How training evaluation can be used to potentiate employee development in an organization

Rita Loução de Almeida

Student Number 1117

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Professor Carlos Marques

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Abstract

This work project tackles a challenge presented by a corporate university and aims to study the impact of training evaluation on employee development. This project is composed by two studies. Study I is a qualitative study that refers to a benchmark of corporate universities and their best practices. Study II, a quantitative research, examines the impact of learning evaluation results on competencies of company’s potential assessment system and on individual performance. Despite learning evaluation results should not be consider alone on employee development decisions, they are usually used in training decisions, such as further training needs; and in career development, for instance to select high potentials and provide career guidance.

Keywords: Learning evaluation, training utilization, employee development, best practices
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1. Introduction

In general, training refers to a planned learning experience that aims to induce a long-lasting change on one’s knowledge, skills, attitudes and behaviors (Marques et al., 1995). In business, the purpose of training is to improve employees’ performance to aid the company achieve its strategic goals (Noe et al., 2008).

Today’s business world requires companies that are continuously adapting to changes and employees who are constant learners; thus companies change when their employees change and it embraces a growing focus on employee development (Guinn & Williamson, 2012). Therefore, training is becoming more important for companies as a human resource development tool (Ashton and Easterby-Smith, 1979; cited by Iqbal, 2011) and so, Portuguese companies are increasing their investment on training programs (Human Resources HR Portugal Website, Jun 2013). However, there is a lack of studies about the impact of training evaluation on employee development and how to use training evaluation results.

This work project, taking a “problem solving” form, tackles a challenge presented by a company on answering “how training evaluation can be used to potentiate employee development?”. This study is developed within the corporate university of a company from the energy sector. Company’s corporate university aims to reinforce a common culture and promote employee development by coordinating employee development initiatives and executing corporate training programs.

2. Framework

This work project is composed by two studies. Study I refers to a benchmark that examines different companies’ overview regarding training evaluation and their current training best practices, as well as training trends. It is a qualitative study that aims to provide a general overview about training best practices in Portugal. Study II is a
quantitative study that examines the relationship between training evaluation results and employee development. In more detail, it explores the relationship between learning evaluation results and competencies considered in company’s potential assessment system and in individual performance. Furthermore, it is analyzed how personal and organizational features influence training results.

2.1. Work Project Design

The project design, presented below, reflects the purpose of this project in finding a relationship between training evaluation and potential competencies and individual performance, as well as additional relationships with other variables (academic background, degree, working time and segment).

2.2. Hypotheses

As mentioned above, the challenge proposed by the company intends to analyze the relationship between learning evaluation results and potential competencies. Based on this, the first hypothesis arises as the following: \( \textbf{H1: Training evaluation impacts positively employee’s potential competencies.} \) In fact, training aims to change one’s knowledge, skills, attitudes and behaviors (Marques et al., 1995). However, due to the lack of empirical studies regarding the above relation, an alternative hypothesis is considered, based on the availability of data. Indeed, Allen (2007) states that “to truly know whether training has been beneficial, we need to measure if performance (individual or organizational) has improved”. Therefore, the second hypothesis is the following: \( \textbf{H2: Training evaluation has a positive impact on individual performance.} \) As a further study, an additional hypothesis is considered since performance is
estimated based on employee’s competencies. In fact, Kandula (2013) states that “competency is a reliable indicator of how a person can perform”. Also, Spencer and Spencer (1993), cited by Kandula (2013), reinforces that a “competency causes or predicts performance”. Therefore, the third hypothesis is the following: **H3: There is a positive impact of potential competencies on individual performance.** However, since it is not the main objective of this work project and was not asked by the corporate university, it is presented on the separate appendix document.

3. **STUDY I - Benchmark of Corporate Universities & Training Best Practices**

Study I refers to a benchmark of corporate universities in Portugal. In this section, it is examined training trends in Portugal and internationally, as well as companies’ overview regarding training evaluation and best practices.

3.1. **Brief Literature Review for Study I**

The concept of corporate university has been difficult to define (Prince and Beaver, 2001) and there are several definitions in the literature since the 90’s. According to Allen (2002), a corporate university is an educational unit that conducts several activities to promote individual and organizational learning and it must be aligned with organization’s mission, goals and strategy. Furthermore, the author presents four levels of corporate universities that range from simply training to academic credits or degrees. However, to consider that an entity is a corporate university, the author defines as minimum requirement training plus managerial and executive development activities. Likewise, there are numerous training evaluation models in the literature such as Kirkpatrick (1976), Brinkerhoff (1987), Bushnell (1990), Cavalcanti (1990), cited by Marques et al. (1995); however the most used is the Kirkpatrick model (1976). Before explaining this model, it is important to understand what training evaluation is. It is usually overlapped by the immediate results of training, which refers to the quality of
the session, such as physical conditions, trainers’ quality and knowledge acquired (Marques et al., 1995). However, the core of the evaluation is the analysis of the impact of training on business performance, on employee development, on teams, which is named training validation by Marques et al. (1995).

Despite some limitations, the Kirkpatrick model (1976) is adopted in this work project since it is a reference in the literature. It consists in four levels of evaluation: reaction, learning, behavior and results (Kirkpatrick, 2007). In brief, reaction level (level one) refers to measuring participants’ satisfaction after a course, to assess how they feel about the course in order improve the program if necessary. However, being satisfied does not mean that participants have learned (Kirkpatrick, 2007). Therefore, learning level (level two) evaluates the change in participant’s knowledge, skills and attitudes. Subsequently, behavior level (level three) measures behavior changes caused by training; usually assessed before and after a program (Kirkpatrick, 2007). Finally, results level (level four) measures the impact of training on business results, such as improvements on quality, customer satisfaction, employee engagement, as well as increased productivity and cost savings (Kirkpatrick, 2007). Companies face an increasing pressure for proven results, which is also applied to the training context. Hence, an additional level is proposed by Phillips & Stone (2002), which is return on (training) investment, which refers to the monetary benefits of training.

