

# Support to Informal Learning at Work, Individual Performance and Impact of Training in Ampleness

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## Abstract

Training activities are planned considering that the psychosocial transference environment after those activities will facilitate and maximize its impact and effect on performance. This study aims to empirically test the predictive relationships between the characteristics of customers, support for informal learning, human performance and impact of training in ampleness in two Organizations located in Distrito Federal, Brazil. Data collection was face-to-face. The sample (N=315) was predominantly female (66, 9%) and had more than a year of work in the organization (85, 6%). Data were analyzed by pattern multiple regression. The results indicate that strategies of performance self-regulation, support to informal learning provided by the supervisor and by the work unit explained 49.5% of the variance of impact in ampleness. We suggest that future studies incorporate in their models other variables related to the composition of the organizational structure and others samples are investigated, ensuring external validity and generality.

**Keywords:** individual performance, impact of training in ampleness, organizational behavior, support to informal learning at work, trainee characteristics

## 1. Introduction

In the current job scenario, where the dynamics of information stimulates the continuous acquisition of new knowledge, learning actions have been consolidated work from the greatest importance for achieving the mission of the organization. Learning in work routines in a constant tension between personal goals and organizational constraints.

The literature on organizational behavior has considered that learning is facilitating the acquisition of professional competences. These technical competences have an important effect on the performance of individuals, teams and organizations as a whole (Bjork, Toien & Sorensen, 2013; Yanchar & Hamkley, 2015; Wahab Saad & Selamat, 2014).

Learning actions can be formal, conducted through the construction and maintenance of training, development and education (TD&E) programs. However, organizations can also invest in actions of informal, unsystematic, arising spontaneously and naturally learning (Coelho Jr. & Mourão, 2011; Manuti, Pastore, Scardigno, Giancaspro & Morciano, 2015).

Specifically, informal learning in the workplace is being investigated as essential for capacity in performance (Simosi, 2012). Psychosocial support for learning is essential for the effective management of people in organizations, and tactics to achieve the objectives and goals of the organization.

The scientific literature on learning in organizations, such as Coelho Jr. and Borges-Andrade (2008), and Borges-Andrade, Abbad and Mourão (2006), indicates that a supportive environment or learning support at work,

especially when provided by supervisors and colleagues, generates positive effect on the results of work. This means that the environment of the organization – in terms of formal and informal organizational structure components – influences the learning process among individuals and, therefore, may influence the performance manifested (Loiola, N éris & Bastos, 2006).

In this context, training programs, formally established typical learning modality, began to have great relevance and considered fundamental to develop the competences of people with complex and extensive professional profiles (Meneses & Abbad, 2009; Salas & Cannon-Bowers, 2001). However, while the organizations spent a lot of money in high investments in training, there is little empirical research to identify the effectiveness of training activities in Brazil. The criterion variable mostly empirically investigated is impact, indicating whether the expected effects after training were achieved (Blume, Ford, Baldwin & Huang, 2010; Green & McGill, 2011).

Given that training programs have become essential for organizations, it's essential that the organizational environment stimulates its members learning and the continued application of learning at work (Yanchar & Hamkley, 2015; Kirwan & Birchall, 2006). Thus, in order that the training activities reach their goals and improve the individuals' performances it is necessary the support of the learning provided by some social actors involved in the act of learning. Usually this support involves colleagues, leadership and the work unit as a whole. Training activities depend on external conditions, such as organizational context to support, which influences the whole process of learning and action, according to Kyndt, Govaerts, Dochy and Baert (2011) and Abbad, Coelho Jr., Freitas and Pilati (2006).

Thus, the psychosocial support of the organization is necessary, though not sufficient, to the application of new competences and skills – impacting the individual job performance. Based on this context, it's essential to identify the effects of training actions in the individual performance and the influence of the learning support perceived in this process.

This article aims to identify the kind of individual and situational predictors related to the impact of training in amplexness under two organizations located in the Federal District, Brazil. One from the engineering and infrastructure sector and the other from the market research field.

