Review of literature on existing models about the impact of continuous training on business performance

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Abstract. The development of a company requires the development of its human resources. Research has shown that overall performance is measured not only by the economic dimension but also by the social dimension and actions on development processes, in particular, the continuous training process which is the constructor of adequate skills for improvement. The below analysis will be divided into two axes:
The first axis aims to define the overall performance through a review of literature. It demonstrates a relationship between the individual's performance and continuous training as a process of individual development, and cites some performance measurement tools.
The second axis examines the literature following specific inclusion criteria, its impact on overall performance, and highlights existing assessment models.

Keywords: Continuous training, Performance, Training plan, Models, Evaluation, Knowledge and interviews.

1. Introduction

Nowadays, companies are facing several challenges such as intensive competition, the market turbulence as well as technological progress, which requires constant monitoring.

The company can only reduce these threats if it has qualified human resources and can achieve overall performance if they enhance individual performance. Despite technological and industrial progress, all over the world, the human factor is the driving force behind any company's growth. Without developing the human resources, we can never achieve performance.

Many studies show that continuous training is the main tool for human development, and it guarantees growth of the company's income [1].

What effects does the training have on the individual, and subsequently on the company's performance? What are the models in the literature that study the impact of continuous training? These are the two axes that will be addressed in the rest of this work.

2. Material and Methods

This article is a literature review. We have extended the time range in order to cover the evolution of the addressed problem. The articles selected for analysis are from 1997 to 2019.

In the first axis, the research defines the impact of individual performance on the company's overall performance, the factor that affects the individual's performance, and the key indicator that measures it.

In the second axis, the study investigates the articles or theses that measure the impact of continuous training on the company's overall performance, and proposes models to assess this impact.
The context of the studies selected varies from one reference to another, from Moroccan, French and Anglo-Saxon contexts.

3. Results and discussion

3.1. Axis 1: Overall and individual performance

According to Bourguignon 1997 [2], performance revolves around three essential points: action, its result and its success.

Action performance within a company is based on processes acting on the individual, the material and the organization.

The process that directly influences the individual's performance is continuous training, which is considered a key in skills production.

Furthermore, performance measurement according to Bouquin 2004, means measuring three components: economy, efficiency and efficacy [3].

![Figure 1: Performance (Bouquin, 2004)](image)

The efficiency component is strongly correlated with the continuous training process. We conclude that a properly implemented and controlled continuous training process generates high efficiency.

For Bouquin (2004), what makes it possible to evaluate individual performance is measuring productivity before and after a training.

According to Movahedkhah (2005) [4], the success of an organization is associated with the performance of people, which can be assessed by motivation, skills development and performance.

He proposed a model for the concept of overall performance of the business, taking into consideration the most important indicators, namely the financial indicator, Customer indicator, Internal Processes and organizational training.

The key indicator for training impact is measuring the productivity. This confirms that measuring the performance of the individual that influences overall performance is similar to measuring productivity.

The definition of performance according to Maurell 2014[5], which is based on Reynaud’s (2003) definition of performance, is an aggregation of three dimensions; economic, social and environmental.

This performance is measured using several tools, namely the Balanced Score Card (BSC) which extends to both social and environmental dimensions, or the Triple Bottom Line.

Maurell 2014[5] proposes a structural equation model, based on data from a sample of 121 firms, from various sectors.

Among the results of his research, social performance has twice as much impact on overall performance compared to the economic and financial component.

According to ISSOR 2017[6], performance is a complex concept that integrates several dimensions (strategic, competitive, organizational, financial, business and human performance), and it is necessary to measure all its dimensions and rely on its determining factors to improve it.

Human performance is impacted by the management practices of human resources (HR).

Continuous training, which is aimed at developing initiative, human resources creativity, and the ability to monitor technical progress, is the most critical practice for the development of employees within a company.

Hence we conclude that in order to ensure overall performance, it is necessary to improve the performance of the people working within the company, and that a continuous training process guarantees the production of competences in a way that meets the constantly evolving requirements.
3.2. Axis 2: Impact of training on performance

A study by Carriou and Jeger published in 1997[7], deals with the return on investment of continuous training, through an analysis of productivity data from the tax returns of a sample of 10,000 companies, with a size of more than 50 employees.