Moreover, the importance of training evaluation is consensual in the literature. Guerci, Bartezzaghi and Solari (2010) state that a consistent evaluation system is a main indicator for a credible corporate university, since the value of training and the investment can be demonstrated through evaluation results. Bober and Barlett (2004) reinforce that the core of evaluation is the utilization of results and define evaluation utilization (or use) as the impact that results has on a program. There are three popular
types of evaluation uses in the literature - instrumental, conceptual, symbolic use - however, it is a topic of permanent discussion (Johnson et al., 2009). In short, instrumental use refers to the direct decisions or actions based on evaluation results (Patton, 2002), such as improvements of the existing training programs: modify length, teaching methods and/or replace trainers. Conceptual use “involves the use of evaluations to influence thinking and deepen understanding […] as clarifying a program’s model, testing theory, distinguishing types of interventions, figuring out how to measure outcomes” (Patton, 2002), as well as future decisions in terms of program holding and advanced courses (Bober & Barlett, 2004). Finally, symbolic use refers to justify a program and demonstrate its worthiness (Bober & Barlett, 2004). Overall, despite its importance, training evaluation is frequently absent and is often limited to the reaction level (Dahita & Jha, 2011).

3.2 Methodology

3.2.1 Data Collection and Qualitative Methods

Data is collected from eight interviews conducted to multinational companies in Portugal or large Portuguese companies, based on a semi-structure questionnaire. The questionnaire is composed by a total of sixteen questions that explore the following topics (see questions in detailed in the separate appendix document):

- General overview about training programs in Portugal: where is inquired training target, time spent for the last three years and programs’ content;
- Training evaluation: where it is asked the importance of training evaluation and what levels are included in the evaluation, based on the four levels of the Kirkpatrick model (1976) and the fifth level of Phillips & Stone (2002);
- Evaluation utilization: includes the importance and purpose of using results. Answers are examined based on the types of evaluation use presented by Patton (2002);
• Questions about learning results are asked in more detail in order to determine its importance and the purposes of that use;

• The last section includes the specific relation between training evaluation and potential, as well as company’s best practices.

The questionnaire is created by the author of this work project and it was validated by the responsible of the internship. Note that different questions may be included, as well as other models of training evaluation and evaluation use.

The first contact with companies was done by email, where the work project’s objectives and methodology were explained briefly. Then, a face-to-face interview was conducted, except for three cases: a phone call interview and two cases in which the information was collected via email. Then, the information was transcribed and a written document was created (see the eight complete interviews in the separate appendix document), based on the information collected from the interview, annual reports and the website. Afterwards, the company validates the document, in order to ensure that information can be included in this project. Due to confidentiality issues, companies are not revealed and thus, a code is assigned to each company (letters from A to H). Moreover, data about training trends in Portugal is collected from one interview with a management consulting firm with expertise in human capital. These facts are supported by international trends collected from the most updated reports of the Chartered Institute of Personnel and Development (CIPD) and the American Society of Training and Development (ASTD) in order to shorten limitations that might arise from the fact that training trends findings are based on one source.

3.2.2. Sample

The sample is composed by eight companies from different sectors: consulting, banking, telecommunications, technology and energy.
The size of these companies in terms of employees can be seen in the table below.

Table I: Figures about companies (Study I)

<table>
<thead>
<tr>
<th>Company</th>
<th>Sector</th>
<th>Employees 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Consulting</td>
<td>275,000</td>
</tr>
<tr>
<td>B</td>
<td>Banking</td>
<td>9,944</td>
</tr>
<tr>
<td>C</td>
<td>Consulting</td>
<td>180,529</td>
</tr>
<tr>
<td>D</td>
<td>Technology</td>
<td>94,000</td>
</tr>
<tr>
<td>E</td>
<td>Telecommunications</td>
<td>70,103</td>
</tr>
<tr>
<td>F</td>
<td>Telecommunications</td>
<td>86,400</td>
</tr>
<tr>
<td>G</td>
<td>Energy</td>
<td>7,241</td>
</tr>
<tr>
<td>H</td>
<td>Consulting</td>
<td>2,600</td>
</tr>
</tbody>
</table>

3.3. Data Analysis and Interpretation

This section begins with a general overview about training trends in Portugal, as well as international trends. Then, it is present a benchmark of corporate universities about training evaluation and evaluation use. In third place, findings about the relationship between training evaluation and potential are presented. This section ends with a summary of best practices about training.

3.3.1. Training Trends

Training trends in Portugal are based on an interview on October 18th, 2013 with a consulting company expert in human resources. The company supports corporate universities in terms of its structure, processes, mission, vision and model; develops specific training programs; and supports training needs.

3.3.1.1. Training trends in Portugal

In Portugal, companies that invest in training maintain a positive track record in business results, regardless their size. The investment in training is decreasing (number of hours has decreased); but there is an increase on the customization and specialization of training, since companies are focusing their training programs on business-specific and relevant topics and on key employees. Moreover, the top areas depend on the company; however the soft skills area is still a gap. Regarding training methods, classroom training is decreasing and eLearning is increasing, since the latter allows time and cost reduction, and convenience. Aligned is blended learning, a combination of
eLearning and classroom, which is also increasing, since it allows cost reduction and still keep controlling and ensuring training effectiveness.

In a context of crisis, companies are focusing their training programs in relevant topics that differentiate the company in the market. They are changing their business priorities, which leads to more sophisticated training programs. Also, the crisis leads to a change in the employee’s profile (the employee must be more dynamic) and so training has the role to support this transition. Moreover, the concept of corporate university is more suitable for large companies, since it allows synergies, cost reduction and training optimization. Training evaluation is becoming more controlled and well-organized, since training is an investment and so needs to be justified, which leads to a structured and grounded training.

Considering the Kirkpatrick model (1976), companies tend to stay in the first two levels (reaction and learning). However, there is an increasing trend for structured training programs in multinational companies, which reflects the importance of the next levels (behavior and results). Moreover, companies use mainly reaction results to improve the existing training programs (instrumental use). Learning results are linked to performance in the case of technical skills, and in some specific but not common cases, learning results are used on career issues.

Finally, companies are formally adopting the 70/20/10 model, which states that 70% of the learning comes from on-the-job learning and experience, 20% from others, like mentoring and coaching, and only 10% from formal training. It means that the employee learns more effectively from on-the-job experiences on an informal environment; however companies do not control the 70% and employees do not consider or value it as training. Thus, the challenge for companies is to structure and monitor informal training such as measure the amount of time and money invested.
3.3.1.2. International trends

Overall, international trends are aligned with Portuguese ones. The profile of companies that invest in training does not depend on the sector or size, and the number of hours spent on training tends to be constant over the years. Similar to Portugal, training tends to be organization- and business-focused and the central target is high-potential employees and senior managers. Regarding training areas, leadership and managerial skills are the main focus, as well as transversal behaviors and culture issues. Moreover, concerning delivery methods, there is a reduction on classroom and trainer-led instruction, and the most common practices are on-the-job training and in-house development programs, and eLearning combined with other types of learning. Technology-driven methods are increasing, such as webinars, virtual and mobile learning. In a context of crisis, companies, which reported a worse situation in the last year, are more likely to reduce their training investment.

