficácia em equipa, mas não dos estados emergentes afetivos.

PALAVRAS-CHAVE: *Teamwork engagement*, eficácia em equipa, aprendizagem em equipa, adaptação em equipa, processos de aprendizagem, desempenho adaptativo das equipas, *hostels*, trabalho em equipa, mecanismos adaptativos, estados emergentes afetivos.

Abstract

This study aimed to evaluate the impact of teamwork engagement, as an affective and motivational contextual factor, on two dimensions of team effectiveness (team learning and team adaptation). We hypothesized that the relationship between team learning and team adaptation is moderated by teamwork engagement and the team adaptation is a mediator of the relationship between team learning and team effectiveness. A total of 23 teams (99 individuals) participated in this study. All teams were part of different hostels at Lisbon Metropolitan Area. Globally, the results supported the hypotheses concerning the direct influence of learning processes on team adaptation, as the team adaptive performance on effectiveness. The results did not support the hypothesis of the moderation role of teamwork engagement on the relationship between team learning and team adaptation. However, the hypothesis related to the mediation effect of team adaptation on the relationship between team learning and team effectiveness was confirmed. Therefore, these results reflect the importance of teamwork, in particularly the adaptation mechanisms and learning processes on team effectiveness, but not of the affective emergent states.

KEY-WORDS: Teamwork engagement, team effectiveness, team learning, team adaptation, learning processes, team adaptive performance, hostels, teamwork, adaptation mechanisms, affective emergent states.

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Abbreviations List

SMETs	Small Medium-Sized Tourism Enterprises
TA	Team Adaptation
PTE	Perceived Team Effectiveness
TL	Team Learning
TP	Tourism of Portugal
TWE	Teamwork Engagement
UNWTO	World Tourism Organization

Glossary

Eco Hostels – Hostel unity which the offer genesis and management is based on ecotourism principles with environmental, social and economic sustainable practical operations.

Independent Hostels – Units not affiliated with Hostelling International Organization and characterized by low prices, common spaces and shared dormitories.

Mobile Hostels – Mobile hostel units, or without fixed location.

Surf Hostels – Hostel unity which the target is surfer tourists.

INTRODUCTION

In recent years, the tourism sector has gained relevance for the national economy. The Tourism of Portugal reported in the “Regional Analysis May 2016” (2016) that tourism revenues in Portugal increased 7.0% with the registration of 6.6 million guests and 17.5 million overnight stays, between January and May 2016, which resulted in a gain of 868.3 million Euros.

The Lisbon Metropolitan Area holds the second position in regional ranking with 4.7 million overnight stays, increasing more than 5.4% over the same period in 2015. However, it is the main destination chosen by the Portugal residents with 1.1 million overnight stays and the visits of no residents increased 6.1% (more 203.3 thousands overnight stays). The average revenue per stay was 47.11 Euros (44.14 Euros the same period in 2015) (Turismo de Portugal [TP], 2016).

According to the “Tourism National Strategic Plan 2013-2015” (2013), the satisfaction rates with the holidays in Portugal were extremely positive (8.5 in a scale of 0 to 10) and 40% of those surveyed tourists asserted that the vacations had exceeded the expectations which reflected in a high intention to return to Portugal in the next three years (TP, 2013).

Given the relevance of the tourism sector is crucial to investigate how to increase the organizational effectiveness in the quality of the service provided in order to foster a sustainable and competitive destination. Therefore, with the expansion of the family/ lifestyle business model, it becomes important to study the processes to improve their performance (Morrison & Teixeira, 2004).

The hostels reveal some differences from conventional hotels, since offer low prices and the main features are the social spaces and shared dormitories (Saraiva, 2013). Its genesis was linked to social tourism, intended to the use of leisure time and socio-educational practices. The hostel units stimulated the “backpackers” tourism aimed to long term foreign travelers.

In accordance to World Tourism Organization (UNWTO), the differentiation with the youth hostel model started from the decade 80 for a model grounded in commercial tourism. Currently, the hostels are present in a variety of destinations with a broader qualitative range that have focus on specific segments, such as “Independent Hostels”, “Boutique Hostels”, “Eco Hostels”, “Surf Hostels” and “Mobile Hostels” (World Tourism Organization [UNWTO], 2012).

In order to achieve organizational effectiveness, several researches emphasize the encouragement of teamwork as a critical success factor in this type of business, once the members establish networking relationships and the employees are drivers of innovation through the improvement initiatives processes and the combination of multi skills (Phillips & Louvieris, 2005).

Moreover, the intensive competition in small medium-sized tourism enterprises (SMTEs) requires strategic actions in business processes found into emerging opportunities to gain major benefits and enhance their profitability and viability in the global marketplace (Buhalis, 1999). Thus, the study of the teams in organizations became relevant in order to take full advantage of individuals.

Team effectiveness is influenced by several variables at different levels (individual, team, organization resources and individuals characteristics) that act in common activities which involve a resources combination to execute the tasks and this interaction may induce the efficiency levels of the outcomes (Ilgen, Hollenbeck, Johnson, & Jundt, 2005).

This dissertation aims to investigate the influence of teamwork engagement in the relationship between team learning and team adaptation. According to Klein and Pierce (2001), adaptive teams are “able to make necessary modifications to meet new challenges” (p.3) and learning processes are crucial for teams that need to adapt to environmental changes and maintain high levels of performance (Santos, Uitdewilligen, & Passos, 2015).

Therefore, this study extends the models proposed by Burke, Stagl, Salas, Pierce and Kendall (2006) on team adaptation by investigating the role of an affective and motivational state – Teamwork engagement. The authors emphasize the adaptive cycle which includes situation assessment, plan formulation, plan execution and team learning as a predictor of team adaptation. However, they argued that this process was influenced by cognitive emergent states, such as shared mental models and team situation awareness.

To accomplish this task, the study is structured in 5 main chapters. The first chapter refers to the conceptual framework of the variables that were analyzed (team effectiveness, team learning, team adaptation and teamwork engagement).

The second chapter, and the core of this study, is the account of the model based on theoretical and empirical researches with the justification of the hypotheses. The third chapter is focused on the methods used and the procedure to obtain the data.

The fourth chapter is result from the data analysis regarding the correlation of the variables. Finally, the fifth chapter is the conclusion of the research, which is an interpretation of the data analysis and a reflection on its importance on the teamwork’s investigations.

I. LITERATURE REVIEW

1.1. Teamwork and Team Effectiveness Framework

A team consists in a set of two or more individuals that have exhibits an interdependency with dynamic interactions through specific roles and develop adaptive mechanisms for sharing and valuing their goals (Dyer, 1984; Salas, Dickinson, Converse, & Tannenbaum, 1992; Saavedra, Earley, & Van Dyne, 1994).

Therefore, the teamwork is responsible for inhibition or contribution of team and outcomes performance (Salas, Stagl, Burke, & Goodwin, 2007). Several researchers have tried to understand the teamwork predictors.

Salas, Sims, and Burke (2005) proposed the idea that teamwork may have a “big five”, such as team leadership, adaptability, mutual performance monitoring, backup behavior and team orientation. These five core components of teamwork ensure that the information is distributed in appropriate manner and this process is being facilitated by coordination mechanisms, such as shared mental models, closed-loop communication and mutual trust (Salas *et al.*, 2009).

Although these components may improve teamwork, the essence of this construct is described through interactions between inputs (e.g. individual, team and task characteristics), processes (e.g. mutual performance monitoring, communication, coordination and leadership) and outcomes (e.g. performance outcomes, productivity and satisfaction) (Salas *et al.*, 2009).

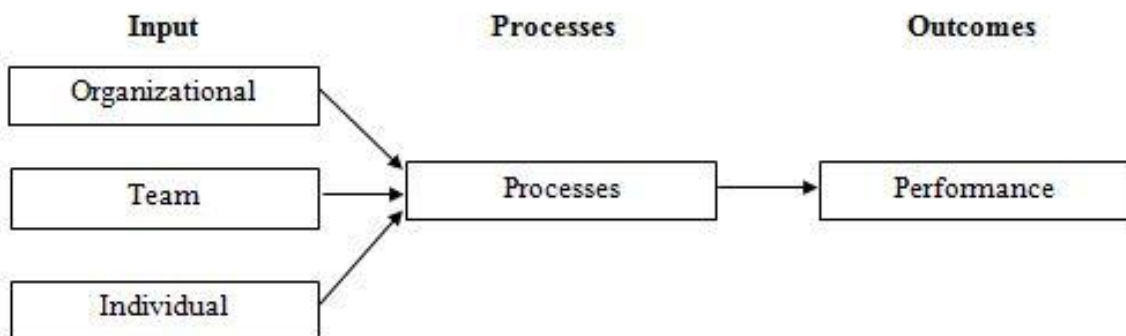


Figure 1.1. *Team effectiveness: Input-Process-Outcome (IPO) model – Mathieu, Maynard, Rapp, & Gilson (2008).*

The effectiveness of the teams depends of the outcomes evaluation of team performance processes in a particularly time or criteria which may be measured by team performance evaluation, satisfaction the team members' needs and team viability or efforts to maintain the team (Kozlowski & Ilgen, 2006).

The performance is characterized as a union of needs, achievement of the objectives and the recognized factors to support the continuity of the organization (Lester, Meglino, & Korsgaard, 2002). It is directly influenced by team processes that are individuals' interdependent activities that change inputs to outcomes through cognitive, verbal and behavioral operations to organize tasks work and achieve collective goals (Marks, Mathieu, & Zaccaro, 2001)

However, several researches criticized the Input-Process-Outcome Model for representing the teamwork as relatively «static» in nature by oversimplifying their function during task performance and tending to deemphasize the long-term development of the teams (Salas, Rosen, Burke, & Goodwin, 2009). Thus, Ilgen *et al.* (2005) develop Input-Mediator-Output-Input Model that indicates more factors than team processes which influence team outcomes (e.g. emergent states) and increased the emphasis on a cycle feedback of team performance.

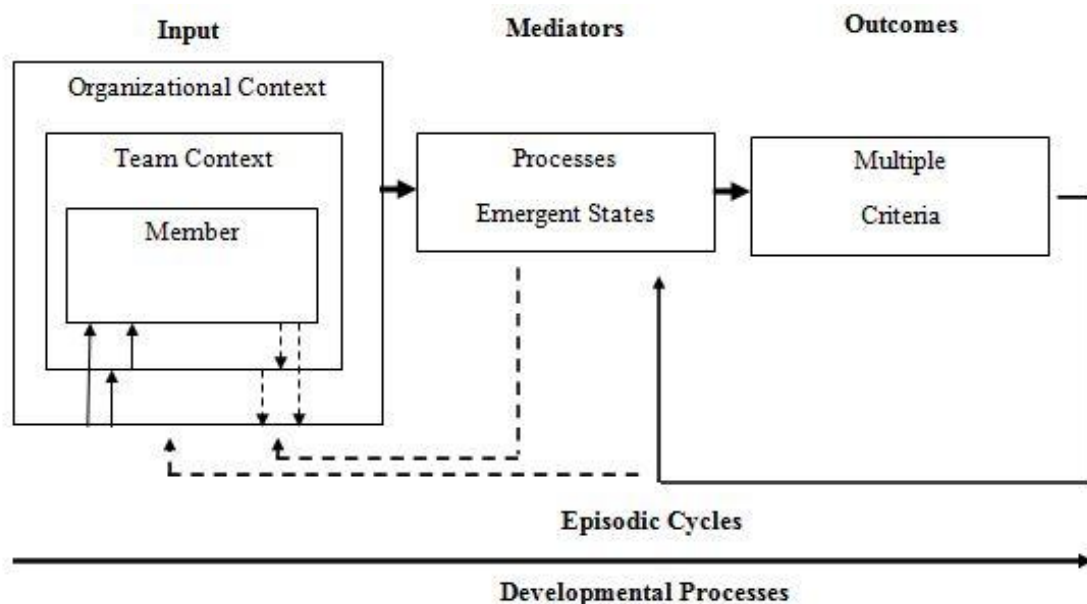


Figure 1.2. Team effectiveness: Input-Mediator-Output-Input (IMOI) model – Mathieu, Maynard, Rapp, & Gilson (2008).