Its intended here to test the effects of personal (gender, age and level of education) and professional (perceptions of learning support from colleagues, the work unit and leaderships, length of service, nature of work, occupational function and the effects of course in the performance at work) variables in the range of predicting impact of training. This impact variable refers to the results and the indirect consequences of training, as general indicators of effect on performance after training.

This article relevance is evidenced when considering that the evaluation of training has the primary function of providing valid and systematic information about the entire training process. It's critical to obtain feedback data in order to evaluate the effectiveness of training, especially in terms of the results it has been generating considering psychosocial factors in learning and their effects on performance. Moreover, despite some studies indicate a positive correlation between learning support and the impact of training on the job (eg. Balarin, Zerbini & Martins, 2014) there are just a few Brazilian empirical models that test individual performance after training.

## **2. Theoretical Framework**

Much has been produced in Brazil and abroad regarding predictor's impact on job training (Meneses, Zerbini & Abbad, 2010; Van Den Bossche, Segers & Jansen, 2010). The main predictor of the impact is learning and transfer support (Borges-Andrade & Abbad, 1996). In their research, Brand ão, Bahry and Freitas (2008) found that the variable psychosocial and material support was the most important predictor of competences and skills application at work. The variable explained 68.2% of impact. In addition, social support variables also act as moderating variables (Aguinis & Kraiger, 2009) in predicting the impact.

The global production process model requires workers increasingly better qualified. Training activities have been systematically planned as an important strategic tool and a competitive advantage (Aguinis & Kraiger, 2009 and Moreira & Munck, 2010). Formal actions relate to the planned activities based on education and instruction.

The expected results for a training action are based on predefined assessment needs through analysis of the occupant's competences in relation to the expected profile for this position (Manuti, Pastore, Scardigno, Giancaspro & Morciano, 2015). When the evaluation indicates that the profile of the occupant differs to the expected profile or need an enhancement, there's an input for a training design (Abbad, Coelho Jr., Freitas & Pilati, 2006; Tharenou, Saks & Moore, 2007).

The study of training needs refers to identify competences gaps. Once identified, need to be resolved to optimize

the performance. These gaps are filled through training activities. However, not always what is trained is applied in the routines of work. According to Wahab, Saad and Selamat (2014), environmental conditions of the organization may limit the application of content learned. When one perceives support from colleagues, peers and/or superiors, it has conditions necessary for impact.

When such support does not exist, the impact of training is directly affected. The learning process combines elements of formal education (through programs provided training) and informal (by imitation, trial and error, reflections on mental work), which should be linked in this process. Thus, training refers to the systematic supply of formal concepts, knowledge, or competences standards that should be translated into better performance at work (Abbad, Pilati & Freitas, 2006; Pilati & Borges-Andrade, 2004).

Attitudes can also be developed in learning activities oriented to the formation of patterns of behavior. The central premise of the concept of "training" therefore indicates that formal learning actions will be developed based on the current performance of the activities required at work. Effective training or development depends on knowing what is required for the individual, the department and the organization as a whole.

Given its importance it's necessary to measure the effectiveness of training activities (Abbad & Borges-Andrade, 2004). The effectiveness is generally measured by the impact of training which is operationally defined as the transfer of training promoting higher performance. Transfer of training in this sense refers to the correct application, in the workplace, of skills and competences acquired in formal training situations. The measure of impact assesses whether the action instruction resulted in improvements in the behavior of individuals, groups and organizations after the training action (Abbad, Borges-Andrade, Freitas & Pilati, 2006).

Abbad (1999) and Abbad, Pilati, Borges-Andrade and Sallorenzo (2012) showed that the impact can be measured in depth or in amplexness. Impact in depth measures training effects that are related to the specific content taught in the TD&E programs while impact in amplexness measures the training effects on the overall performance expected by the organization. In this paper, the impact will be measured in amplexness, at the individual level, with emphasis on the behavior long after the action of training.

Impact in amplexness is operationally defined as the individual's perception about effects of training in their overall performance directly or indirectly related to the content learned. It measures the effects on individuals levels of motivation, self-confidence and openness to change at work.

According to Cseh, Davis e Khilji (2013), the concept of performance refers to the set of behaviors related to tasks, roles, rules, expectations, achieving goals, efficiency and effectiveness based on the organizational standards. This concept is related to the achievement of objectives, so that each given conduct must be subject to judgment of whether it is appropriate and effective. Others aspects such as efficiency and effectiveness are important too. People need the explicit support of the organization.