Regarding training evaluation, there is an increasing emphasis on measuring and evaluating training effectiveness due to the current economic situation and the need to justify the investment. Despite the effort to link evaluation and business impact, results measurement is still a gap, since companies are at the reaction level of the Kirkpatrick model (1976). Finally, the most effective learning and development practice pointed out is on-the-job training and coaching by line managers, since it provides immediate benefits, for instance builds capability and competence.

3.3.2. Benchmark of Corporate Universities

Despite some differences in size and scope, the eight corporate universities share similarities. Considering the four levels of corporate universities of Allen (2002), every corporate university provides training plus managerial and executive development activities but only two of them provide academic degrees. Specifically, corporate
university B focuses only on courses that offer academic credits or degrees, by developing its own programs with partnerships with leading Portuguese universities. Table II represents a brief comparison of corporate university’s target and training hours’ evolution.

Table II: Corporate Universities Overview

<table>
<thead>
<tr>
<th>CU</th>
<th>Target (employees)</th>
<th>Training Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>A</td>
<td>Internal: technicians, middle and top management</td>
<td>19 397</td>
</tr>
<tr>
<td>B</td>
<td>Internal: senior managers</td>
<td>NA</td>
</tr>
<tr>
<td>C</td>
<td>Internal</td>
<td>NA</td>
</tr>
<tr>
<td>D</td>
<td>Internal: young graduates, talents, team managers</td>
<td>越来越来</td>
</tr>
<tr>
<td>E</td>
<td>Internal</td>
<td>41/employee</td>
</tr>
<tr>
<td>F</td>
<td>Internal</td>
<td>25.7/employee</td>
</tr>
<tr>
<td>G</td>
<td>Internal</td>
<td>134 895</td>
</tr>
<tr>
<td>H</td>
<td>Internal</td>
<td>随着来</td>
</tr>
</tbody>
</table>

CU: Corporate university; NA: Not applicable

Note: Different units for “Training Hours” are presented due to the information provided by each company

In brief, the time spent on training varies among corporate universities. On one hand, the decrease in time spent on training is explained by: the increase of pre-work; of the eLearning component and the decrease of classroom; and the economic context. On the other hand, the increase in time is explained by the increase in the number of new employees and training needs. Note that some companies are under a legal restriction of providing at least thirty five hours per employee per year, on a three-year average.

Training programs’ purpose varies according company’s business and in general, corporate universities focus on technical skills for the majority of internal employees, usually the ones that start new functions. Concerning soft skills, the most common is leadership and they tend to be offered to specific groups such as senior managers and high potentials. Moreover, corporate universities attach a very high level of importance to training evaluation, but they tend to stay in the first levels - reaction, learning and behavior. It was expected based on the current training trends presented before. Note that the methods used within each level differ among companies.

It is interesting to analyze one case in which the other levels - results and ROI - are evaluated. In brief, CU B evaluates the impact of training on business results by quality
indicators, such as clients’ satisfaction. A certain level of satisfaction is defined and the gap between the objective and the current satisfaction level is determined. Then, the variable training is the only that changes and the others remain constant (same clients, same purchasing power, same products, etc.) and the new client satisfaction level is determined. Then, the company connects the results level with ROI, in which costs refers to the money spent on that training course and benefits are the increase on client’s satisfaction.

Regarding evaluation utilization, corporate universities confer a high importance to it but the most popular use is instrumental; nevertheless conceptual and symbolic uses were also present. In brief, every company uses the results from satisfaction level to improve existing training programs, such as assessing suppliers’ quality and content adequacy; adapting program’s length, objectives, trainers, methodology, facilities; and aligning expectations. Moreover, the results from learning and behavior levels tend to be conceptually used, which refers to advanced courses decisions and course effectiveness assessment. There are only three corporate universities that use training results to demonstrate programs’ worthiness, in order to show the impact of training on business results and the return of the money invested on training.

3.3.3. Relationship between Learning Evaluation and Employee Development

In short, employee development is an initiative between the employee and the company regarding the acquisition of knowledge, skills, attitudes and behaviors, which involves an equilibrium between employee’s needs and career objectives and company’s goals (Noe et al., 2008). Learning is evaluated through a test or exam in the end of the course or on-the-job observation. Learning results are frequently used to assess whether an employee is prepared to move to the next level of a training program and to further training needs decisions. Moreover, it is usually linked to career progression.
It is common among consulting firms to use learning results to determine the level of competence of an employee, conveying a certification. This certification influences the members that are chosen to a project, and then, influence one’s career progression and performance assessment. Moreover, there is one company that uses learning results in the promotion system in case of draws, as well as in mobility; however they are seldom cases, which correspond to employees from the management area that revealed potential on engineering and were recommended to move to other department.

3.3.4. Relationship between Learning Evaluation and Potential

Regarding the relationship between learning results and potential, it is vital to consider that the definition of potential differs from company to company. When talking about potential, one key issue is to define “potential for what”, which refers to the target area or function. Sometimes, potential is assessed in terms of comparison among employees based on pre-defined criteria. Overall, companies in Portugal tend to link potential with the topic of leadership. Most common findings indicate that potential is frequently linked with talent: potential is assessed first and then the results influence the access to advance training and academic degrees funding.

3.3.5. Summary of Best Practices of Training Evaluation

It is crucial to take into account that best practices may depend on the corporate university type, structure, objectives, as well as the sector. In fact, Patton (2002) states that “the assumptions undergirding the phrase “best practices” (e.g., that there must be a single way to do something) are highly suspect.”

In order to demonstrate training programs’ success, it is crucial for corporate universities to measure business impact and training effectiveness, by increasing their emphasis on results and ROI levels. Regardless the model, corporate universities must be committed to evaluate training impact, which does not mean to ignore early levels.
Corporate universities must only move to the next level of evaluation if that level and the previous one are well-structured and defined. Every level adds different value to the corporate university and to the company and any level must not be passed over.

3.4. Conclusions from Study I

Overall, training tends to be business-focused and high-potential employees and senior managers are the central target. Regarding methods, classroom training is decreasing and eLearning is increasing since it allows time and cost reduction and convenience. Companies tend to stay in the first two levels (reaction and learning) of the Kirkpatrick model (1976); however, there is an increasing trend for structured training programs, which reflects the importance of the next levels. The popular uses identified were instrumental; nevertheless conceptual and symbolic uses were also present.