This model suggests that mediating processes explain the effect of certain inputs on team effectiveness and viability. Mediators may be included in two major categories that are the processes and the emergent states (Mathieu, Maynard, Rapp, & Gilson, 2008).

According to Marks, Mathieu and Zaccaro (2001), the first component is described into a taxonomy that involves transition processes which focus on activities developed by team members, such as mission analysis, planning, goal specification and strategies formulation, action processes that are based on task accomplishments, monitoring and systems progress, coordination and support and, finally, interpersonal processes that refers to the salience of conflict management, motivation, confidence and affect management across episodic phases.

In contrast, emergent states are cognitive, motivational and affective states of the team. It develops over their life time and has an impact in team outcomes (Ilgen *et al.*, 2005; Mathieu *et al.*, 2008). Marks *et al.* (2001) characterized it as dynamic in nature with variances depending of the function of the team context, inputs, processes and outcomes.

In sum, teamwork processes promote the transformation of team inputs to proximal and long-term outcomes and describe the interdependent activities of the teams that induce task work in order to achieve individuals' goals. In opposition, the emergent states serve as inputs and have impact in the execution of teamwork processes and task work (Marks *et al.*, 2001).

1.2. Team Adaptation Literature

Team adaptation is an emergent phenomenon caused by a salient or stream cue that leads to a functional outcome and results in a change in the team performance (Burke *et al.*, 2006). It is expressed in the improvement or modification of the structures, capacities and goals actions related to behavioral or cognitive factors. Thus, it focus on change and is expressed in adjustments to relevant team processes that modify teams' practices in reaction to adaptation needs which is identified in a stimuli or trigger (Maynard, Kennedy, Sommer, & Passos, 2015; Stagl, Burke, Salas, & Pierce, 2006).

This process may have a positive consequence which is named as meritorious adaptive outcome. In contrast, maladaptive outcomes refer to potential negative consequences of team adaptation (Maynard *et al.*, 2015). The effectiveness of this process depends of team-level antecedents that are related to task antecedents and it is characterized by the way that team members engage in task work and in their own task, individual-level inputs which are

linked to individual characteristics that promote adaptation and organizational-level inputs (Maynard, Kennedy, & Sommer, 2015; Moon *et al.*, 2004).

Burke *et al.* (2006) developed a team adaptation model that defines this construct and adaptive team performance through an adaptive cycle. It implies a situation assessment, plan formulation, plan execution via adaptive interaction processes and team learning even as emergent states (i.e. shared mental models, team situation awareness and psychological safety), which provide proximal outcomes and inputs in this cycle. The individual characteristics and job design characteristics characterize the distal forces with respect to the adaptive cycle.

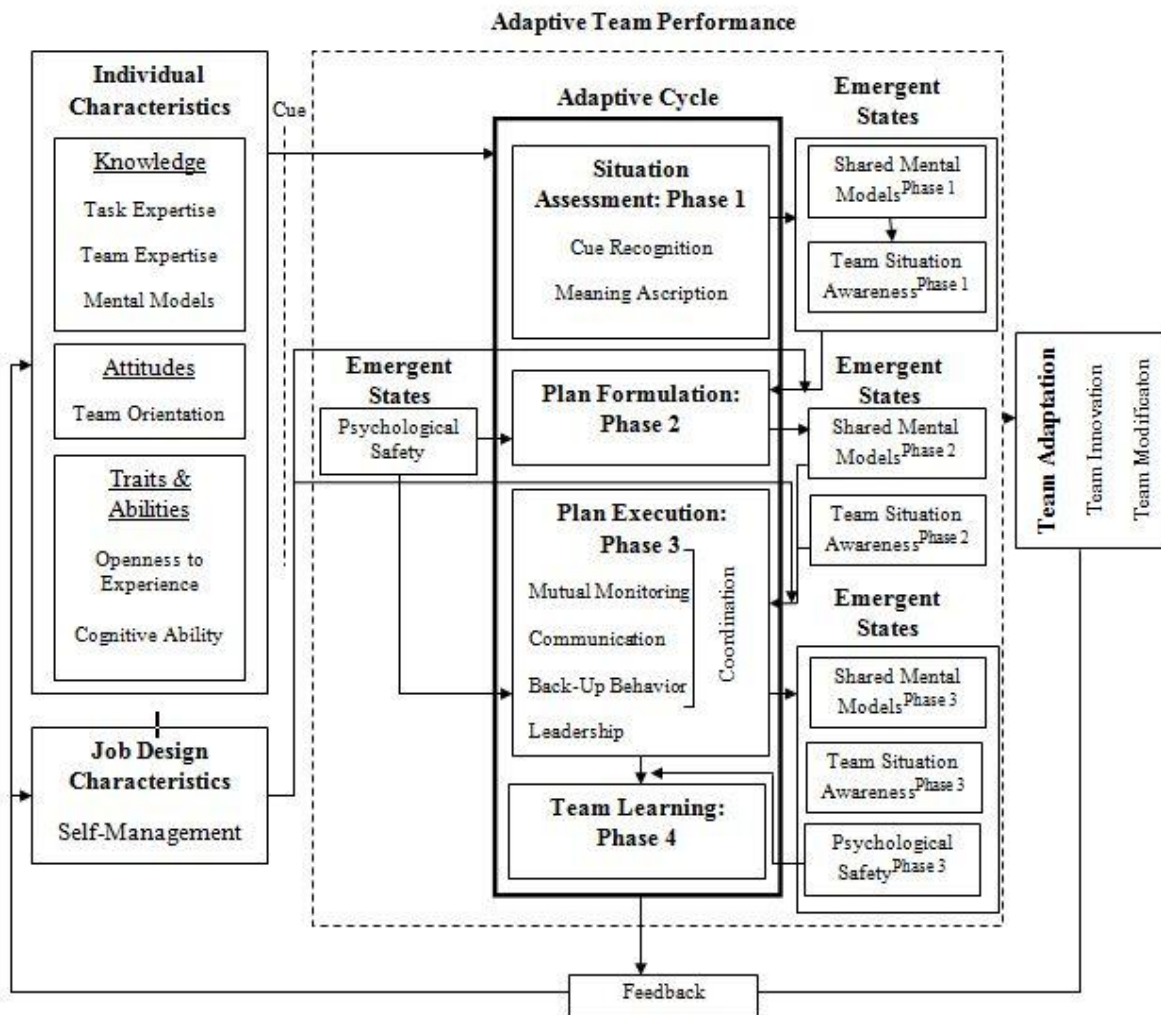


Figure 1.3. Team adaptation model – Burke, Stagl, Salas, Pierce, & Kendall (2006).

According to the authors, the situation assessment consists in a search of cues based on prior experience and cognitive frameworks to identify the problems. This process and team-level cognitive states promote the ability to make a functional adaptation by recognize a cue pattern according to the environmental changes needs. Moreover, the emergent states provide cognitive frameworks that allow the team to predict future system states linked to members' action and aspects of current situation.

The plan formulation is characterized by decision-making processes oriented to action plans, setting goals and clarifying the roles and responsibilities of the individuals (Stout & Salas, 1993). This construct is proximal to situation awareness that refers to a shared understanding of the current situation at a given period (Salas, Prince, Bakker, & Shrestha, 1995). It has three levels focus on the complexity that are the perception of environmental elements (Level 1), the understanding of which of these elements affect the teams' goals (Level 2) and the ability to preview future events based on the experience of the current situation (Level 3) (Endsley, 1995).

However, psychological safety is also important in this process once promotes the speaking up and offers contributions during plan development (Burke *et al.*, 2006). This emergent state is defined as the shared belief that members are safe of interpersonal risks (Edmondson, 1999). The plan formulation and the resulting product are important to command and request information during plan execution and serve as a proximal input into shared mental models (Orasanu, 1990; Burke *et al.*, 2006).

The plan execution involves a dynamical, simultaneous and recursive individual and team-level processes and a combination of behaviors, such as mutual performance monitoring, back-up behavior, communication and leadership (Burke *et al.*, 2006). The first behavior allows the recognition of when members need assistance, facilitates the awareness according to the timing and pacing of individuals actions and it is responsible to high levels of team situation awareness that provides the common ground essential to correctly adapt the coordinated action (Dickinson & McIntyre, 1997; Kozlowski, 1998; Salas *et al.*, 1995; Burke *et al.*, 2006).

The second behavior provides coaching and feedback that enables members to adjust their action in an appropriately time and manner. The communication promotes the development and updating of shared knowledge structures and an effective monitoring behavior by speaking in the form of feedback or back-up behavior (Burke *et al.*, 2006). Finally, the team leaders act to solve the problems of the team through their collective affective states, as well as cognitive and coordination processes (Salas, Burke, & Stagl, 2004).

The team learning process promotes the development of knowledge and improves the collective understanding of situation by discover the consequences of previous actions, the mechanisms to prevent these cues and the manner to review the courses of action (Burke *et al.*, 2006)

It is more effective on teams that openly discuss their mistakes, mismatches and alternative points of view. Though, psychological safety is a moderator of this process through the team interaction that induces the level of learned changes (Burke *et al.*, 2006).

In accordance to Rosen *et al.* (2011) model, this process is based on four categories that are the recap, reflection, integration and action planning. The first component consists in a review of events, information search and structuring to understand past performance.

The second element refers to a framing/ convergent interpretation by diagnose and evaluate of teams performance. The integration involves a shared model which incorporates previously identified successes and failures. Finally, the action planning comprises a plan development according to lessons learned from the evaluation of past performance (Rosen *et al.*, 2011).

1.2.1. Team Learning Literature

The learning process is an application of knowledge which modifies individuals' behavior (Buchanan & Huczynski, 1997). Kasl, Marsick and Dechant (1997) argued that team learning is a collective process of framing the teams' initial perception of a situation or action and a reframing of their cognitive frameworks based on active boundary-crossing dialogue.

This is an ongoing process of collective reflection and action that involves an exploration, reflection, errors discussion and unexpected outcomes of actions, feedback search and experimentation within and as a team (Edmondson, 1999).

According to Costa, Graça, Marques-Quinteiro, Santos, Caetano and Passos (2013), this process is a team level construct which is originated at individual level and emerges through team members interactions. At individual level, team members acquire knowledge, skills and performance abilities that are essential to accomplish their individual tasks (Kozlowski, Gully, Nason, & Smith, 1999). In order to achieve higher compilation of knowledge, team members engage in interpersonal interactions to gain a understanding of other members' roles and capabilities and learn how their task is related to team mates' task (Pearsall, Ellis, & Bell, 2010).

Subsequently, team members may engage in processes of communication, reflection, exchange, observation and collaboration to develop an effective interaction process which is responsible to increase team performance by the procedural knowledge sharing among the members (Kozlowski & Bell, 2008; Kozlowski & Chao, 2012; Edmondson, 1999; Savelsbergh, Gevers, Van Der Heijden, & Poel, 2012; Wong, 2004).

Several researches indicate that there are three traditions of team learning studies: outcome improvement, task mastery and group processes. The first area of research is based on learning curve which implies that organizations improve with experience. The task mastery consists on how team members learn to accomplish independent tasks and the central focus is in encoding, storing, retrieving and communication information in teams. Team learning is viewed as an outcome of communication and coordination that supports a shared knowledge by team members about their team, tasks, resources and context (Edmondson, Dillon, & Roloff, 2009).