As stated by Sonnentag and Frese (2002), performance is a multidimensional and dynamic construct. It includes procedural aspects of behavior and results. Actions made by individuals seeking to achieve the goals and objectives of the organization. Factors such as time, cost, quality and quantity of work are essential for determining and planning of individuals' performances in the exercise of their functions. The role of leadership is crucial (Lancaster, Milia & Cameron, 2013; Pantouvakis & Bouranta, 2013; Sibarani, Tjakraatmadja, Putro & Munir, 2015).

For Coelho Jr. (2009), performance refers to the efforts of the person who intends to perform certain types of pre-planned and expected behaviors. Performance can be oriented by the indicators related to work outcomes and to behaviors exerted to achieve these outcomes. Both the impact of the work done by the manifestation of the person and the use of knowledge, skills and attitudes considered indispensable to achieve organizational goals can be used as parameters for assessing performance (Brandão & Guimarães, 2011).

The training by itself doesn't seem to be able to produce a lasting effect on individual behavior, because the transfer of learning to work after the training directly depends of the work context. The conditions of support to learning and transfer also need to be investigated empirically (Burke & Saks, 2009; Cheng & Hampson, 2008; Grossman & Salas, 2011).

Abbad, Coelho Junior, Freitas and Pilati (2006) conceptualize support to learning as collective social perceptions regarding the conditions that activate or inhibit learning and its application in the workplace. It refers to shared mental models about this support. Among other things, these concepts include peer support, supervisor support, the organization as one whole support, the quality of interaction and exchange of knowledge.

The concept of social support applied to the organizational environment leads the idea of something related to the context. Social support should happen when someone need to achieve some pre-defined goal or objective

(Coelho Jr. & Abbad, 2010; Hutchins, Berthelsen & Burke, 2010), something very common in organizations.

Learning support is defined by Coelho Jr. (2004) as the shared perceptions about incentives on informal learning initiatives by peers, colleagues and leaders. Coelho Jr. and Mourão (2011) state that this concept can support any step in the learning process (acquisition, retention, maintenance, generalization and transfer).

Therefore, the support has the sense to guide, help and support individual initiatives and the assistance and incentive for learning can come from co-workers, leaders and educators (Borges-Andrade, 2006). For Coelho Jr. (2009), among the variables of context, the support to learning provided by peers and leadership is the most influential factor in the pursuit of learning in organizations.

This is due to the basic assumption that, in organizations, informal learning occurs continuously through imitation, trial and error, conversations with colleagues, bosses and clients, among others.

The amount of empirical studies about support to informal learning at work is still low (Coelho Jr. & Mourão, 2011, for example). One reason for this is that the concept of informal learning support presents a varied profusion of meanings, which hinders the development of empirical scientific studies on this variable (Bjork, Toien & Sorensen, 2013; Freitas Borges-Andrade, Abbad & Pilati, 2006).

Most empirical studies investigating aspects of the organizational context in a typical learning support environment, however, address the issue of occurrence of informal learning. It's necessary to check the predictive effects of learning social support and training in amplexness impact on subsequent performance, as proposed here.

This study investigated the differences between the type of perceived support and the consequences of the implementation of specific actions of training in global work results in two Brazilian Organizations. Considering the above, the research design followed what was recommended by Coelho Jr. and Mourão (2011). This design emphasizes the need to raise the main research questions and then perform analysis, which ultimately define the purpose of the investigation. Accordingly, the following questions and hypotheses were tested.

Question 1. Trained participants believe that the impact of training will result in improved job performance?

Hypothesis 1. Participants who apply the training in the workplace have better performance than those applied less contents learned.

Question 2. Perceptions of support to informal learning at work and impact of training in amplexness directly affects individual job performance?

Hypothesis 2. The support from managers and colleagues will be related to the impact of training in amplexness and these will predict job performance.