Hence, learning results are mainly used to assess whether an employee is prepared to move to the next level of a training program, to further training needs decisions and to demonstrate programs’ effectiveness. Moreover, some companies link learning results with certifications and career progression, promotions in case of draws and mobility. Potential is frequently connected with talent and is assessed first in order to influence the access to advance training and academic degrees funding. Finally, it is crucial for corporate universities to measure the impact and training effectiveness, by increasing their emphasis on the results and ROI levels, without ignoring the early levels.

4. STUDY II - Impact of Training Evaluation on Potential Competencies and Employee Performance

Study II aims to examine the relationship between learning evaluation and competencies considered in company’s potential assessment system and individual performance. Furthermore, it is analyzed how personal and organizational features influence training results.
4.1. Brief Literature Review for Study II

Employee development is a shared responsibility between the employee and the employer regarding the acquisition of knowledge, skills, attitudes and behaviors to prepare ones for future changes in job requirements (Noe et al., 2008). According to this author, employee development involves formal education, job experiences, interpersonal relationships and assessment. In brief, Noe et al. (2008) defines formal education as one’s participation in training courses; and describes job experiences as “job enlargement, rotating to a new job, promotions, or transfers”. Moreover, interpersonal relationships usually refers to the relation between a more experienced employee and the employee that aims to help “better understand the company and gain visibility to key persons in the organization” (Noe et al., 2008). The same author defines assessment as measuring one’s performance, knowledge, skills, behaviors and personality characteristics.

In fact, the ultimate goal of training relates with competencies regardless their nature - technical, social or behavioral competencies, current or future ones (Marques et al., 1995). There are several definitions for competency presented in the literature. In brief, competencies consist on a set of behaviors needed to perform a task or function (Vathanophas & Thai-ngam, 2007). Moreover, performance refers to a specific task achievement measured against predetermined levels of proficiency set by the company (Sultana et al., 2012). Overall, training leads to the acquisition of skills and knowledge that results in changes in one’s competencies, which improve job performance (Aguinis & Kraiger, 2009). Moreover, Noe et al. (2008) states that employee skills and abilities are “the raw material of performance” and further explains that “these raw materials are transformed into objective results through behaviors [and] employees can exhibit...
behaviors only if they have the necessary knowledge, skills, abilities and other characteristics”.

4.2. Methodology

Study II, a quantitative study, is a correlational research in which is assumed that is examined the cause-effect relation between variables. In this section, it is presented the description and characterization of the variables and the process of collecting data. Furthermore, the sample of this study is described, as well as the metric characteristics.

4.2.1. Variables Description

Taking into account work project hypotheses, it is important to characterize the main variables of this study - training evaluation, potential competencies and individual performance - in order to understand in more detail the design of this project.

4.2.1.1. Training Evaluation

In this study, the variable training evaluation refers to the learning level of the Kirkpatrick model (1976). In this case, it is used five variables that are the scores from five courses of the “Development and Valorization Program” of the corporate university. This program, transversal to all departments of the company, aims to provide insights about energy business and finance, as well as regulation and competition, which are critical subjects to the company’s daily business. Training evaluation refers to the following five variables:

- Introduction to Energy Business (IEB) - it provides insights about the energy sector and its structural changes in the medium- and long-run. It is a mandatory course.

- Introduction to Energy Business Senior Experts (IEB SE) - this course provides a global vision about the energy sector worldwide and long-term planning insights. It targets senior managers and so is optional.
• Introduction to Business Finance I (IBF I) - it provides a global overview about finance and its applicability to firm’s business. It is mandatory and focuses on employees without experience or background in finance.

• Introduction to Business Finance II (IBF II) - is a more detail and deeper version of IBF I and targets employees with experience or background in finance.

• Regulation and Competition (RC) - it relates with the economic regulation in the energy sector and the competition. It is a mandatory course regardless one’s academic background, experience, function or segment.

Test scores are a continuous variable (Newbold, Carlson & Thorne, 2007) and may take any value from 0 to 20 with two decimals. It can be seen below that IEB is the course with the highest mean, 16.24, whereas RC is the course with the lowest, 14.12.

Table III: Scores Descriptive

<table>
<thead>
<tr>
<th></th>
<th>IEB</th>
<th>IEB SE</th>
<th>IBF I</th>
<th>IBF II</th>
<th>RC</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>226</td>
<td>192</td>
<td>186</td>
<td>82</td>
<td>86</td>
</tr>
<tr>
<td>Missing</td>
<td>402</td>
<td>436</td>
<td>442</td>
<td>546</td>
<td>542</td>
</tr>
<tr>
<td>Mean</td>
<td>16.24</td>
<td>15.77</td>
<td>14.56</td>
<td>15.26</td>
<td>14.12</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>2.52</td>
<td>2.91</td>
<td>2.87</td>
<td>3.10</td>
<td>2.97</td>
</tr>
<tr>
<td>Variance</td>
<td>6.34</td>
<td>8.44</td>
<td>8.21</td>
<td>9.63</td>
<td>8.81</td>
</tr>
<tr>
<td>Minimum</td>
<td>6.00</td>
<td>6.00</td>
<td>6.40</td>
<td>6.40</td>
<td>4.40</td>
</tr>
<tr>
<td>Maximum</td>
<td>20.00</td>
<td>20.00</td>
<td>20.00</td>
<td>20.00</td>
<td>19.33</td>
</tr>
</tbody>
</table>

Additionally, since the purpose of this project is to understand how learning evaluation affects potential competencies (H1) or individual performance (H2), test scores are independent variables that try to predict either potential competencies or individual performance. From Table III, it can be seen that there are missing values for each course since employees did not do all tests. In fact, there are rare cases when it happens and so the five courses have different population and must be analyzed separately.

4.2.1.2. Potential Competencies

Company’s potential assessment refers to the following eight competencies that employees should manifest since they have impact on reaching firm’s strategic goals:
• Strategic Vision and Market Orientation (SVMO) - it refers to understanding company’s strategy, vision, values, market context and positioning.
• Organizational Commitment (OC) - it involves engagement and commitment to company's ideologies, values and policies.
• Teamwork (TW*) - it only applies to employees who belong to teams and are not responsible for one. It refers to the easiness of integration in a team and one’s cooperation with team members.
• Results Oriented (RO) - one’s actions and attitudes must be aligned with goals.
• Change Openness (CO) - refers to ones’ flexibility and quick adaptation to change.
• Initiative and Continuous Improvement (ICI) - the employee should be proactive on searching different and innovative ideas and solutions for business challenges.
• Client Orientation Internal and External (COIE) - employees must be personally committed to meet and exceed client’s expectations.
• Development and Team Leadership (DTL*) - it only applies to employees who coordinate a team. They must guide the team towards objectives, conveying guidelines and clear priorities, by delegating the adequate activities according one’s development and motivation.