The third area of research comprises models, constructs and methods to explore organizational learning and team effectiveness by examine how the managerial and contextual factors affect team learning processes and performance (Edmondson *et al.*, 2009). In accordance with this point of view, Edmondson, Bohmer and Pisano (2001) recognized four phases in learning process that are the enrolment, preparation, trials and reflection.

Therefore, team reflexivity is a concept that has a crucial role in this process and has a positive effect in team performance (Schippers, Den Hartog, Koopman, & Wienk, 2003). It refers to the extent to which teams reflect on and reform their function (Edmondson *et al.*, 2009). This component helps teams to identify potential problems, find causes and solutions and prepare them for future actions by discussing team's objectives, strategies and processes (Schippers, Homan, & Van Knippenberg, 2013; West, 2000).

In sum, learning curve and task mastery areas view team learning as an improved task performance. In contrast, group process explores an extensive array of team tasks and focuses on adaptive behaviors. Task mastery and group process researches investigate how team members' knowledge and interpersonal relationships affect group outcomes through group dynamics (Edmondson *et al.*, 2009).

1.3. Teamwork Engagement: An Emergent State

Teamwork engagement is a shared positive and motivational emergent state related to well-being in work groups. Team members may have the same perception of this state and it

is developed by the nature of their interaction during team processes and dynamics (Costa, Passos, & Bakker, 2014b). According to Morgeson and Hofmann (1999) this is a collective construct that depends of individual actions and multiple interactions which are responsible for creating a common behavior model.

The level of this emergent state is influenced by the affective, cognitive and motivational outcomes of different patterns of relations and specific configurations of inputs (e.g. previous performance, work structure, leaders' behavior and work events) and team processes (e.g. mission analysis, planning and coordination). Thus, it is a multidimensional construct characterized by three affective and cognitive dimensions that are team vigor, team dedication and team absorption (Costa *et al.*, 2014b).

The first dimension is related to high levels of energy and benevolence to provide efforts in task work and persistence to overcome difficulties. The team dedication is a shared strong involvement in work by expressing a sense of significance, enthusiasm, inspiration and pride while team members execute task work. Finally, the third dimension refers to a common attention of team members on work whereby individual centre their experience and difficulties on job activities (Costa *et al.*, 2014b).

Tyler and Blader (2003) proposed that a strong identification with the group may encourage individuals to invest personal energy to attain group success and this proposition was confirmed through a positive correlation between high levels of teamwork engagement and efforts as well as time investment in planning, goal setting, coordinating, tracking resources and proving back-up responses (Costa, Passos, & Bakker, 2014a).

However, the identification with the team is also related to high levels of commitment, cohesion, altruism and positive evaluations of the group and low levels of absenteeism, social loafing and turnover (Riordan & Wheatherly, 1999). This component implies thinking about one-self as a group (Tajfel & Turner, 1986).

Teamwork engagement is also connected to team potency and team viability (Costa *et al.*, 2014a). The first variable is characterized by a belief that team members may execute any task or demand (Stajkovic, Lee, & Nyberg, 2009). For this reason, individuals experience work-related well-being when they believe that the team is able to attain certain goal and may reinforce each other in order to benefit the team (Costa *et al.*, 2014a).

In accordance to Costa *et al.* (2014a), individuals are likely to working together when they have positive affect and high level of collective dedication to work. The positive affect expression is facilitated by teamwork engagement which owing to display enthusiasm and energy. Team members improve their affect according to controlled affect regulation

strategies, such as positive engagement and acceptance (Niven, Totterdell, & Holman, 2009). The positive engagement refers to the ability to involve the other in order to improve their affect and acceptance implies communication validation to the others (Costa *et al.*, 2014b).

Given the positive effects of teamwork engagement, leaders may promote efficient management behavior to provide a competitive advantage and increase performance at work by inducing a supportive climate and coordination in order to develop more vigorous, dedicated and absorbed teams (Torrente, Salanova, Llorens, & Schaufeli, 2012).

II. THE RESEARCH MODEL

The model of this study is illustrated in Figure 2.1. which is based on Burke *et al.* (2006) research. Although, the authors emphasize cognitive emergent states in the relation between team learning and team adaptation. This study proposes that this process is also influenced by affective states, in particularly teamwork engagement. It is a recent construct that is relevant and interesting to investigate in the context of teamwork.

The present research is innovative since it addresses the team effectiveness in tourism sector which is a poorly explored area in this dimension. The hypotheses focus on the positive effect of teamwork engagement in team adaptation that involves a learning process and induces high effective levels in teams.



Figure 2.1. *Hypothesized research model.*

According to Burke *et al.* (2006), the team learning requires an open discussion of the errors and unexpected outcomes in order to review the cognitive and behavioral aspects.

Therefore, it is a process that promotes an acquiring, sharing and combination of knowledge in teams through testing assumptions, forming new routines and adjusting strategies in response to current problems (Edmondson, 1999; Edmondson *et al.*, 2001). Team learning also involves a reflection of team processes and behaviors further to improve their performance (West, 2004; Argote & Olivera, 1999).

The translation, differentiation, integration and application of knowledge enable the execution of cognitive and behavioral processes toward to the team adaptation (Day & Lance, 2004). Thus, adaptive teams use their resources (i.e. knowledge gained from learning) to adjust their actions in accordance with situational requirements. However, the learning is also a consequence of team adaptation when the teams learn competencies as a result of adapting (Burke *et al.*, 2006).

Hypothesis 1: Team learning has a positive correlation with team adaptation.

Team adaptation is crucial to organizations that need to modify their resources and policies in order to become effective in a context of environmental changes (Marks *et al.*, 2001). This process is revealed in the innovation of new or modification of existing structures, capacities and/ or actions guided by behavioral or cognitive goals (Burke *et al.*, 2006). It is more effective in teams, once collectives have an extensive repertoire of capacities, experiences and networks to structure and delineate in order to engage in performance change (Zaccaro & Bader, 2003).

The team adaptation is essential in modern organizations since we are facing a changing reality. Thus, the adaptive teams are frequently able to manage performance barriers in effective way (Burke *et al.*, 2006).

Hypothesis 2: Team adaptation has a positive correlation with team effectiveness.

In accordance with the Burke *et al.* (2006) model, the team adaptation is directly and interactively determined by two categories of distal inputs (i.e. individual characteristics and job design characteristics) and two elements of adaptive team performance (i.e. processes in adaptive cycle and emergent cognitive states).

The adaptive cycle begins with an individual-level cognitive process which consists in scanning the environment in search of cues that may affect the success of the mission (Burke *et al.*, 2006). The situation assessment as well the emergent states allow team members to predict the future system states by understanding the current situation and the shared mental models provide an proactive adapt once they have compatible views of equipments, tasks and team member roles and responsibilities.

The members' situation awareness create a shared mental model in respecting to characterize and diagnose situations regarding to the objectives of the team and this information forms serve as baseline to the plan development (Endsley, 1995; Burke *et al.*, 2006).

However, team psychological safety enables that team members speak up and offer contributions during plan development (Burke *et al.*, 2006). The plan formulation is the product of a commands and information requests created to implement the plan execution (Orasanu, 1990).

Plan execution assumes a coordination action (e.g. back-up behavior, mutual performance monitoring, communication and leadership) that allows the effective teams to favor the potential synergies or process gains (Burke *et al.*, 2006).

These processes are influenced by team learning which is an ongoing process of reflection and action that induces the necessity of asking questions, seeking feedback, experimenting, reflecting on results and discussing errors or unexpected outcomes (Edmondson, 1999).

Therefore, teams prevent threats to performance or remove barriers as they encounter through the implementation of problem management techniques which is directly and indirectly related to team adaptation (Tesluck & Mathieu, 1999).

Several researches in tourism sector refer that certain policies (e.g. educating and communicating, setting goals, supplying strategic feedback, facilitate strategies review, align strategic initiatives, allocating resources and setting targets) are an advantage in this type of business in order to become organizations more effective (Kaplan & Norton, 2001; Denton & White, 2000).

These are the underlying principles of team adaptation that displaying the importance on the effective functioning and viability of organizations (Burke *et al.*, 2006).

Hypothesis 3: Team adaptation processes mediate the relationship between team learning and team effectiveness.

Burke *et al.* (2006) argued that a functional team adaptation starts with the challenge to maintain the team performance when team detects a cue pattern indicative of an incorrect arrangement between team's current performance and the needs of operational context. In order to the growth of the team, individuals develop task expertise at the individual-level and shared emergent cognitive states at the team-level.

The cognitive ability facilitates team performance and team adaptation through the processes that team members are able to engage in and the extent to which team members are successful in those activities. Teams that have high cognitive ability levels usually have a better way to adjust their role structure to conform to an unexpected change and this modification enhances decision accuracy (Burke *et al.*, 2006).

However, the affective regulation may also exert interpersonal influence over attitudes and behaviors of individuals. Engaging teams are more able to compromise, accept different opinions and try new solutions (Costa *et al.*, 2014b). They also shared a perception of challenge and supportive commitment (Bakker, Albrecht, & Leiter, 2011).

For this reason, teamwork engagement may influence the process of team adaptation once is a motivational and affective emergent state that improves team orientation in order to invest efforts in their work and avoid conflicts (Salas *et al.*, 2007; Costa *et al.*, 2014a).

Therefore, teams which are more vigorous, dedicated and absorbed tend to be more persistent within overcome problem barriers and this is essential in the four phases of adaptive cycle. The expression of enthusiasm during the task work boosts the strong involvement at work and it is particularly important during plan execution in order to be effectively performed (Costa *et al.*, 2014b; Burke *et al.*, 2006).

Finally, the time that teams spend in addressing their experiences and difficulties related to work may promote team learning and induce the situation assessment in order to find cues or failures on plan formulation during the execution (Costa *et al.*, 2014b; Burke *et al.*, 2006).

Hypothesis 4: Teamwork engagement is a moderator of the relationship between team learning and team adaptation.

III. METHOD

3.1. The Project “Team Effectiveness in Tourism Sector”

The project “Team Effectiveness in Tourism Sector” was developed by four mentees with a supervision of PhD Ana Margarida Passos. This consisted in the analysis of several variables that influence team effectiveness (team adaptation processes, teamwork engagement, intragroup conflict, shared temporal cognitions, adaptability, team orientation, transition and interpersonal team processes, team learning human resources management practices, team cohesion and leadership) as well the team effectiveness perceived by the employees and customers in hostels at Lisbon Metropolitan Area.

It was created a questionnaire with the processes mentioned above based on theoretical and empirical literature and also with socio-demographic questions. However, the data of team effectiveness perceived by the customers was collected through the evaluation in *Hostel World site*.

3.2. Sample and Procedure

3.2.1. Sample

The sample of this study consisted of 23 teams from hostels in Lisbon Metropolitan area (99 individuals with a maximum of 7 responses per hostel and a minimum of 2 responses per hostel). The teams are consisted of receptionists (51.5%), managers (7.1%), chambermaids (7.1%), cleaners (3.0%), cooks (2.0%) and others (24.2%).

Table 3.1. *Socio-demographic data of hostels teams.*

	N	M	SD	Minimum	Maximum
N teams	23				
N individuals	99				
Gender	<u>M F</u> 46 53	1.54	.50		
Age		29.53	8.15	19	62
Team Size		6.77	3.60	2	14

The teams are composed of two to fourteen persons with an average team size of 6.77 persons ($SD = 3.60$) which 40.8% is working at less than one year in the hostel, 34.7% between one and three years, 16.3% between three and five years, 6.1% between five and seven years and 2.0% more than seven years. The average age was 29.53 ($SD = 8.15$) with a minimum age of 19 years and a maximum age of 62 years. The participants were 46.5% male and 53.5% female that 12.4% perform leadership roles.