If the comprehension about performance involves a great number of variables, understand the difference between predictors is critical to the success of management. The design of organizational policies, procedures and valorization of performance increases organizational effectiveness. The assessment of impact of training on individual performance involve: monitoring performance before, during and after the training activity, anticipating future shortfalls or problems, and identifying the type and level of training required and analyzing how this can best be provided.

Understanding the factors that promote the effective performance is fundamental for the survival of the organization and gain of competitive advantage; failure to do so may result in much higher costs in the future of the organization and a decrease in the motivation of its members.

### **3. Methodological Aspects**

This study aimed to test a set of individual and situational predictors that can explain the impact of training in amplexness in two Brazilian Organizations. This is a study with a quantitative approach, cross-sectional and correlational design. These organizations were selected by the availability and interest of its managers to participate in this research.

The first organization ("Opinion and Market") conducts the analysis and production of market information. This organization was founded in 1998, and has performed opinion polls and development of projects market in organizations of all sizes and sectors, public, private or sector market or third coverage. The locus of this research was the area of Call Center of the Organization, which had, when the data were collected, 175 employees.

The second organization ("Agency of development of the Federal District") is dedicated to the preparation of studies and technical projects in the areas of engineering infrastructure, buildings, urban planning and others. The population of employees was 230 employees while data were collected.

### 3.1 Sample Profile

The sample was intentional and not probabilistic, for accessibility. Individuals were selected according to a predetermined criterion. The criterion variable studied was the impact in amplexness of two training at work, so the sample was chosen on purpose. Participants must necessarily be entitled to, at least, one program training conducted in their organization on the last 12 months. Only in this way it would be possible to measure the impact of amplexness, regardless of the type of training the person had achieved.

More specifically, the sample consists of individuals that had completed a formal training at least 03 months ago. Importantly, the team of research didn't have access to the modality of training offered by the organizations.

We have a sample of 120 participants in first Organization, and the second, 195. The total sample ( $N = 315$ ) was predominantly female (66.9%), with the predominant age group 24-30 years (67.7%) and the majority (85.6%) more than a year of work. Regarding the educational level of the participants, 78.9% had at least high school.

When asked to assign a score from 0 (no impact) to 10 (excellent impact), each participant there valued the effects of the training on their performance. We identify that 64% of participants attributed at least the score 7, indicating a lot of effects of the course in their behaviors. This is our criteria variable.

### 3.2 Instruments and Measures

The instrument used to measure the impact on the amplexness was developed by a Brazilian researcher, Abbad (1999). This instrument had 12 items associated with a Likert scale of 10 points, where 1 corresponded to 'disagree strongly' and 10 'Agree'. This instrument has been validated and is related to improved work performance elements, like the quality of work done, the motivation to carry out the tasks and some work attitudes, for example.

The questionnaire also consists of 28 items related to the perception of support to informal learning at work ( $KMO = 0.98$ ). Specifically, items about the support provided by peers and colleagues (6 items,  $\text{Alpha} = 0.97$ , 10.3% explained variance), the unit of work (13,  $\text{Alpha} = 0.95$ , 22.6% explained variance) and supervisor or leadership (9 items,  $\text{Alpha} = 0.96$ , 42.78% explained variance). It was used an adaptation of a psychometric measure validated by Coelho Jr., Abbad and Todeschini (2005). All items were also associated with a Likert scale, ranging from 1 (never) to 10 (always).

Finally, another Brazilian measure, self-report job performance ( $KMO = 0.93$ ), built and validated by Coelho Junior, Borges-Andrade, Seidl and Pereira (2010), was used. This scale is based on the perception of their work results, focusing on processes (efficiency) and products (effectiveness) of job results.

The first factor, 'Performance Regulation' ( $\text{Alpha} = 0.91$ , 37.5% explained variance), consists of 12 items that assess how the individual realizes that their work contributes to the achievement of the mission and strategy of the organization you work.

The second factor is called 'Degree of Effort and Knowledge of the Task' ( $\text{Alpha} = 0.60$ , 5.6% explained variance) consists of 3 items that relate to the perception of knowledge and professional competences about their work results.

The third factor is related to the 'Implementation, Monitoring and Review of Performance' ( $\text{Alpha} = 0.66$ , 4.4% explained variance), and consists of four items. This dimension focuses on the process of communication tasks and actions counting even with the setting of objectives and broader organizational strategies and development work.