In brief, since the beginning of 2012, employees are divided into groups according to responsibilities and job function (see Appendix I). For each group, there is a level of proficiency defined according to market references (see Appendix II). The final evaluation is done according to the level of proficiency, ranking from 1 to 5 with two decimals. In order to measure every competency with the same scale regardless the group, it was calculated a gap between the level of proficiency and the final evaluation, which is a continuous variable according to Newbold, Carlson & Thorne (2007) and it varies from -1.00 to 1.00 in this sample (0 corresponds to be aligned with expectations).

*Employees are evaluated either in TW or DTL, but not in both at the same time (see Valid and Missing Values in Table IV).
Table IV: Potential Competencies Descriptive

<table>
<thead>
<tr>
<th></th>
<th>SMVO</th>
<th>OC</th>
<th>TW</th>
<th>RO</th>
<th>CO</th>
<th>ICI</th>
<th>COIE</th>
<th>DTL</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>628</td>
<td>628</td>
<td>554</td>
<td>628</td>
<td>628</td>
<td>628</td>
<td>628</td>
<td>554</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
<td>74</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>554</td>
</tr>
<tr>
<td>Mean</td>
<td>0.19</td>
<td>0.34</td>
<td>0.47</td>
<td>0.38</td>
<td>0.37</td>
<td>0.41</td>
<td>0.42</td>
<td>0.32</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>0.25</td>
<td>0.28</td>
<td>0.28</td>
<td>0.29</td>
<td>0.25</td>
<td>0.29</td>
<td>0.28</td>
<td>0.30</td>
</tr>
<tr>
<td>Variance</td>
<td>0.06</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>0.06</td>
<td>0.08</td>
<td>0.08</td>
<td>0.04</td>
</tr>
<tr>
<td>Minimum</td>
<td>-0.45</td>
<td>-0.50</td>
<td>-1.00</td>
<td>-0.45</td>
<td>-0.50</td>
<td>-0.45</td>
<td>-0.45</td>
<td>-0.08</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>0.90</td>
</tr>
</tbody>
</table>

The variable “potential competencies” is a dependent variable since it is expected to observe the effect of learning evaluation on potential competencies (H1). As a final remark, the final evaluation in each competency is determined by a weighted average of different interveners, depending on one’s group (see Appendix III). A minimum of 60% of this evaluation is determined by one’s supervisor. This variable is somehow contaminated because supervisors have access to employee’s tests scores, and so their decisions regarding potential competencies assessment might be influenced by that.

4.2.1.3. Individual Performance

Individual performance is one value weighted by four elements: personal goals (15%), department goals (35%), strategic competencies (20%) and global appraisal (30%). Personal and department goals results are based on metrics and are determined by the supervisor. Strategic competencies refer to potential competencies mention in the previous section. Likewise, global appraisal is evaluated by the supervisor. Note that individual performance is not a truly individual variable because 35% represents department goals (not individually defined). It appears that this data is also contaminated since it is the supervisor who determines the largest part of one’s potential competencies evaluation, as well as individual performance. Also, the latter is composed by 20% of potential competencies and so it is not totally independent. It is a continuous variable (Newbold, Carlson & Thorne, 2007) measured in percentage that ranks between 70.43 and 116.51 in this sample (Table V). Similar to potential competencies, this evaluation is based on the level of proficiency; but in percentage.
An employee that scores 100% in individual performance means that is aligned with expectation (similar to a gap of 0 in potential competencies). Individual performance has a mean of 108.17, as it can be seen in the table below.

Table V: Individual Performance Descriptive

<table>
<thead>
<tr>
<th>Individual Performance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N Valid</td>
<td>628</td>
</tr>
<tr>
<td>Mean</td>
<td>108.17</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>4.57</td>
</tr>
<tr>
<td>Variance</td>
<td>20.92</td>
</tr>
<tr>
<td>Minimum</td>
<td>70.43</td>
</tr>
<tr>
<td>Maximum</td>
<td>116.51</td>
</tr>
</tbody>
</table>

Finally, individual performance is a dependent variable, since it is expected to analyze how individual performance is predicted by learning evaluation (H2).

4.2.1.4. Other Variables

Furthermore, personal features are one’s academic background and degree; and organizational features refer to working time and segment. First of all, academic background is composed by three main areas: Technology (mainly science and engineering); Economics, management and accounting; and Law, social sciences and humanities, which were defined according to the “index of area of study and course” from “Direção-Geral do Ensino Superior” (2013), which is a Portuguese central service that coordinates university courses. It is a discrete variable: Technology takes the value -1, Law, social sciences and humanities takes the value 1 (opposite areas); and Economics, management and accounting takes 0. Second, degree is an ordinal variable since is divided in seven increasing categories from 1 to 7: basic, high school, bachelor, undergraduation, post graduation, masters, and masters/MBA.

Moreover, working time refers to the number of years an employee is working for the company. It is calculated based on 31st September 2013 in order to include individual performance (2012) as well as scores (from 2010 until 2013), by subtracting the defined base date (31st September 2013) and the date the employee had started function at the company. It is a continuous variable (Newbold, Carlson & Thorne, 2007) taking any
value from 1.12 to 37.10 in this sample. Finally, employees are divided into three segments according to the increasing level of responsibility within the company: 1 corresponds to Experts, 2 to Managers and Senior Experts and 3 to High Direction and Direction. It is an ordinal variable since express the rank ordering of those three items.

4.2.2. Data Collection
Data that correspond to the scores of the five courses is provided by company’s corporate university. Moreover, potential competencies and individual performance data is collected from the Human Resources department of the company.

4.2.3. Sample
After describing the variables and collecting data, analytical phase of this work project starts with characterization of the sample. The sample is composed by a total of 628 employees working at different departments in the company. However, these employees belong all to the same program for the corporate university - Development and Valorization Program. From the total of the 628 employees, 64.6% are masculine and the remaining 35.4% are feminine. Moreover, the average age is 36.93 years old (with a standard deviation of 8.8 years old) and age ranges between 24 and 61 years old and 80% of the employees are less than 45 years old. Age is only consider for describing the sample and not in the correlation analysis since it is highly correlated with working time, which is more relevant for this work project. Regarding academic background, Technology represents 65.3%, 27.1% refers to Economics, management and accounting area and Law, social sciences and humanities represents 7.6%, as expected since it is an energy firm (it requires a larger number of engineers). Moreover, the two most illustrative degrees are Undergraduate that represents 71% and Masters with 21.3%. The average working time is approximately 10.50 years, with a standard deviation of 9.40 years and it ranges from 1 year to 37 years. Concerning segment, Experts represents
45.3%, 49.9% corresponds to Managers and Senior Experts and only 4.8% corresponds to the highest segment High Direction and Direction.