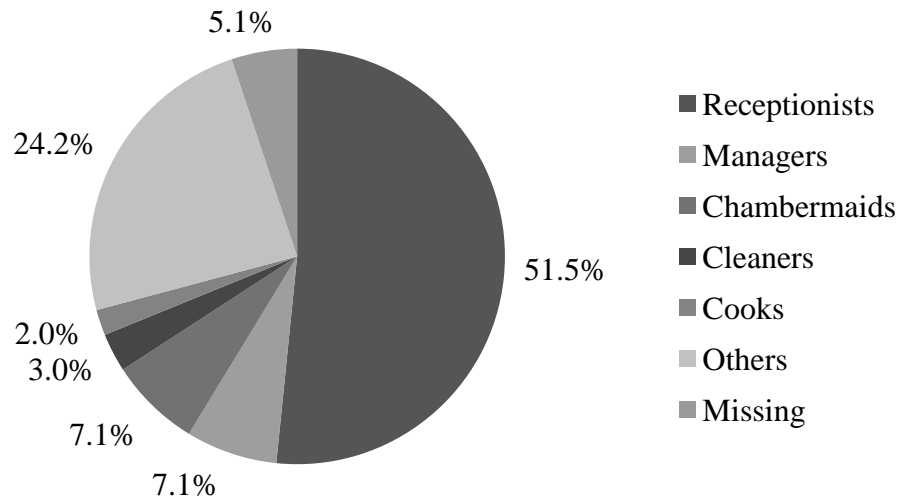


Figure 3.1. *Job position at the hostel.*

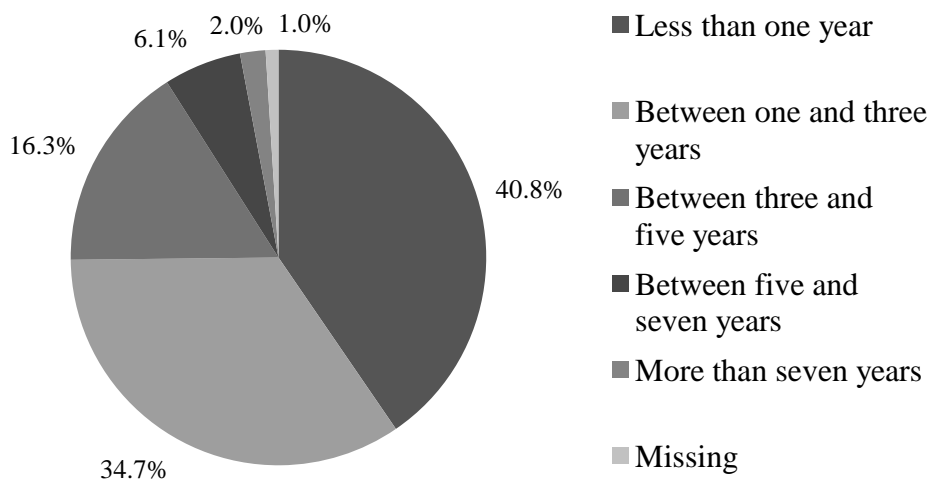


Figure 3.2. *Time since working at the hostel.*

3.2.2. Procedure

This study was part of a Master Project that integrated four students from ISCTE – Lisbon University Institute and was coordinated by an Associate Professor of ISCTE Business School.

First it was discussed a global theme that would be studied by the four mentees. We agreed that the project would be focused on team effectiveness. Then, we debated about the sector that we would analyze (health, social service and tourism) and we opted to apply the surveys in hostels at Lisbon Metropolitan Area.

Second we made a list of the hostels that were identified according to the parish (Santa Maria Maior, Misericórdia, Santo António, Arroios, Avenidas Novas, São Vicente and Estrela) and the four mentees were responsible to deliver the questionnaires in person for those establishments, which were in portuguese language. Initially, the deadline for receipt the responses was one week. However, was extended for three months once we had some difficulties to attract the individuals in order to participate in the study.

Thus, the prevision of answers was not the expected and we had to search more hostels. In this group we developed and applied an english version of the questionnaires. Finally, the surveys were gathered in person except one case that was sent by courier.

The problems that we had in data collection may have been by the extensive questionnaire which was composed of two paper sheets (four pages). However, we contacted the hostels between Carnival and Easter vacations that tend to be a period with an increasing in workflow and the employees may not have had time to answer the surveys.

3.3. Measures

Team learning. Team learning was operationalized through 12 items of the team learning behaviors questionnaire (Santos *et al.*, 2015). Examples of the twelve items include “we regularly take time to reflect on how we can improve our working methods” and “if something is unclear, we ask each other questions”. Participants answered on a seven-points rating-scale (1= totally disagree; 7= totally agree). Higher scores indicated better team learning. Alpha coefficient of this scale was 0.95.

Team adaptation. Team adaptation was measured by the 10 items of the team adaptation processes scale developed by Marques-Quinteiro, Ramos-Villagrasa, Passos and Currel (2015). Participants answered on a seven-points rating-scale (1= totally disagree; 7=

totally agree) reflecting the extent of their agreement with each statement. Examples of the items include “we engage in creative action to solve problems for which there are no easy or straight forward answers” and “we search and develop new competences to deal with difficult situations”. Higher scores reflect more team adaptation. Alpha coefficient for this scale was 0.91.

Teamwork engagement. Teamwork engagement was operationalized through 9 items of the validation of teamwork engagement construct questionnaire (Costa *et al.*, 2014a). Examples of the nine items include “we are enthusiastic about our job” and “we are immersed in our work”. Participants answered on a seven-points rating-scale (1= totally disagree; 7= totally agree). Higher scores indicated greater perception of teamwork engagement. Alpha coefficient of this scale was 0.95.

Team effectiveness. Team effectiveness was measured by 6 items of the effectiveness scale developed by González-Romá, Fortes-Ferreira, and Peiró (2009) based on effectiveness construct of Hackman (1987). Participants answered on a seven-points rating-scale (1= totally disagree; 7= totally agree) reflecting the extent of their agreement with each statement. Examples of the six items include “the team that works in this hostel has a good performance” and “this hostel is better than the competition”. Higher scores reflect more team effectiveness. Alpha coefficient of this scale was 0.85.

The data related to the team effectiveness perceived by customers was gathered in *Hostel World site* and the variables included were the relation between service quality and price, security, location, staff, atmosphere, cleanliness, facilities and the average evaluation of the Hostel. Customers answered on an eleven-points rating-scale (0= very bad; 10= excellent). Higher scores indicated greater satisfaction with the hostel.

IV. DATA ANALYSIS

Aggregation

The group was the level of analysis in this study. Therefore, the individual answers to the questionnaires were aggregated to the group level for statistical analysis. This aggregation intends to reduce the impact of individual differences inside the team (Bliese, 2001).

To justify this aggregation by the variables we computed the $R_{wg(j)}$ that were designed for multiple-item scales (James, Demaree, & Wolf, 1984, 1993). The $R_{wg(j)}$ for team adaptation, teamwork engagement, team effectiveness and team learning with the team averaged were 0.93, 0.91, 0.87 and 0.85, respectively. The values exceeded the minimum criterion of 0.70 which deemed that was appropriate to aggregate the variables to team level for the analysis (Cohan, Doveth, & Eick, 2001) (See Table 4.1. *Descriptive statistics and correlations among team-level variables and others*).

Hypotheses Testing

The correlations, means and standard deviations for the variables at team-level that are being studied and customer evaluation are presented in Table 4.1. As expected, the results of the relationship between team-level variables reveal a positive correlation. It was verified a positive and significant correlation between the criteria evaluated by customers in respect to the hostel. However, the variables of customer evaluation do not correlate with teamwork engagement, team adaptation, team effectiveness and team learning.

The predictive variables team learning and teamwork engagement have a positive and significant correlation between themselves ($r = .67, p < .01$), as was team learning and team adaptation ($r = .62, p < .01$).

These team processes have also a positive correlation with the criterion variables. In these case, the results showed a positive and significant correlation between teamwork engagement and team adaptation ($r = .88, p < .001$), team learning and perceived team effectiveness ($r = .62, p < .01$) and team adaptation and perceived team effectiveness ($r = .76, p < .001$). Thus, the results allowed us to support Hypotheses 1 and 2 once that showed a positive correlation between team learning and team adaptation, as was team adaptation and team effectiveness.

Table 4.1. Descriptive statistics and correlations among team-level variables and others.

	Rwg(j)	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. TA	.93	5.71	.65	(.98) ¹										
2. TWE	.91	5.87	.80	.88**	(.95) ¹									
3. PTE	.87	5.08	.52	.76**	.74**	(.85) ¹								
4. TL	.85	5.75	.67	.62*	.67*	.62*	(.95) ¹							
5. Value/Money		9.17	.60	0	.07	.29	.23							
6. Security		9.31	.64	-.04	.03	0	.19	.60*						
7. Location		9.22	.72	.44	0	.05	.04	.38	.72**					
8. Staff		9.41	.58	.25	.29	.12	.25	.59*	.79**	.72**				
9. Atmosphere		8.80	.81	.09	.10	.23	.13	.80**	.63*	.67**	.72**			
10. Cleanliness		9.19	.67	.12	.21	.19	.10	.63*	.85**	.64*	.76**	.63*		
11. Facilities		8.88	.80	.12	.20	.20	.21	.66*	.84**	.74**	.81**	.77**	.90**	
12. Average		9.13	.60	.10	.15	.18	.17	.77**	.89**	.80**	.88**	.89**	.88**	.95**

Note. N = 23

TA Team Adaptation TWE Teamwork Engagement PTE Perceived Team Effectiveness TL Team Learning

* p < .01 ** p < .001

¹Cronbach Alpha

Regarding to the mediation effect of team adaptation on the relationship between team learning and perceived team effectiveness, the results reveal that when team adaptation was added the influence of team learning become no significant, suggesting mediation (See Table 4.2. *Estimated parameters for the hypotheses indirect effect for the hostels teams*). Therefore, the results reflect a possible mediation and allowed us to support Hypothesis3.

Table 4.2. *Estimated parameters for the hypotheses indirect effect for the hotels teams.*

Perceived Team Effectiveness		
Model	Step 1	Step 2
1. Predictor		
Team Learning	.48** (.13)	.19(.14)
2. Mediator		
Team Adaptation		.48** (.14)
Adj. R ₂	.36	.57
ΔR ₂		.22
F	13.33**	15.59*
ΔF		11.31*

Note. Non standardized Betas are presented.

* $p < .01$ ** $p < .001$

To test the hypotheses we execute a Multiple Regression using the ENTER method. Thus, the main effects of each variable were entered in the first step of the model and the interaction effects were exposed in the second step. The predicting variables were previously centered according to the procedure proposed by Aiken and West (1991), in the moderation case.

It was verified a positive effect of teamwork engagement and team learning on team adaptation, although only the first variable showed a significant effect ($B = .67, p < .001$ and $B = .06, p > .05$, respectively). This model explains 75% of the variance ($F = 33.76, p < .001$).

In respect to the moderation effect of teamwork engagement on the relationship between team learning and team adaptation, the results showed that the interaction was not significant ($B = .19, p > .05$), when it was added the interaction of the variables in the equation. However, the F change was significant (See Table 4.3. *Estimated parameters for the hypotheses indirect effect for the hostels teams*). Once the means of team-level variables were not extremely high, it probably may affect negatively the results of the moderation effect. Thus, the results do not allowed us to support Hypothesis 4.