The fourth and final factor is the 'Self-Management Performance Shares' ( $\text{Alpha} = 0.90$ , 3.7% explained variance) which has 8 items. This factor refers to the efficiency and performance of the individual's ability to manage the execution of their work. Furthermore, the ability of effective use of available equipment is addressed, beliefs about the effectiveness of own performance and achievement results of work, strategic view of performance and interdependence in achieving the tasks.

### 3.3 Data Collection Procedures and Data Analysis

Data collection was conducted in person in both organizations. The researchers explained the research objectives and given prior consent from each participant signed. Confidentiality was guaranteed. We hadn't any personal identification in the instruments.

The data obtained through the questionnaires were tabulated and analyzed using SPSS 20.0 software. To analyze the kind of individual and situational predictors of impact of actions on the job training statistical technique we used multiple regression analysis.

The data were transformed into standardized score, allowing the test model using multiple regression technique. In the multiple regression model, the responses were analyzed by means of the following background variables: average score of learning support from peers; average score of learning support provided by unit of work; average score of learning support provided by leadership; educational level (0 = Secondary, 1 = rest); sex (0 = Male, 1 = Female); time of service in the organization and age.

The dependent variable of our theoretical model proposed corresponds to the average score of the answers given by the participants to the impact of training in amplexness on performance.

#### 4. Results and Discussion

To measure the impact in amplexness we used 12 items reproduced in Table 1, where the mean (M) and standard deviation (SD) too can be found.

Table 1. Means and standard deviations of items of impact of training in amplexness

Items of impact in amplexness	M	SD
I use in my work, what was taught in training.	8.2	1.8
I take the opportunities I have to practice what was taught in training.	8.1	2
The skills learned in training made me commit fewer mistakes in my work, in activities related to the training content.	8.1	2
When I apply what I learned in my training, I do my work faster.	8.1	1.9
I remember very well the content taught in training.	7.9	1.9
The quality of my work has improved in activities directly related to the content of the training.	7.7	1.9
My participation in this training has increased my self-confidence.	7.4	2.3
The quality of my work has improved even in those activities that don't seem related to the content of the training.	7.2	2
My participation in training serves to increase my motivation to work.	7.2	2.5
My colleagues learned new skills from application of content of training by myself.	7.2	2.6
This training have made me more receptive to changes at work.	6.9	2.5
After my participation in training, I have suggested changes in work routines.	6.6	2.6

Source: Survey data (2016).

In general, the mean values were high, indicating greater agreement by the sample. The training assessed seems to have impact on subsequent individual performance. The standards deviations were also high, mainly because the data were obtained in two different organizations. Items representing the highest average refer on the direct effects of the course done on personal performance. There is a uniform or common perception among respondents about the effectiveness of the course taken and leadership support.

With respect to the items related to support to informal learning provided by supervisor or leadership the responses were more heterogeneous. This signals that supervisors have different profile within the two organizations, or even within each organization indicating subculture. Table 2 summarizes the results.

Table 2. Means and standard deviations of support to informal learning provided by leaders

Items of support to informal learning provided by supervisor/leadership	M	DE
My supervisor is available to take my doubts about the use of new skills and knowledge at work.	7.6	2.8
My supervisor encourages me to face the challenges at work.	6.5	2.9
My immediate supervisor praises me when I apply new skills and knowledge.	6.1	3.1
My supervisor appreciates my suggestions for change.	5.9	3
My supervisor gives me the freedom to decide on how to develop my tasks.	5.9	3.1
My supervisor encourages me to apply new skills and knowledge.	5.8	2.8
My immediate supervisor takes risks with me to try new ways of doing work.	5.7	2.9
My immediate supervisor eliminates the difficulties and obstacles to the implementation of my new skills and knowledge at work.	5.7	3
My immediate supervisor considers my ideas even if different from him.	5.4	3

Source: Survey data (2016).

In general, the means are above the midpoint of the scale (5). However, they are associated with high standard deviations. This suggests that the leaders seem to be taking different lines in terms of providing support for informal learning at work. There appear to be subcultures between organizations evaluated with respect to the function of the leadership support (one, more supportive, others, more of lack of support). It's necessary to understand the reasons of this empirical found. Table 3 presents the perceptions of support from colleagues.