### 4.2.4. Metric Characteristics

Before analyzing the impact of learning evaluation on potential competencies and individual performance, it is studied the characteristics of the metrics, in this section. First, it is important to recall the project design and examine it in more detail. As can be seen in the design below, H3 is not consider, because is not the main objective of this work project and individual performance is highly contaminated, so it was transfer to the separate appendix document.

Sample’s sensibility can be seen in histograms for all variables in the separate appendix document for the verification of results variance. The validity of the potential assessment system is verified based on the factorial analysis, by judging whether the eight potential competencies are independent among them. It uses the existing correlations to estimate common factors (Maroco, 2003). Factorial analysis is not applied to: training evaluation, since the population differs among the courses; and individual performance because it is only one indicator. Concerning potential assessment system, employees are evaluated either in Teamwork (TW) or Development and Team Leadership (DTL), and so it was created two analyses for non-leaders and leaders, respectively. Note that there are seven potential competencies for each analysis.
• **Non-leaders:** This analysis includes SMVO, OC, RO, CO, ICI, COIE and TW, excluding DTL. In this case, the factorial analysis is statistical meaningful (Appendix IV) since the value of KMO and Bartlett's is $0.87 > 0.60$ (Maroco, 2003) - and so is adequate to proceed. From the table below, it can be concluded that despite there are seven competencies for assessing one’s potential, there is only one explanatory factor that holds 46% of the total variability.

Table VI: Total Variance Explained (Non-leaders)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>3.222</td>
<td>46.022</td>
</tr>
<tr>
<td>2</td>
<td>0.784</td>
<td>11.200</td>
</tr>
<tr>
<td>3</td>
<td>0.749</td>
<td>10.693</td>
</tr>
<tr>
<td>4</td>
<td>0.623</td>
<td>8.894</td>
</tr>
<tr>
<td>5</td>
<td>0.576</td>
<td>8.227</td>
</tr>
<tr>
<td>6</td>
<td>0.567</td>
<td>8.093</td>
</tr>
<tr>
<td>7</td>
<td>0.481</td>
<td>6.870</td>
</tr>
</tbody>
</table>

• **Leaders:** This analysis includes SMVO, OC, RO, CO, ICI, COIE and DTL, excluding TW. There is statistical meaning since KMO and Bartlett's Test is 0.77 and so it is suitable to proceed (see Appendix IV). From the following table, it can be concluded that there are two factors that explain the potential assessment. In this case, employees with team coordination are assessed based on two factors that explain 46.32% of the total variability.

Table VII: Total Variance Explained (Leaders)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1</td>
<td>3.088</td>
<td>44.12</td>
<td>44.12</td>
</tr>
<tr>
<td>2</td>
<td>1.084</td>
<td>15.486</td>
<td>59.606</td>
</tr>
<tr>
<td>3</td>
<td>0.841</td>
<td>12.015</td>
<td>71.621</td>
</tr>
<tr>
<td>4</td>
<td>0.678</td>
<td>9.679</td>
<td>81.3</td>
</tr>
<tr>
<td>5</td>
<td>0.499</td>
<td>7.124</td>
<td>88.424</td>
</tr>
<tr>
<td>6</td>
<td>0.456</td>
<td>6.51</td>
<td>94.934</td>
</tr>
<tr>
<td>7</td>
<td>0.355</td>
<td>5.066</td>
<td>100</td>
</tr>
</tbody>
</table>

From the table below, it can be seen that SMVO loads strongly on factor 1, along with ICI and COIE; while DTL and RO loads strongly on factor 2. Note that potential competencies are selected to each factor according to the criterion of loading above 50%.
Table VIII: Rotated Factor Matrix

<table>
<thead>
<tr>
<th>Potential Competencies</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMVO Strategic Vision and Market Orientation</td>
<td>0.856</td>
<td>0.048</td>
</tr>
<tr>
<td>OC Organizational Commitment</td>
<td>0.417</td>
<td>0.281</td>
</tr>
<tr>
<td>RO Results Oriented</td>
<td>0.201</td>
<td>0.629</td>
</tr>
<tr>
<td>CO Change Openness</td>
<td>0.321</td>
<td>0.466</td>
</tr>
<tr>
<td>ICI Initiative and Continuous Improvement</td>
<td>0.571</td>
<td>0.471</td>
</tr>
<tr>
<td>COIE Client Orientation Intern and Extern</td>
<td>0.502</td>
<td>0.266</td>
</tr>
<tr>
<td>DTL Development and Team Leadership</td>
<td>0.128</td>
<td>0.781</td>
</tr>
</tbody>
</table>

4.3. Data Analysis and Interpretation

After analyzing the metric characteristics of the variables, the next step is to check the hypotheses of this project - through the correlation matrix - which are presented in the next three sections. The correlation matrix is used to describe whether there is a significant correlation between the variables (sig.< .05) and its strength (Pearson coefficient).

4.3.1. Impact of Learning Evaluation on Potential Competencies

First of all, potential competencies are significantly correlated among them (see Appendix V), i.e. they are not independently, except for SMVO and DTL that are not correlated. It was expected given the results from the factorial analysis. Moreover, the inter correlation matrix for learning evaluation is not applicable since the population differs among tests. In this section, it is addressed the main objective of this work project by using the correlation matrix presented below.