Table 4.3. *Estimated parameters for the hypotheses indirect effect for the hostels teams.*

Team Adaptation		
Model	Step 1	Step 2
1. Main Effect		
Teamwork Engagement	.67* (.12)	.74* (.12)
Team Learning	.06(.14)	.04(.14)
2. Interaction		
Teamwork Engagement x Team Learning		.19(.12)
Adj. R ₂	.75	.77
ΔR ₂		.03
F	33.76*	24.90*
ΔF		2.41

Note. Non standardized Betas are presented.

* $p < .001$

Although we done the analyses to testing hypotheses. We also executed other moderation effects. The interaction of teamwork engagement in the relationship between team learning and customer evaluation average showed interesting results. It was verified a negative and significant effect in this moderation ($B = -.52, p < .05$), as F change ($\Delta F = 6.01, p < .05$). These results suggest a possible moderation.

Table 4.4. *Estimated parameters for indirect effect for the hostels teams.*

Average		
Model	Step 1	Step 2
1. Main Effect		
Teamwork Engagement	.04(.22)	-.15(.21)
Team Learning	.12(.27)	.21(.24)
2. Interaction		
Teamwork Engagement x Team Learning		-.52* (.21)
Adj. R ₂	-.07	.15
ΔR ₂		.23
F	.33	2.28
ΔF		6.01*

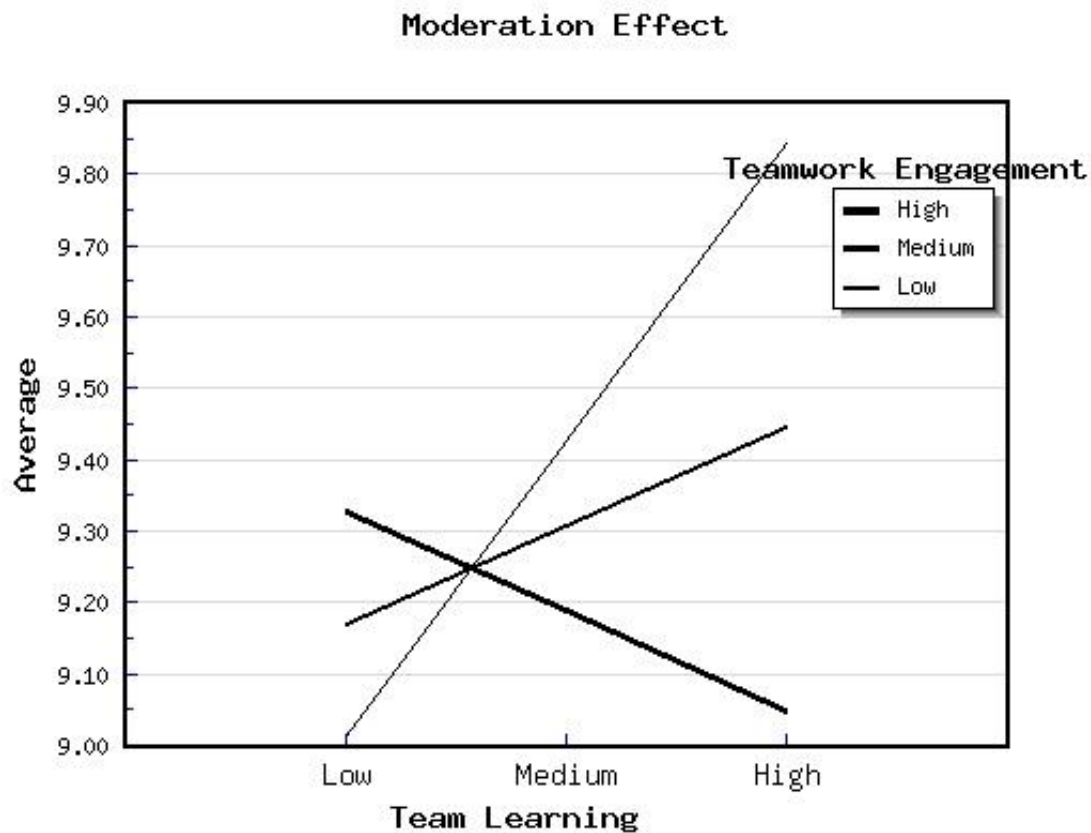
Note. Non standardized Betas are presented.

* $p < .05$

We verified through ModGraph that teams with high levels of teamwork engagement have better average ranking of customer evaluation and worst rates of learning abilities. When we observe high levels of team learning and teamwork engagement, the average ranking of customer evaluation tend to be lower. (See Figure 4.1. *Moderation effect of teamwork engagement on the relationship between team learning and average by ModGraph*) (Jose, 2013).

Furthermore, the teams with low levels of teamwork engagement and team learning have also worst rates in average ranking of customer evaluation. However, we verify that lower levels of teamwork engagement and high levels of team learning have better average ranking of customer evaluation. These results suggest that teamwork engagement do not have an important role in customer satisfaction, as opposite of the evidences of empirical and theoretical literature.

Figure 4.1. *Moderation effect of teamwork engagement on the relationship between team learning and average by ModGraph.*



V. DISCUSSION AND CONCLUSION

Researchers are increasingly interested in studying and understanding adaptation processes in teams once we face environmental changes constantly that result in high levels competitiveness and organizations seek mechanisms in order to become more effective. However, only few researches have been made in the tourism sector so we decided to focus on hostel units in Lisbon Metropolitan Area. This study aimed to evaluate the effect of teamwork engagement on team learning and team adaptation. Overall, the results point to a direct influence of these variables. When it comes to the moderation effect of teamwork engagement, the results do not support the hypothesis which is being tested.

According to Edmondson (1996), teams with higher quality interpersonal process, better leaders and team effectiveness had more detected errors. These teams were more likely to report errors and it is essential for team learning. Furthermore, the identification of the problems and ambition to improve team performance were the first processes that initiate an adaptive cycle (Burke, Stagl, Salas, Pierce, & Kendall). Thus, our model suggested that teamwork engagement may have a positive influence on the relationship between these variables once it promotes a strong identification, high levels of team orientation, commitment and positive emotions that are important to efficient communication and to invest efforts to overcome barriers (Tyler & Blader, 2003; Costa *et al.*, 2014a).

Regarding the direct influence of team learning and team effectiveness in the team adaptation, the results allowed us to support the hypothesis 1 and 2. As expected, the learning processes such as experimentation, reflective communication and knowledge codification improve team adaptation which has an impact on team performance processes once it focus on the modification of structures, capacities and actions that may influence the team effectiveness (Gibson & Vermeulen, 2003; Burke *et al.*, 2006).

Moreover, the results of present study allow us to support the mediation effect of team adaptation on the relationship between team learning and team effectiveness which refers to hypothesis 3. As Burke *et al.* (2006), suggest in previous study regarding team adaptation, this process implies an adaptive cycle that involves team learning once it influences the recognizing of the situation as so the phenomena to prevent the effectiveness barriers and the manner to review their actions. Although the learning processes improve the ability to adapt to a changing reality, it also increases the levels of knowledge that are important in order to attain team adaptation outcome. Furthermore, when teams achieve this outcome successfully it may reflect in their effectiveness.

Finally, the results suggested a possible moderation of teamwork engagement on the relationship between team learning and customer evaluation average of hostel units. However, it was not in accordance with theoretical and empirical literature once teamwork engagement is positively related to job satisfaction which is connected to pleasure and positive emotions (Locke, 1976; Costa *et al.*, 2014a). Several researches emphasized the significant role that employees play in customer service and their satisfaction have an impact on loyal customers as so in their satisfaction (Chi & Gursoy, 2009). Moreover, Sarin and McDermott (2003) identified that leader's behaviors, such as involving members in decision making and clarifying team goals facilitates team learning. According to Bandura (1997), the success experiences and/ or the positive feedback received allow the teams to improving their efficacy, boosting motivation and creativity which facilitate engagement and positive emotions at work.

Therefore, it was expected that teamwork engagement has a positive influence on the relationship between team learning and customer evaluation, once this affective emergent state increase positive emotions and motivation that have an impact on the quality of customer service as so the customers satisfaction. Furthermore, the employees' involvement improves their efficacy and teamwork engagement as so team learning facilitates these processes. Although the researches evidences, the results showed the opposite that was supposed.

We suggest that hostels may have boxes with satisfaction questionnaires at the bedrooms for customers in order to improve quality service and other for suggestions of the staff to understand adaptation needs. Furthermore, it would be interesting choose a responsible per shift and make a monthly meeting with the hostel's director to implement strategies to increase effectiveness.

Moreover, the directors of the hostels should search for partnerships, such as museums, surf schools, restaurants, bars and others to promote tourist experiences and improve the customers' satisfaction.

Although these partnerships, they may invest in discounts in languages courses for their staff to increase quality service and learning abilities, as also customer service and cooking workshops. Finally, we suggest that should be organized staff meetings, such as Christmas dinner, to establish better relationships between team members and improve teamwork engagement.

Limitations

During the course of the investigations we tried to contact the majority of hostels in Lisbon Metropolitan Area as possible. However, we do not have positive responses in respect

to the participation in the study. Thus, it interfered with the quality of the sample. Moreover, as staffs of the hostel have many job functions during their work not all the individuals are available to answer the questionnaires.

This sector is not the most appropriate to test these variables since it has a large turnover rate and it is negatively related to teamwork engagement. Furthermore, there is little investment in learning processes. However, this sector has a lot of competition, so it necessary to create strategies in order to make the adaptation more effective.

The majority of individuals are working less than one year at the hostel and we had few answers per team, so it may have influence the establishment of an affective emergent state. These facts may have affected the results once they are not in accordance with that was supposed.

Future research

This study proves that there is still a lot to be studied in what concerns to teamwork engagement and it may be directed to other sectors in different countries. Team adaptation is also an important variable to be studied once we are facing environmental changes and teams need to adapt their resources in order to become more effective, so it is completely pertinent to do more researches in this area, especially in different sectors and contexts.

We suggest that in the future, researchers should study the relationship between these variables and other aspects that may influence the establishment of teamwork engagement (e.g. number of individuals that compose the team and time that individuals have been working in the organization). Once it is a recent construct, it would be interesting to study the relationship between this emergent state and other variables that have impact on team effectiveness.

Overall, the goal of this study was to contribute to a better understanding on the relationship between teamwork engagement, team learning and team adaptation as key processes for team effectiveness. However, the results were not as positive and conclusive as we expected, so it is important that future researches investigate these processes in order to have a better comprehension of this phenomena.

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APPENDIX

Appendix A – Investigation tools

Explanation of the study.

À direção do Hostel

Enquanto Coordenadora científica do Projeto “Team to Hostels”, gostaria de solicitar a sua autorização para aplicar um questionário aos colaboradores da vossa unidade hoteleira. Trata-se de um projeto de investigação levado a cabo por um grupo de investigadores do ISCTE-Instituto Universitário de Lisboa, focado na eficácia do trabalho em equipa em contexto unidades de turismo, especificamente nos Hostels da região da Grande Lisboa.

Os questionários são distribuídos em papel por um dos membros da equipa de investigação e demora sensivelmente 10 minutos a preencher. Será fornecido um envelope para cada questionário. Os envelopes serão recolhidos uma semana mais tarde por um membro da equipa. Desta forma asseguramos a privacidade e anonimato das respostas. Aproveito igualmente para salientar que o nome Hotel não será mencionado em qualquer documento.

No sentido de aumentar a participação neste estudo, vamos sortear duas inscrições no “Tourism & Ageing Conference” que terá lugar no ISCTE-IUL nos próximos dias 26 – 29 de Outubro de 2016. Para mais informações sobre a conferência podem visitar o site: <http://taconference2016.iscte-iul.pt>.