Table 3. Means and standard deviations of support to informal learning provided by colleagues

Items of support to informal learning provided by colleagues	M	DE
My colleagues give me directions when I have difficulties in applying new skills and knowledge.	8.3	1.9
My colleagues support my attempts to seek new learning at work.	7	2.6
My colleagues praise me when I apply my new skills and knowledge.	6.6	2.8
My colleagues feel confident when I apply new skills and knowledge at work.	6.5	2.8
My colleagues motivate me to seek new skills and knowledge related to work.	6.4	2.9
My colleagues motivate me to propose new ideas for tasks..	6.4	2.7

Source: Survey data (2016).

The peer support is more evident in the surveyed sample. This may be a sign, as stated by Manuti, Pastore, Scardigno, Giancaspro and Morciano (2015), Tynjala (2013) and Blume, Ford, Baldwin and Huang (2010), that there is a strong component of assistance provided by co-workers in the experience of post learning adversities. The support provided by peers is more homogeneous than the support provided by the unit of work and leadership. Table 4 displays the descriptive results obtained from work unit.

Table 4. Means and standard deviations of support to informal learning provided by work unit

Items of support to informal learning provided by unit of work	M	SD
In my unit, there is mutual respect.	7.9	2.1
In my unit, there is tolerance to errors in applying new skills.	6.9	2.7
In my unit, there is autonomy to organize work.	6.9	2.7
In my unit, there is exchange of information and knowledge about the application of new skills.	6.5	2.7
In my unit, there is openness to criticism when someone applies new skills.	6.4	2.8
In my unit, new ideas are valued.	5.9	2.8
In my unit, each member is motivated to expose what you think.	5.8	3
In my unit there is incentive to seek new learning.	5.7	2.9
In my unit tasks facilitate the application of new skills.	5.7	2.8
In my unit, there is an acceptance of the risks associated with the application of new skills.	5.5	2.6
In my unit, there is autonomy to question the orders given by the supervisor.	5.2	2.9
In my unit, there is time dedicated to finding new ways to do the job.	4.6	2.6
In my unit, there is autonomy to act without consulting the supervisor.	3	2.5

The highest mean values refers to the actions of perceived support provided by unit of work in terms of acquisition of competences related to performance, as discussed by Coelho Jr. and Mourão (2011). The lower mean value refers to autonomy, a component of environment organizations, especially with regard to the rationalization of work optimization and organizational performance. The results regarding the self-report performance measure, it was found that average were also very high, with smaller standard deviations. It's noteworthy that the comparative analyses of the average between the participants of the organizations surveyed were conducted. No statistically significant differences between them were identified. Thereby, we opted for the aggregation of the data.

Table 5. Means and standard deviations of self-reference performance at work

Item	Mean	Standard Deviation
<b>General Factor 1: Implementation of Performance</b>	8.5	1.1
1. I do my homework trying to keep the commitment to this organization.	9	1.2
3. I am committed to the goals and objectives set by the Organization.	8.9	1.4
5. My job is important for the performance of this Organization.	8.9	1.4
10. I know what is expected of me in terms of my performance at work.	8.8	1.5
2. I assess the performance of my work contributes directly to achieving the mission and goals of this Organization.	8.5	1.5
6. I keep me updated on the technical knowledge in my area of expertise.	8.3	1.7
7. I have a permanent channel of communication aiming to promote interaction with others.	8.3	1.8
11. I take initiative, taking advantage of the opportunities that can generate better results.	8.3	1.7
12 My job performance is in line with what is expected of me.	8.3	1.6
4. I redirect my actions in my work due to changes in the objectives of this Organization.	8.2	1.7
9. I implement most appropriate actions when detect an error in my work.	8.1	1.9
8. I direct my actions to carry out my work with resource savings.	7.9	2
<b>General Factor 2: Degree of Effort and Knowledge of the Task</b>	7.9	1.5
13. My work requires me much effort to carry them out.	8	2
15. I direct my actions from knowledge of the structure and policies of the Company.	8	1.8
14. I get appropriate guidance to perform tasks under my responsibility.	7.6	2.3