Table IX: Correlation Matrix (H1)

<table>
<thead>
<tr>
<th></th>
<th>SVMO</th>
<th>OC</th>
<th>TW</th>
<th>RO</th>
<th>CO</th>
<th>ICI</th>
<th>COIE</th>
<th>DTL</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.016</td>
<td>-.089</td>
<td>.026</td>
<td>-.117</td>
<td>-.004</td>
<td>.017</td>
<td>-.067</td>
<td>-.486</td>
</tr>
<tr>
<td>N</td>
<td>.816</td>
<td>.184</td>
<td>.706</td>
<td>.078</td>
<td>.947</td>
<td>.803</td>
<td>.317</td>
<td>.328</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IEB SE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.151</td>
<td>.162</td>
<td>.035</td>
<td>.053</td>
<td>.183</td>
<td>.204</td>
<td>.050</td>
<td>-.061</td>
</tr>
<tr>
<td>N</td>
<td>.036</td>
<td>.025</td>
<td>.673</td>
<td>.464</td>
<td>.011</td>
<td>.004</td>
<td>.487</td>
<td>.700</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBF I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.004</td>
<td>-.107</td>
<td>-.055</td>
<td>-.029</td>
<td>-.097</td>
<td>.050</td>
<td>-.085</td>
<td>.005</td>
</tr>
<tr>
<td>N</td>
<td>.957</td>
<td>.145</td>
<td>.473</td>
<td>.699</td>
<td>.186</td>
<td>.497</td>
<td>.249</td>
<td>.985</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBF II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.178</td>
<td>-.130</td>
<td>.228</td>
<td>.035</td>
<td>.112</td>
<td>-.045</td>
<td>-.184</td>
<td>.165</td>
</tr>
<tr>
<td>N</td>
<td>.110</td>
<td>.244</td>
<td>.057</td>
<td>.753</td>
<td>.319</td>
<td>.689</td>
<td>.098</td>
<td>.609</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.114</td>
<td>.001</td>
<td>.132</td>
<td>.001</td>
<td>.101</td>
<td>.201</td>
<td>.137</td>
<td>.328</td>
</tr>
<tr>
<td>N</td>
<td>.295</td>
<td>.994</td>
<td>.269</td>
<td>.995</td>
<td>.354</td>
<td>.063</td>
<td>.209</td>
<td>.252</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).
It can be verified that there is no correlation between most of the learning evaluation results and the potential competencies. Nevertheless, there is a significant correlation between one test - Introduction to Energy Business Senior Experts - and the following potential competencies: Strategic Vision and Market Orientation, Organizational Commitment, Change Openness and Initiative and Continuous Improvement. It implies that H1 is only partial accepted for the training course: Introduction to Energy Business Senior Experts.

4.3.2. Impact of Learning Evaluation on Individual Performance

Since H1 is only partial accepted, H2 needs to be tested. It can be concluded from the table below that there is no correlation between three courses results and individual performance. However, two courses - Introduction to Energy Business Senior Expect and Introduction to Business Finance II - are correlated with individual performance and so they seem to be relevant for individual performance. It implies that H2 is only partially accepted.

Table X: Correlation Matrix (H2)

<table>
<thead>
<tr>
<th></th>
<th>INDPERF</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEB</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>-.024</td>
</tr>
<tr>
<td>IEB SE</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>.185</td>
</tr>
<tr>
<td>IBF I</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>.002</td>
</tr>
<tr>
<td>IBF II</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>.227</td>
</tr>
<tr>
<td>RC</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>.203</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

The inexistent correlation between the three learning evaluation and individual performance might be explained, by the fact that an employee might have acquired the skills and knowledge from the course but might simply do not have the opportunity to put them into practice; or is not translating it into behaviors or actions, due to situation
constraints (Noe et al., 2008). Noe et al. (2008) refers to companies’ culture that discourages employees from exhibiting effective behaviors or simply employees are not motivated, which commonly occurs when employees rely on not being rewarded or recognized for demonstrating those behaviors.

4.3.3. Impact of Personal and Organizational Charact. on Learning Evaluation

From Table XI, it can be concluded that employees from the Humanities area have lower grades in the IEB test than employees from the Technology area, which is expected based on the content of the course. Moreover, the higher the employee’s degree, the greater the score is, for every course. However, employees, who are working in this firm for a long period, score lower in IEB SE, IBF I and IBF II (even stronger).

Table XI: Correlation Matrix (Personal and Organizational Features)

<table>
<thead>
<tr>
<th></th>
<th>IEB</th>
<th>IEB SE</th>
<th>IBF I</th>
<th>IBF II</th>
<th>RC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Background</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.251</td>
<td>-.002</td>
<td>-.134</td>
<td>.008</td>
<td>.178</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>226</td>
<td>192</td>
<td>186</td>
<td>82</td>
<td>86</td>
</tr>
<tr>
<td><strong>Degree</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.318</td>
<td>.208</td>
<td>.229</td>
<td>.270</td>
<td>.270</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>225</td>
<td>190</td>
<td>186</td>
<td>82</td>
<td>85</td>
</tr>
<tr>
<td><strong>Working Time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.119</td>
<td>-.163</td>
<td>-.214</td>
<td>-.498</td>
<td>-.136</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>226</td>
<td>192</td>
<td>186</td>
<td>82</td>
<td>86</td>
</tr>
</tbody>
</table>

4.4. Conclusions from Study II

Overall, company’s potential assessment system differs between non-leaders and leaders. On one hand, non-leaders have been evaluated through one explanatory factor, which means that employees are evaluated based on an overall perception. On the other hand, leaders’ potential assessment is based on two factors.

Regarding the impact of learning evaluation on potential competencies, H1 is only partially accepted since most of the courses are not correlated with potential competencies. This might happen because the nature of the courses is not straight connected with the strategic competencies considered in the potential assessment. In this case, the five courses constitute a program that aims to transfer technical knowledge, whereas the potential competencies are related with soft skills. Likewise,
there are only two courses correlated with individual performance. On one hand, an employee might have acquired the skills and knowledge but is not translating it into behaviors or actions due to situational constraints (Noe et al., 2008), since employees might not believe on being rewarded or recognized. On the other hand, it might refer to the lack of opportunity to put into practice the acquired skills, knowledge and behavior.

5. Main Conclusions

It was presented the challenge of answering “how training evaluation can be used to potentiate employee development?”, which refers to how learning evaluation - scores from knowledge tests - and employee development are linked. In this section, main conclusions of both studies are presented.

Main conclusions of Study I:

- Training tends to be business-focused.
- High-potential employees and senior managers are the central target.
- Classroom training is decreasing and eLearning is increasing.
- Companies tend to stay in the first two levels of the Kirkpatrick model (1976).
- The most popular use of training results identified was instrumental.
- Companies usually link learning results with certifications and career progression.
- Potential influences the access to advance training and academic degrees funding.
- Training impact and ROI are relevant levels to measure training effectiveness.