The impact of continuous training was tested using three production function models, and each model is based on a combination of assumptions (table 1):

| Hypothesis 1: the delayed impact effect on productivity / Hypothesis 2: the accumulation effect / Hypothesis 3: the obsolescence effect / Hypothesis 4: the saturation phenomenon |
|---------------------------------------------------------------|
| Model 1 of the Cobb-Douglas type | Model 2 | Model 3 of type TRANSLOG |
| H1 | H1 H2 H3 | H1 H4 |

A basic model confirms a positive impact of the continuous training rate of year n-1 on the productivity of year n, and measures the elasticity of the company's added value compared to the training rate of 2% shows an obsolescence of continuous training of about 50% per year, and confirms the elasticity of 2%. Also attests to the positive impact of continuous training on productivity.

In addition, Arcimoles (2012) addresses the effect of evaluation on the effectiveness of training, through a study of the impact of training on employee productivity [8].

The study used a quantitative approach of evaluation practices done after the training (on SPF120: sample of companies in the region of Paris, France), then measured the impact of these evaluation practices on the effectiveness of the training, by observing two studied populations, to one of which the evaluation was announced and the other wasn’t.

The study showed positive consequences of the implementation of a learning assessment process on employees' attitudes and on the effectiveness of training, and it increases performance orientation.

Aubert (2009) [9] studied the apparent performance of continuous training in companies, and analysed the impact on productivity through the processing of productivity data from tax returns of a sample of 1,605 companies with a size of more than 1,000 employees. The effect of continuous training was tested using the Cobb-Douglas production function model, with constant yield, and with only two production factors: capital and efficient labour. The study estimates confirm the existence of significant productivity gains associated with continuous training provided by employers. Investment in continuous training would also be beneficial to companies.

Another study published in 2010 by Dyane [10], analyses the systems and practices of continuous training in France and Morocco for the development of the necessary skills among companies, and discusses public responsibility in this process.

It was based on a quantitative and qualitative survey, for a sample of 40 respondents out of 110 companies in various sectors, the data collected were then statistically processed.

The perceived effects of training vary mainly between production yield and increased revenue.

This proves that continuous training has a positive impact on the development of the company's human resources.

Additionally, Zaim (2017) confirms the effect of continuous training on the improvement of employees' skills, through a questionnaire, with a sample of companies (46 respondents out of 93 companies in Morocco in the Rabat-Sale region) [11].

The final conclusion of this article is that the majority of companies are aware of the importance of continuous training: a factor of stability and security by guaranteeing a staff always qualified and ready
Lazzarini (2019), for his part, addressed the issue of university studies for future engineers, and proposed the integration of a module on sustainable human development within companies [12].

He proceeded through focus groups with engineering students and semi-interviews with coordinators. The integration of this module was appreciated by the students, who are the bearers of change within companies, and the professors have brought added value to the training curriculum which will help to spread this notion of sustainable human development, which increases performance within companies.

According to Muehler and Beckmann [13], when comparing the evolution of wages of employees who had undergone firm-specific training and those who had general training, we notice that general training is linked to larger wage increases than firm-specific training.

They use for demonstrating a Difference in differences (DID), which is a statistical technique used in quantitative research, and they conducted the training as well as observed data on the span of 3 years. Which leads us to conclude that general training impacts productivity more than firm-specific training.

Nevertheless, and on the same orientation of observing wage effects and productivity by training, Gallen, Peneder, and Robinson insist that investing in continuous training is highly recommended and important for the increase and growth of the overall performance of the European Union labour Force’s sample of study [14].

Gallen, Peneder, and Robinson have also found in their statistics of EU Labour Force Survey that general education and continuous training are both positively correlated.

Through this set of studies we develop a conceptual model of performance, its components, its impact factors, and its measurement models (Figure 2).
Figure 2: Impact of continuous training on performance and Models of its assessment
Among the main findings, the components of the company's overall performance include the results of actions directly related to the individual. The definition of performance over the years, since 1997, has been based on components. The common measure is individual productivity, which provides information on the overall state of the company's performance.

According to the above-mentioned studies, the process of continuous training has a direct influence on the individual's productivity. This is proven through models that measure the impact of continuous training on individual performance.

These models are divided into two categories: objectives through an analysis of individual productivity data for a sample of companies, and subjective through questionnaires and surveys (Figure 2).

4. Conclusion
This review of literature shows the positive effect of continuous training on the development of individuals and, consequently, on the development of the overall business performance. This confirms that continuous training is an essential tool for the constant improvement of companies.

Questions that might be areas of research later on are: What are the practices of continuous training in Moroccan companies today? Does the state as a stakeholder support this process of upgrading the skills of employees within a company? If so, what are the mechanisms that exist? And to what extent do these mechanisms affect the real needs of Moroccan companies?

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