Estou inteiramente ao dispor para responder a qualquer questão relacionada com este projeto e a aplicação dos questionários (ana.passos@iscte.pt).

Com os melhores cumprimentos,

Ana Margarida Passos

Professora no Departamento de Recursos Humanos
e Comportamento Organizacional

Lisboa, 25 de Janeiro de 2016

Hostel description questionnaire.

QUESTIONÁRIO DE CARACTERIZAÇÃO DO HOSTEL

1. Este questionário insere-se num projeto de investigação levado a cabo por um grupo de investigadores do ISCTE-Instituto Universitário de Lisboa, focado na eficácia do trabalho em equipa em contexto de unidades de turismo, especificamente nos Hostels da região da Grande Lisboa. O principal objetivo deste projeto é identificar os fatores relacionados com trabalho em equipa que contribuem para a eficácia do serviço prestado aos clientes e para o bem-estar dos profissionais.
2. Os dados recolhidos serão exclusivamente analisados pela equipa de investigação, estando garantido o anonimato.
3. As perguntas deste questionário servem apenas para a equipa ter alguns dados gerais de caracterização do Hostel

Para qualquer esclarecimento, ou para receber informação adicional sobre o estudo por favor contacte: Prof.^a Doutora Ana Margarida Passos (ana.passos@iscte.pt).

Obrigado pela sua colaboração!

1. Ano de abertura do Hostel: _____

2. Número de camas: _____

3. Quantas pessoas trabalham em permanência no Hostel:

4. Tempo médio de permanência dos clientes: _____ dias (estimativa)

5. A abertura do Hostel resultou de um projeto empreendedor? _____

MUITO OBRIGADO PELA SUA PARTICIPAÇÃO!

Questionnaire.

QUESTIONÁRIO

4. Este questionário insere-se num projeto de investigação levado a cabo por um grupo de investigadores do ISCTE-Instituto Universitário de Lisboa, focado na eficácia do trabalho em equipa em contexto de unidades de turismo, especificamente nos Hostels da região da Grande Lisboa. O principal objetivo deste projeto é identificar os fatores relacionados com trabalho em equipa que contribuem para a eficácia do serviço prestado aos clientes e para o bem-estar dos profissionais.
5. Os dados recolhidos serão exclusivamente analisados pela equipa de investigação, estando garantido o anonimato.
6. As perguntas estão construídas de modo a que apenas tenha de assinalar a resposta que lhe parecer mais adequada. Procure responder sem se deter demasiadamente em cada questão.
7. Não há respostas certas ou erradas. O que nos interessa é exclusivamente a sua opinião pessoal.
8. Para cada pergunta existe uma escala. Pode utilizar qualquer ponto da escala desde que o considere adequado.
9. Responda a todo o questionário de seguida, sem interrupções.

Para qualquer esclarecimento, ou para receber informação adicional sobre o estudo por favor contacte: Prof.^a Doutora Ana Margarida Passos (ana.passos@iscte.pt).

Obrigado pela sua colaboração!

1.As questões que a seguir se apresentam procuram descrever os comportamentos da equipa no Hostel. Indique em que medida concorda com cada uma delas utilizando a escala de resposta

Discordo Totalment e	Discordo muito	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo muito	Concordo Totalment e
1	2	3	4	5	6	7

A nossa equipa é eficaz...

1.	A levar a cabo ações criativas para resolver problemas para os quais não há respostas fáceis ou diretas.	1	2	3	4	5	6	7
2.	A encontrar formas inovadoras de lidar com situações inesperadas.	1	2	3	4	5	6	7
3.	Em ajustar-se e lidar com situações imprevistas, mudando rapidamente de foco e tomando medidas adequadas.	1	2	3	4	5	6	7
4.	A desenvolver planos de ação alternativos, num curto espaço de tempo, para lidar com imprevistos.	1	2	3	4	5	6	7
5.	Na atualização periódica das competências técnicas e interpessoais para melhorar o desempenho das tarefas em que está envolvida.	1	2	3	4	5	6	7
6.	Na procura e desenvolvimento de novas competências para dar resposta a situações/ problemas.	1	2	3	4	5	6	7
7.	A ajustar o estilo pessoal de cada membro ao da equipa como um todo.	1	2	3	4	5	6	7
8.	Na melhoria das relações interpessoais tendo em consideração as necessidades e aspirações de cada membro.	1	2	3	4	5	6	7
9.	A permanecer calma e com comportamentos positivos mesmo em situações de elevado stress.	1	2	3	4	5	6	7
10.	A manter o foco mesmo quando lida com várias situações e responsabilidade.	1	2	3	4	5	6	7

2. As seguintes afirmações referem-se a sentimentos que algumas equipas têm em relação ao seu trabalho. Por favor, leia atentamente cada um dos itens a seguir e responda se a sua equipa já experimentou o que é relatado, em relação ao trabalho realizado no Hostel. Utilize, por favor, a mesma escala apresentada anteriormente.

Em relação ao **nosso trabalho neste Hostel sentimos que:**

1.	Quando estamos a trabalhar sentimo-nos cheios de energia.	1	2	3	4	5	6	7
2.	Sentimo-nos com força e energia quando estamos a trabalhar.	1	2	3	4	5	6	7
3.	Estamos entusiasmados com este trabalho.	1	2	3	4	5	6	7
4.	Este trabalho inspira-nos.	1	2	3	4	5	6	7
5.	Durante o trabalho, temos vontade de participar nas diversas atividades.	1	2	3	4	5	6	7
6.	Somos felizes quando estamos envolvidos neste trabalho.	1	2	3	4	5	6	7
7.	Estamos orgulhosos com o nosso trabalho neste Hostel.	1	2	3	4	5	6	7
8.	Estamos imersos no trabalho deste Hostel.	1	2	3	4	5	6	7
9.	“Deixamo-nos levar” pelas atividades deste trabalho.	1	2	3	4	5	6	7

3. As questões que se seguem dizem respeito à **forma como a sua equipa funciona enquanto grupo**. Indique, por favor, com que frequência cada uma destas situações se verifica na realização do vosso trabalho. Utilize, por favor, a seguinte escala:

Nunca	Raramente	Poucas vezes	Às vezes	Muitas vezes	Quase sempre	Sempre
1	2	3	4	5	6	7

Com que frequência:

1.	Existem conflitos pessoais entre os membros da equipa.	1	2	3	4	5	6	7
2.	Existem divergências sobre a forma de utilizar os recursos disponíveis.	1	2	3	4	5	6	7

3.	Existe atrito entre os membros da equipa.	1	2	3	4	5	6	7
4.	Existe conflito de ideias entre os membros da equipa.	1	2	3	4	5	6	7
5.	Existe desacordo entre os membros sobre a forma de distribuir o tempo disponível na realização de tarefas.	1	2	3	4	5	6	7
6.	Existe confronto de opiniões sobre o trabalho.	1	2	3	4	5	6	7
7.	Existe desacordo na equipa em relação às ideias expressas por alguns membros.	1	2	3	4	5	6	7
8.	Existe desacordo entre os membros sobre o tempo que é necessário despende para realizar as tarefas.	1	2	3	4	5	6	7
9.	Os conflitos pessoais são evidentes.	1	2	3	4	5	6	7
10.	Os membros da equipa estão em desacordo sobre quem deve fazer o quê.	1	2	3	4	5	6	7
11.	Os membros da equipa estão em desacordo em relação à rapidez com que as tarefas devem ser realizadas.	1	2	3	4	5	6	7
12.	Existe conflito sobre a delegação de tarefas.	1	2	3	4	5	6	7

4. As questões que se seguem dizem respeito à forma **como a equipa gere o seu tempo**. Indique-nos a frequência com que estas situações ocorrem na equipa. Utilize, por favor, a seguinte escala:

Discordo Totalmente	Discordo muito	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo muito	Concordo Totalmente
1	2	3	4	5	6	7

Na minha equipa...

1.	Temos a mesma opinião sobre o cumprimento de prazos.	1	2	3	4	5	6	7
2.	Pensamos de forma semelhante sobre a forma de usarmos o tempo no trabalho.	1	2	3	4	5	6	7
3.	Concordamos sobre a forma de distribuir o tempo	1	2	3	4	5	6	7

	disponível durante o trabalho.							
4.	Temos ideias semelhantes no que se refere ao tempo necessário para realizarmos as tarefas necessárias.	1	2	3	4	5	6	7

5. Tendo por base o trabalho desenvolvido pela vossa equipa no Hostel, indique, em que medida concorda com cada uma das seguintes afirmações. Utilize, por favor, a mesma escala:

1.	Considero que as mudanças, na maior parte das vezes, têm implicações positivas.	1	2	3	4	5	6	7
2.	Normalmente aceito bem as mudanças.	1	2	3	4	5	6	7
3.	Considero-me uma pessoa aberta a mudanças.	1	2	3	4	5	6	7
4.	Consigo lidar com as mudanças eficazmente.	1	2	3	4	5	6	7
5.	Sou capaz de me adaptar a novas circunstâncias.	1	2	3	4	5	6	7

6. Indique, em que medida concorda com cada uma das seguintes afirmações. Continue, por favor, a utilizar a mesma a escala:

1.	Sinto-me mais confortável a trabalhar sozinho/a do que a trabalhar com outros.	1	2	3	4	5	6	7
2.	Se me for dado a escolher, prefiro trabalhar em equipa do que sozinho/a.	1	2	3	4	5	6	7
3.	As equipas são mais produtivas do que as mesmas pessoas seriam a trabalhar sozinhas.	1	2	3	4	5	6	7

7. Pense agora na no funcionamento do **Hostel como um todo**. Indique em que medida concorda ou discorda com cada uma das seguintes afirmações. Continue, por favor, a utilizar a mesma a escala:

1.	A equipa que trabalha neste Hostel tem um bom desempenho.	1	2	3	4	5	6	7
2.	Os clientes deste Hostel estão satisfeitos.	1	2	3	4	5	6	7
3.	A minha equipa neste Hostel é eficaz.	1	2	3	4	5	6	7
4.	Em relação a este Hostel existe uma boa relação preço –	1	2	3	4	5	6	7

	serviço.							
5.	Este Hostel é melhor do que a concorrência.	1	2	3	4	5	6	7
6.	Existem poucas coisas que gostava de alterar no funcionamento do Hostel.	1	2	3	4	5	6	7

8. Tendo por base a forma como o **trabalho é desenvolvido pela vossa equipa no Hostel**, indique, em que medida concorda com cada uma das seguintes afirmações. Utilize, por favor, a escala seguinte:

Discordo Totalmente	Discordo muito	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo muito	Concordo Totalmente
1	2	3	4	5	6	7

A minha equipa trabalha ativamente para...