Both Factors 1 e 2 show homogeneous perceptions about degree of effort in performing the tasks (except item 14). According to Sonnentag e Freese (2002), individual performance is of high relevance for organizations and individuals alike. Aguinis e Kraiger (2009) showed high performance when accomplishing tasks results in satisfaction, feelings of self-efficacy and mastery. Task performance refers to actions that are part of the technical core, and addresses the requirements as specified in job descriptions. Task performance consists of activities that transform materials into the goods and services produced by the organization or to allow for efficient functioning of the organization.

Table 6. Means and standard deviations of the items of self-reference performance

<b>General Factor 3: Execution, Monitoring and Evaluation</b>		
16. I contribute with alternatives solutions to solving problem in this Organization.	7.6	2.1
19. My actions impact on the outcome of other areas of the Organizations.	7.3	2.6
17. I stable exchanges with other teams or units where necessary to ensure the achievement of organizational objectives.	6.6	3
18. There are group meetings between me, my colleagues and leaders for discussion and evaluation of the actions and tasks performed.	6.3	3
<b>General Factor 4: Self-Management Strategies Performance</b>		
21. I develop my work in accordance with the established rules and standards.	8.9	1.5
24. I adapt to change in my work routines.	8.6	1.7
27. Improving my performance motivates me to do a better job.	8.6	1.7
20. I evaluate successfully my performance in achieving tasks and routines related to my work.	8.3	1.5
22. I use tools and materials available for improving the results of my work.	8.3	2
23. I plan my routines in accordance with my organizational responsibilities.	8.1	2
25. I establishes priorities in my work, defining actions, deadlines and resources.	8.1	2
26. I establish the relationship between the source and the purpose of my work.	8	2

The data show that the participants demonstrate an adaptive performance (Sonnentag & Freese, 2002). They seem to develop strategies aimed at continuous improvement of its performance, impacting thus the contextual performance. The results of the statistical regression model can be observed in Table 6.

Table 7. Empirical research model

The predictors variables*	Beta	T
The average of support to informal learning provided by unit of work	0.38	2.79
The average of support to informal learning provided by supervisor	- 0.29	-2.20
The average of General Factor 4 (Self-Management Strategies Performance)	0.42	3.14
R <sup>2</sup> adjusted = 0,495 (49,5%)		
N = 315		

\*p < 0.005

This finding indicates that a context organizational can explain impact of training on performance. The work context appears to be positive in providing learning support.

The three predictive variables explained, in the aggregate, approximately 49.5% of the variance of the criterion variable investigated (score from 0 to 10 assigned to the impact of training on performance). The support provided by the work unit (B = 0.38) and leaderships (B = - 0, 29), and strategies using auto performance tuning (B = 0.42) explained the dependent variable in the analysis. The hypothesis 1 (Participants who apply the training in the workplace have better performance than those applied less contents learned) is confirmed. The hypothesis 2 (The support from managers and colleagues will be related to the impact of training in amplexness and these will predict job performance) was partially confirmed. Only the support provided by unit of work and supervisor contributed to explain performance.

As our theoretical model hypothesized the homogeneous perceptions of the participant considers the course added to its performance. The average scores of the support provided by the unit of work and leadership, and the average score of colleagues explain the impact range of courses already made by the participants in the two organizations investigated. These three variables together explained about 49.5% of the variance criterion variable investigated.

These results are in line with pointing Manuti, Pastore, Scardigno, Giancaspro and Morciano (2015), Wahab Saad and Selamat (2014), Abbad, Freitas and Pilati (2006) and Tharenou, Saks and Moore (2007), highlighted the essential role of context in determining the application of learned content after training events. The role of leadership, as reported here, was also found by Cseh, Davis and Khilji (2013), Lancaster, Milia and Cameron (2013), Van den Bossche, Segers and Jansen (2010), Coelho Jr., Abbad and Vasconcelos (2008), Burke and Saks (2009) and Grossman and Salas (2011) as an important predictor of impact of training in amplexness.