1.	Identificar as tarefas envolvida na sua atividade.	1	2	3	4	5	6	7
2.	Identificar os principais desafios que esperavam enfrentar.	1	2	3	4	5	6	7
3.	Determinar os recursos necessários para terem sucesso na sua missão.	1	2	3	4	5	6	7
4.	Definir os objetivos da equipa.	1	2	3	4	5	6	7
5.	Garantir que todos os membros entendam claramente os objetivos da equipa.	1	2	3	4	5	6	7
6.	Estabelecer prioridades para os objetivos da equipa.	1	2	3	4	5	6	7
7.	Desenvolver uma estratégia global de ação.	1	2	3	4	5	6	7
8.	Preparar planos de contingência (“se-então”) para lidar com situações inesperadas.	1	2	3	4	5	6	7
9.	Saber quando continuar com uma determinada estratégia, e quando adotar uma diferente.	1	2	3	4	5	6	7
10.	Avaliar regularmente em que medida os objetivos estão a ser cumpridos.	1	2	3	4	5	6	7
11.	Usar critérios claramente definidos para avaliar o	1	2	3	4	5	6	7

	progresso da equipa.							
12.	Procurar obter feedback de outras equipas ou de colegas de trabalho para saber se os objetivos estão a ser cumpridos.	1	2	3	4	5	6	7
13.	Monitorizar e gerir os recursos da equipa (e.g., equipamentos, materiais, etc.).	1	2	3	4	5	6	7
14.	Monitorizar os aspetos importantes do ambiente de trabalho (e.g., equipamento, comunicação da informação).	1	2	3	4	5	6	7
15.	Avaliar os acontecimentos e condições fora da equipa que influenciam as suas atividades/tarefas.	1	2	3	4	5	6	7
16.	Desenvolver padrões para um desempenho aceitável dos membros da equipa.	1	2	3	4	5	6	7
17.	Equilibrar o volume de trabalho entre os membros da equipa.	1	2	3	4	5	6	7
18.	Ajudar-se uns aos outros quando necessário.	1	2	3	4	5	6	7
19.	Comunicar abertamente uns com os outros.	1	2	3	4	5	6	7
20.	Integrar facilmente o esforço de todos.	1	2	3	4	5	6	7
21.	Coordenar as atividades uns com os outros.	1	2	3	4	5	6	7
22.	Lidar com os conflitos pessoais de forma justa e adequada.	1	2	3	4	5	6	7
23.	Mostrar respeito uns pelos outros.	1	2	3	4	5	6	7
24.	Manter a harmonia da equipa.	1	2	3	4	5	6	7
25.	Ter orgulho dos sucessos.	1	2	3	4	5	6	7
26.	Desenvolver confiança nas capacidades da equipa para alcançar um bom desempenho.	1	2	3	4	5	6	7
27.	Encorajar-se mutuamente para termos o melhor desempenho possível.	1	2	3	4	5	6	7
28.	Partilhar um sentimento de pertença e de coesão.	1	2	3	4	5	6	7
29.	Gerir o stress.	1	2	3	4	5	6	7
30.	Manter o equilíbrio emocional na equipa.	1	2	3	4	5	6	7

9. Pense agora na **forma como a sua equipa trabalha** neste Hostel. Não se trata da forma como acha que a equipa devia trabalhar mas sim no que faz na maioria das vezes. Utilizando a mesma escala indique em que medida concorda ou discorda com cada afirmação:

Na minha equipa...

1.	Refletimos sobre a forma como podemos melhorar os métodos de trabalho.	1	2	3	4	5	6	7
2.	Procuramos em conjunto analisar as possíveis causas dos erros cometidos.	1	2	3	4	5	6	7
3.	Se alguma coisa corre mal, a equipa investe tempo a analisar o problema.	1	2	3	4	5	6	7
4.	Consideramos útil analisar os nossos erros.	1	2	3	4	5	6	7
5.	Se um membro dá a sua opinião sobre um assunto a seguir pergunta aos outros a opinião sobre o mesmo assunto.	1	2	3	4	5	6	7
6.	Durante a realização do trabalho, se alguma coisa não é clara, fazemos perguntas uns aos outros abertamente.	1	2	3	4	5	6	7
7.	Encorajamo-nos a olhar para o nosso trabalho de diferentes perspetivas.	1	2	3	4	5	6	7
8.	Os membros ouvem atentamente o que os outros elementos têm a dizer.	1	2	3	4	5	6	7
9.	Os erros são analisados exaustivamente por todos.	1	2	3	4	5	6	7
10.	Discutimos frequentemente os métodos de trabalho.	1	2	3	4	5	6	7
11.	Avaliamos regularmente a forma como colaboramos uns com os outros.	1	2	3	4	5	6	7
12.	Reconsideramos regularmente os nossos procedimentos de trabalho.	1	2	3	4	5	6	7

10. As questões que se seguem dizem respeito às **práticas de gestão de recursos humanos (RH)** neste Hostel. Indique em que medida concorda com cada uma das afirmações. Utilize, por favor, a escala seguinte

Discordo Totalmente	Discordo muito	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo muito	Concordo Totalmente
1	2	3	4	5	6	7

1.	A Gestão de RH do Hostel promove um verdadeiro espírito de equipa.	1	2	3	4	5	6	7
2.	O sistema de avaliação de desempenho promove a boa performance da equipa.	1	2	3	4	5	6	7
3.	A minha equipa reúne com frequência para trocar ideias entre si.	1	2	3	4	5	6	7
4.	Eu e a minha equipa temos recebido formação suficiente.	1	2	3	4	5	6	7
5.	As ações de formação que tenho frequentado são úteis para o trabalho que realizo nesta unidade hoteleira.	1	2	3	4	5	6	7
6.	O sistema de avaliação de desempenho é útil.	1	2	3	4	5	6	7

11. As questões que se seguem dizem respeito à forma como a sua equipa funciona e aos sentimentos que os membros da equipa têm uns relativamente aos outros. Indique em que medida concorda com cada uma das afirmações. Utilize, por favor, a mesma escala.

1.	A nossa equipa é unida ao tentar conseguir um bom desempenho.	1	2	3	4	5	6	7
2.	Todos nós assumimos a responsabilidade por qualquer mau desempenho da nossa equipa.	1	2	3	4	5	6	7
3.	Comunicamos abertamente uns com os outros sobre as nossas responsabilidades pessoais no trabalho.	1	2	3	4	5	6	7
4.	Os membros da equipa ajudaram-se uns aos outros durante o trabalho.	1	2	3	4	5	6	7
5.	Os membros da equipa convivem uns com os outros fora do trabalho.	1	2	3	4	5	6	7

12. Pense agora no **comportamento da liderança** da sua chefia. Indique em que medida concorda com cada uma das afirmações. Por favor, continue a utilizar a mesma escala.

1.	Revê resultados de desempenho relevantes com a equipa.	1	2	3	4	5	6	7
2.	Monitoriza a equipa e o desempenho dos colaboradores.	1	2	3	4	5	6	7
3.	Sugere novas formas de realizar o trabalho.	1	2	3	4	5	6	7
4.	Fornece feedback positivo quando a equipa tem um bom desempenho.	1	2	3	4	5	6	7
5.	Contribui com ideias concretas para melhorar o desempenho da equipa.	1	2	3	4	5	6	7
6.	Comunica questões relativas ao trabalho realizado pela equipa e ao seu desempenho.	1	2	3	4	5	6	7
7.	Desafia o modo como as coisas estão a funcionar.	1	2	3	4	5	6	7
8.	Mantém-se informado sobre o que as outras equipas/unidades estão a fazer.	1	2	3	4	5	6	7
9.	Implementa ou ajuda a equipa a implementarem soluções para os problemas.	1	2	3	4	5	6	7
10.	Repara em falhas nos procedimentos ou trabalho desenvolvido pela equipa.	1	2	3	4	5	6	7
12.	Comunica o que é esperado da equipa.	1	2	3	4	5	6	7
13.	Participa na resolução de problemas com a equipa.	1	2	3	4	5	6	7
14.	Assegura que a equipa tem objetivos claros de desempenho.	1	2	3	4	5	6	7
15.	Mantem padrões de desempenho claros.	1	2	3	4	5	6	7

Para terminar, gostaríamos de lhe solicitar alguns dados sociodemográficos, indispensáveis ao tratamento estatístico dos questionários:

1.Sexo: Masculino Feminino

2. Idade: _____
anos

3. Função que exerce no Hostel:

4. Há quanto tempo trabalha neste Hostel?

- Menos de 1 1 a 3 anos 3 a 5 anos 5 a 7 anos Mais de 7 anos
anos

5. Tem funções de chefia? Não Sim De quem? _____

6. Número de pessoas que trabalham na sua equipa: _____

MUITO OBRIGADO PELA SUA PARTICIPAÇÃO!

Appendix B – Descriptive analysis

Individual descriptive statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
Unit	99	1	23	11,68	6,872
Gender	99	1	2	1,535	,5013
Age	96	19	62	29,53	8,151
Time since working	98	1	5	1,939	1,0033
Leadership role	97	1	2	1,12	,331
Px. per team	94	2	14	6,766	3,6023

Individual unit distribution.

Unit	N	%
1	4	4,0
2	7	7,1
3	3	3,0
4	2	2,0
5	8	8,1
6	3	3,0
7	3	3,0
8	8	8,1
9	2	2,0
10	5	5,1
11	7	7,1
12	3	3,0
13	3	3,0
14	5	5,1
15	4	4,0
16	3	3,0
17	2	2,0
18	7	7,1

19	2	2,0
20	3	3,0
21	5	5,1
22	6	6,1
23	4	4,0
Total	99	100,0

Individual gender distribution.

Gender	N	%
Male	46	46,5
Female	53	53,5
Total	99	100,0

Individual age group distribution.

Age group	N	%
< 25	31	31,3
25-35	48	48,4
36-45	12	12,0
> 45	5	5,0
Total	96	96,7
Total	99	100,0

Individual job position distribution.

Job position	N	%
Receptionist	51	51,5
Manager	7	7,1
Bed maker	7	7,1
Cleaner	3	3,0
Cook	2	2,0
Other	24	24,2

Total	94	94,9
Total	99	100,0

Individual leadership role distribution.

Leadership role	N	%
No	85	85,9
Yes	12	12,1
Total	97	98,0
Total	99	100,0

Individual team-sized distribution.

Team-sized	N	%
2-4	29	29,3
5-10	52	52,4
> 11	13	13,1
Total	94	94,8
Total	99	100,0

Individual time since working at the hostel distribution.

Time since working	N	%
< 1 years	40	40,4
Between 1-3 years	34	34,3
Between 3-5 years	16	16,2
Between 5-7 years	6	6,1
> 7 years	2	2,0
Total	98	99,0
Total	99	100,0

Appendix C – Correlation analysis

Internal consistency measurement for team adaptation.

Cronbach's Alpha	N of Items
,908	10

Internal consistency measurement for teamwork engagement.

Cronbach's Alpha	N of Items
,953	9

Internal consistency measurement for perceived team effectiveness.

Cronbach's Alpha	N of Items
,849	6

Internal consistency measurement for team learning.

Cronbach's Alpha	N of Items
,952	12

Group descriptive statistics.

	rwg_TA	rwg_TWE	rwg_PTE	rwg_TL
Valid N	23	23	23	22
Mean	,9330	,9079	,8687	,8465
St. Deviation	,08058	,11054	,18917	,19629
Minimum	,73	,60	,22	,23
Maximum	1,00	1,00	1,00	1,00

Team adaptation, teamwork engagement, perceived team effectiveness, team learning and customer evaluation correlations (Pearson's r).

		Value_Money	Security	Location	Staff	Atmosphere	Cleanliness	Facilities	Average	team_adaptation_mean	TWE_mean	perceive_team_effect_mean	aprendizagem_mean
Value_Money	Pearson Correlation	1	,595**	,379	,586**	,806**	,628**	,659**	,770**	,003	,073	,289	,231
	Sig. (2-tailed)		,004	,074	,003	,000	,001	,001	,000	,989	,740	,181	,288
	Sum of Squares and Cross-products	7,789	4,400	3,555	4,426	8,497	5,544	6,898	6,091	,025	,766	1,953	2,023
	Covariance	,354	,220	,162	,201	,386	,252	,314	,277	,001	,035	,089	,092
	N	23	21	23	23	23	23	23	23	23	23	23	23
Security	Pearson Correlation	,595**	1	,723**	,768**	,632**	,850**	,843**	,889**	-.041	,034	-.014	,191
	Sig. (2-tailed)	,004		,000	,000	,002	,000	,000	,000	,859	,883	,950	,406
	Sum of Squares and Cross-products	4,400	8,066	6,710	5,366	5,907	6,991	8,167	6,407	-.348	,348	-.092	1,530
	Covariance	,220	,403	,336	,268	,295	,350	,408	,320	-.017	,017	-.005	,076
	N	21	21	21	21	21	21	21	21	21	21	21	21
Location	Pearson Correlation	,379	,723**	1	,715**	,669**	,637**	,737**	,801**	,044	-.004	,049	,037
	Sig. (2-tailed)	,074	,000		,000	,000	,001	,000	,000	,842	,987	,825	,867
	Sum of Squares and Cross-products	3,555	6,710	11,279	6,496	8,482	6,764	9,289	7,625	,448	-.044	,397	,390
	Covariance	,162	,336	,513	,295	,386	,307	,422	,347	-.002	,020	,018	,018
	N	23	21	23	23	23	23	23	23	23	23	23	23
Staff	Pearson Correlation	,586**	,768**	,715**	1	,724**	,757**	,810**	,881**	,245	,288	,117	,248
	Sig. (2-tailed)	,003	,000	,000		,000	,000	,000	,000	,260	,183	,595	,254
	Sum of Squares and Cross-products	4,426	5,366	6,496	7,318	7,401	6,472	8,223	6,754	2,012	2,919	,766	2,101
	Covariance	,201	,268	,295	,333	,336	,294	,374	,307	,091	,133	,035	,095
	N	23	21	23	23	23	23	23	23	23	23	23	23
Atmosphere	Pearson Correlation	,806**	,632**	,669**	,724**	1	,635**	,769**	,890**	,094	,101	,233	,128
	Sig. (2-tailed)	,000	,002	,000	,000		,001	,000	,000	,671	,648	,285	,561
	Sum of Squares and Cross-products	8,497	5,907	8,482	7,401	14,270	7,579	10,898	9,523	1,074	1,425	2,129	1,513
	Covariance	,386	,295	,386	,345	,649	,345	,495	,433	,049	,065	,097	,069
	N	23	21	23	23	23	23	23	23	23	23	23	23
Cleanliness	Pearson Correlation	,628**	,850**	,637**	,757**	,635**	1	,896**	,876**	,119	,211	,193	,103
	Sig. (2-tailed)	,001	,000	,001	,000	,001		,000	,000	,589	,334	,378	,639
	Sum of Squares and Cross-products	5,544	6,991	6,764	6,472	7,579	9,998	10,627	7,846	1,141	2,500	1,476	1,024
	Covariance	,252	,350	,307	,294	,345	,454	,483	,357	,052	,114	,067	,047
	N	23	21	23	23	23	23	23	23	23	23	23	23
Facilities	Pearson Correlation	,659**	,843**	,737**	,810**	,769**	,896**	1	,946**	,115	,200	,199	,213
	Sig. (2-tailed)	,001	,000	,000	,000	,000	,000		,000	,601	,360	,363	,328
	Sum of Squares and Cross-products	6,898	8,167	9,289	8,223	10,898	10,627	14,073	10,052	1,310	2,819	1,806	2,509
	Covariance	,314	,408	,422	,374	,495	,483	,640	,457	,060	,128	,082	,114
	N	23	21	23	23	23	23	23	23	23	23	23	23
Average	Pearson Correlation	,770**	,889**	,801**	,881**	,890**	,876**	,946**	1	,095	,148	,181	,174
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000		,665	,502	,408	,426
	Sum of Squares and Cross-products	6,091	6,407	7,625	6,754	9,523	7,846	10,052	8,029	,821	1,568	1,243	1,548
	Covariance	,277	,320	,347	,307	,433	,357	,457	,365	,037	,071	,056	,070
	N	23	21	23	23	23	23	23	23	23	23	23	23
team_adaptation_mean	Pearson Correlation	,003	-.041	,044	,245	,094	,119	,115	,095	1	,877**	,755**	,621**
	Sig. (2-tailed)	,989	,859	,842	,260	,671	,589	,601	,665	,000	,000	,000	,002
	Sum of Squares and Cross-products	,025	-.348	,448	2,012	1,074	1,141	1,310	,821	9,217	9,990	5,548	5,904
	Covariance	,001	-.017	,020	,091	,049	,052	,060	,037	,419	,454	,252	,268
	N	23	21	23	23	23	23	23	23	23	23	23	23
TWE_mean	Pearson Correlation	,073	,034	-.004	,288	,101	,211	,200	,148	,877**	1	,737**	,665**
	Sig. (2-tailed)	,740	,883	,987	,183	,648	,334	,360	,502	,000	,000	,000	,001
	Sum of Squares and Cross-products	,766	,348	-.044	2,919	1,425	2,500	2,819	1,568	9,990	14,080	6,688	7,824
	Covariance	,035	,017	-.002	,133	,065	,114	,128	,071	,454	,640	,304	,356
	N	23	21	23	23	23	23	23	23	23	23	23	23
perceive_team_effect_mean	Pearson Correlation	,289	-.014	,049	,117	,233	,193	,199	,181	,755**	,737**	1	,623**
	Sig. (2-tailed)	,181	,950	,825	,595	,285	,378	,363	,408	,000	,000	,000	,001
	Sum of Squares and Cross-products	1,953	-.092	,397	,766	2,129	1,476	1,806	1,243	5,548	6,688	5,854	4,724
	Covariance	,089	-.005	,018	,035	,097	,067	,082	,056	,252	,304	,266	,215
	N	23	21	23	23	23	23	23	23	23	23	23	23
aprendizagem_mean	Pearson Correlation	,231	,191	,037	,248	,128	,103	,213	,174	,621**	,665**	,623**	1
	Sig. (2-tailed)	,288	,406	,867	,254	,561	,639	,328	,426	,002	,001	,001	,001
	Sum of Squares and Cross-products	2,023	1,530	,390	2,101	1,513	1,024	2,509	1,548	5,904	7,824	4,724	9,817
	Covariance	,092	,076	,018	,095	,069	,047	,114	,070	,268	,356	,215	,446
	N	23	21	23	23	23	23	23	23	23	23	23	23

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix D – Hypotheses testing

H1: Team learning has a positive correlation with team adaptation.

H2: Team adaptation has a positive correlation with team effectiveness.

H3: Team adaptation processes mediate the relationship between team learning and team effectiveness.

H4: Teamwork engagement is a moderator of the relationship between team learning and team adaptation.

Mediation analysis effect of team adaptation processes on team learning and perceived team effectiveness (Verification of model fit).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,623 ^a	,388	,359	,41292	,388	13,333	1	21	,001	2,472
2	,781 ^b	,609	,570	,33819	,221	11,307	1	20	,003	

a. Predictors: (Constant), aprendizagem_mean
 b. Predictors: (Constant), aprendizagem_mean, team_adaptation_mean
 c. Dependent Variable: perceive_team_effect_mean

Verification of coefficient fit (ANOVA) and interaction (multiple regression).

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2,273	1	2,273	13,333	,001 ^a
	Residual	3,581	21	,171		
	Total	5,854	22			
2	Regression	3,566	2	1,783	15,591	,000 ^b
	Residual	2,287	20	,114		
	Total	5,854	22			

a. Predictors: (Constant), aprendizagem_mean
 b. Predictors: (Constant), aprendizagem_mean, team_adaptation_mean
 c. Dependent Variable: perceive_team_effect_mean

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,313	,763		4,344	,000		
	aprendizagem_mean	,481	,132	,623	3,651	,001	1,000	1,000
2	(Constant)	2,236	,702		3,186	,005		
	aprendizagem_mean	,194	,138	,251	1,409	,174	,615	1,626
	team_adaptation_mean	,478	,142	,599	3,363	,003	,615	1,626

a. Dependent Variable: perceive_team_effect_mean

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics			
					Tolerance	VIF	Minimum Tolerance	
1	team_adaptation_mean	,599 ^a	3,363	,003	,601	,615	1,626	,615

a. Predictors in the Model: (Constant), aprendizagem_mean
 b. Dependent Variable: perceive_team_effect_mean

Moderation analysis effect of teamwork engagement on team learning and team adaptation (Verification of model fit).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,878 ^a	,771	,749	,32452	,771	33,758	2	20	,000	
2	,893 ^b	,797	,765	,31364	,026	2,412	1	19	,137	1,318

a. Predictors: (Constant), aprendizagem_c, TWE_c
 b. Predictors: (Constant), aprendizagem_c, TWE_c, TWE_aprend
 c. Dependent Variable: team_adaptation_mean

Verification of coefficient fit (ANOVA) and interaction (multiple regression).

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7,110	2	3,555	33,758	,000 ^a
	Residual	2,106	20	,105		
	Total	9,217	22			
2	Regression	7,348	3	2,449	24,898	,000 ^b
	Residual	1,869	19	,098		
	Total	9,217	22			

a. Predictors: (Constant), aprendizagem_c, TWE_c
 b. Predictors: (Constant), aprendizagem_c, TWE_c, TWE_aprend
 c. Dependent Variable: team_adaptation_mean

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5,712	,068		84,407	,000		
	TWE_c	,674	,116	,833	5,814	,000	,557	1,795
	aprendizagem_c	,064	,139	,066	,464	,648	,557	1,795
2	(Constant)	5,649	,077		73,393	,000		
	TWE_c	,742	,120	,917	6,167	,000	,483	2,072
	aprendizagem_c	,035	,135	,036	,257	,800	,546	1,831
	TWE_aprend	,185	,119	,174	1,553	,137	,847	1,180

a. Dependent Variable: team_adaptation_mean

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics			
					Tolerance	VIF	Minimum Tolerance	
1	TWE_aprend	,174 ^a	1,553	,137	,336	,847	1,180	,483

a. Predictors in the Model: (Constant), aprendizagem_c, TWE_c
 b. Dependent Variable: team_adaptation_mean

Moderation analysis effect of teamwork engagement on team learning and average customer evaluation of the effectiveness (Verification model fit).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,179 ^a	,032	-,065	,62332	,032	,332	2	20	,721	2,521
2	,515 ^b	,265	,149	,55736	,233	6,014	1	19	,024	

a. Predictors: (Constant), aprendizagem_c, TWE_c
 b. Predictors: (Constant), aprendizagem_c, TWE_c, TWE_aprend
 c. Dependent Variable: Average

Verification of coefficient fit (ANOVA) and interaction (multiple regression).

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,258	2	,129	,332	,721 ^a
	Residual	7,770	20	,389		
	Total	8,029	22			
2	Regression	2,126	3	,709	2,282	,112 ^b
	Residual	5,902	19	,311		
	Total	8,029	22			

a. Predictors: (Constant), aprendizagem_c, TWE_c
 b. Predictors: (Constant), aprendizagem_c, TWE_c, TWE_aprend
 c. Dependent Variable: Average

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	9,130	,130		70,250	,000		
	TWE_c	,043	,223	,057	,192	,850	,557	1,795
	aprendizagem_c	,124	,267	,137	,464	,648	,557	1,795
2	(Constant)	9,307	,137		68,051	,000		
	TWE_c	-,149	,214	-,197	-,697	,494	,483	2,072
	aprendizagem_c	,207	,241	,228	,858	,401	,546	1,831
	TWE_aprend	-,520	,212	-,524	-2,452	,024	,847	1,180

a. Dependent Variable: Average

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	TWE_aprend	-,524 ^a	-2,452	,024	-,490	,847	1,180	,483

a. Predictors in the Model: (Constant), aprendizagem_c, TWE_c
 b. Dependent Variable: Average