The results indicate that the transfer of learning is directly associated with the presence of psychosocial support environment (Bjork, Toien & Sorensen, 2013; Hampson & Cheng, 2008; Tynjala, 2013). Support provided by social



actors who have more control over content, and is of utmost importance for the application of knowledge in the workplace (Coelho Jr. & Mourão, 2011). Thus, context exerts a decisive role in the application of learning and the leadership style is essential (Cseh, Davis & Khilji, 2013; Pantouvakis & Bouranta, 2013; Sibarani, Tjakraatmadja, Putro & Munir, 2015).

The context of the implementation of self-regulatory performance actions also explained the impact. This means that more individuals are dedicated to acting their best performance, making efforts; also they tend to apply more training content. According to Kyndt, Govaerts, Dochy and Baert (2011), Green and McGill (2011) and Salas and Cannon-Bowers (2001), when the content of the actions of instruction focuses on a preliminary needs assessment, it has the ability to generate impact. Training needs analysis identifies training needs at employee, departmental or organizational level in order to help the organization to perform effectively. The aim of training needs analysis is to ensure that training addresses existing problems, is tailored to organizational objectives, and is delivered in an effective and cost-efficient manner

Finally, psychological support of social actors is very important to the application of new skills and competences on the job. The use of performance self-regulation strategies should also be encouraged by the directors of the organization. The role of the supervisor is fundamental. The context promotes strong effects on learning and human performance in the workplace (Kirwan & Birchall, 2006; Yanchar & Hamkley, 2015).

## 5. Conclusions and Recommendations

This study aimed to empirically verify the influence of individual and situational predictors of training in amplexity in individual performance in two organizations located in Brasilia, Brazil. The results showed that psychosocial learning support provided by colleagues, leadership/supervisor and work unit and strategies of self-regulation of performance generate effect on post-training contextual performance. The general objective was achieved in full, since the variable criteria of empirical research was determined. Therefore, the questions were answered and the established hypothesis supported. Just hypothesis 2 was partially confirmed.

It was found that the context variables predict impact of training on the job. The results suggest that support for learning by work units and managers also played an important role in the application of the knowledge acquired during the formal training events.

An important limitation of this study relates to the failure to identify participants for each specific organization. Due to the agreed total confidentiality of information, questionnaires were not different between the organizations, which made it impossible to carry out tests comparing the average and variance between them. Perhaps the results by the organization were different, although the results demonstrate homogeneity in the perception of the participants.

For future studies, considering the pursuit of external validity or generality of the findings reported, it's recommended that participants from other organizations, whose training policy is also strongly consolidated, are also evaluated. It's recommended to compare the impact results of former students from different institutions with the aim of compare the effects of its application on performance.

Another important limitation of this study refers to the lack of validity of the parameters or characteristics of the training offered by the two institutions. The team of research did not have access to educational content, which hindered, for example, the construction of measures applied to the specific reality of each training (in depth) that could have added much to this work. It's recommended for future studies that incorporate new scales of in depth impact, comparing them with the impact in amplexity, ensuring the accuracy and reliability of the effectiveness of instructional actions.

It's expected that the results of this research can provide inputs for future management actions within the organizations surveyed. Organizational policies and human resource practices can be redesigned or designed according to the current results. The psychosocial support should be stimulated promoting informal learning between individuals and workgroups. Management development programs oriented to leaders should promote actions of informal learning.

In the context of the two organizations, support for informal learning has substantially contributed to the acquisition and expression of skills at work. These professional competences, in turn, exert influences on individual performance. We tested here, empirically, that there are relationships between informal learning gains, professional competences acquired by training programs and their effect on improved performance.

Furthermore, this study presents two major contributions, the first, academic, by means of a rereading of the main concepts related to support to informal learning at work, acquisition and expression of competences, training activities and their effects on performance; the second, managerial, as this research can contribute to the

improvement and implementation of the people management in two existing Brazilian organizations and also contribute to the improvement of the formal organizational practices and routines.

It's recommended for future studies researchers to seek and apply validated diagnostic tools to measure other contextual variables such as the organizational structure and the existing organizational culture. Still, we recommend the empirical study of other organizations from other sectors about the impact of training programs and the development of managerial skills on the individual and team performance.

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