Main conclusions of Study II:

- Non-leaders have been evaluated through one explanatory factor (overall perception).
- Leaders’ potential assessment is based on two factors.
- H1 is partially accepted since only IEB SE is significantly correlated with SMVO, OC, CO and ICI.
- H2 is partially accepted, since only IEB SE and IBF II are correlated with INDPERF.
6. Recommendations

First of all, since there is no correlation between IEB, IBF I, IBF II and RC and potential competencies, the company should not take into account these scores on employee’s potential assessment. Despite IEB SE is correlated with potential competencies, it should not be taken into account on assessing potential competencies in order to ensure a uniform and coherent potential assessment system within the organization, since this course is taken by senior managers and not by all employees. Likewise, despite there is a significant correlation between IEB SE and IBF II and individual performance, the scores should not be used on performance assessment for the same reason presented above for the potential assessment system.

In general, the corporate university must be aware of the fact that employees from the Humanities area have lower grades than employees from the Technological area; it might be necessary to provide an introductory course in order to better prepare them to the main course or provide more training time. Likewise, employees who are working for longer in the company need more training or training time, to ensure that they acquire the necessary knowledge and skills, and so they require a special attention.

Overall, based on the literature\(^1\) and the benchmark, learning results are effective tools for two main purposes regarding employee development: (1) training and (2) career development. (1) First, tests scores help to assess further training needs since they reveal the current level of skills and knowledge of participants. Second, tests also help deciding whether one is prepared to move to the next level within a program (defining a cut-off score, for instance). Third, tests and course’s effectiveness are also linked, since scores provide information about one’s level of knowledge and so shows whether course’s objectives were being achieved (usually assessed through pre and post testing). (2) Tests provide a first “clue” about employees’ inherent ability for development in a

\(^1\)US Department of Labor Employment and Training Administration, 2006
certain area, since scores can “project” the likelihood of success on a specific subject. In this case, scores can be used to select high potentials to advance training (sometimes though cut-off scores). Then, within that program, the progress of that employee can be monitored through the scores of other tests. Moreover, scores can help to provide career guidance, by understanding which employees fit a specific career development path to reach a position.

However, test scores must not be used alone in these decisions, since it represents only a small portion of employees’ skills. Hence, it is recommended to the company to include the results from training courses of the corporate university when an assessment of the employee is done, in order to ensure that the assessment provides the whole picture about the employee. Finally, employees must receive information about the implications of training results in order to engage them in the whole process.

7. References


8. Appendices

Appendix I - Division per Group (Study II)

<table>
<thead>
<tr>
<th>Group</th>
<th>Population</th>
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</thead>
<tbody>
<tr>
<td>Group I</td>
<td>Board of Directors of Business Units; First line directors of Holding</td>
</tr>
<tr>
<td>Group II</td>
<td>First line directors of Business Units; Second line directors of Holding</td>
</tr>
<tr>
<td>Group II.A</td>
<td>Senior executives without team coordination</td>
</tr>
<tr>
<td>Group III</td>
<td>Managers with a formal team coordination</td>
</tr>
<tr>
<td>Group IV</td>
<td>Managers without a formal team coordination</td>
</tr>
<tr>
<td>Group V</td>
<td>Coordinators</td>
</tr>
<tr>
<td>Group VI</td>
<td>Senior Experts</td>
</tr>
<tr>
<td>Group VII</td>
<td>Experts</td>
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Appendix II - Level of Proficiency of Potential Competencies for Groups (Study II)

<table>
<thead>
<tr>
<th>Group</th>
<th>Level of Proficiency - Potential Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level of Proficiency - Potential Competencies</td>
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<tr>
<td>Group</td>
<td>SVMO</td>
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</tr>
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NA: Not Applicable

Employees are evaluated either in TW or in DTL: Teamwork and team leaders in Development and Team Leadership, not in both at the same time.

Appendix III - Interveners of Potential Competencies Assessment (Study II)

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<thead>
<tr>
<th>Group</th>
<th>Assessment of Potential Competencies (2012)</th>
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How training evaluation can be used to potentiate employee development in an organization
How training evaluation can be used to potentiate employee development in an organization

### Appendix IV – Factorial Analysis Adequacy (Non-leaders & Leaders) (Study II)

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<th>KMO and Bartlett’s Test</th>
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### Appendix V – Inter Correlation Matrix – Potential Competencies (Study II)

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</table>

NA: Not Applicable

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

*. Correlation is significant at the 0.05 level (2-tailed).

c. Cannot be computed because at least one of the variables is constant.
A Work Project, presented as part of the requirements for the Award of a Masters Degree in Management from the NOVA – School of Business and Economics.

How training evaluation can be used to potentiate employee development in an organization

APPENDICE DOCUMENT

Rita Loução de Almeida
Student Number 1117

A Project carried out on the Management course, under the supervision of:

Professor Carlos Marques

6th January 2014
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1. Study I Appendices

1.1. Interview Guide for Portuguese Training Trends

Training Trends in Portugal - Interview Guide

Training Trends in Portugal

1. What is the profile of the Portuguese companies that most invest in training?
   Size, industry, etc.

2. What is the investment (in hours) for the years for Portuguese companies?

3. What are the top investment areas?

4. What is the learning methods most used? eLearning, blended learning, classroom?

5. What are the major reasons for companies in Portugal invest in training?

6. What is the “training target”? Internal employees, external?

7. How far the concept of Corporate University is developed in Portugal?

Training Evaluation Trends

1. Is it common for companies to evaluate training? If yes, for what (criteria)?
2. In what levels are most of the companies? Why?

Trends regarding learning evaluation uses

3. Do companies use the evaluation? If yes, for what (criteria)?

Best Practices

4. How are these topics developed in the literature and in companies?

5. How do companies link (training evaluation and) knowledge assessment and employee development?

6. How do companies link (training evaluation and) knowledge assessment and employee potential?

7. How do companies relate tests’ scores and potential?

8. What are the assessment tools that companies should use to support individual development?
1.2. Interview Guide for Corporate Universities

Benchmark of Corporate Universities – Interview Guide

General Overview about Training
1. What is the training target of the company, in general?

2. How many hours does the company spend on training per year, approximately?
   - Year 2010:
   - Year 2011:
   - Year 2012:

3. What is the training programs content/purpose?

Training Evaluation
4. What is the importance of training evaluation for the company?
   - ☐ Not important
   - ☐ Little importance
   - ☐ Few importance
   - ☐ Important
   - ☐ Very important
   - ☐ Crucial
   - ☐ Does not apply/answer/know

5. Does the company evaluate training? If yes, how (levels)?

Evaluation Utilization
6. What is the importance of training evaluation utilization for the company?
   - ☐ Not important
   - ☐ Little importance
   - ☐ Few importance
   - ☐ Important
   - ☐ Very important
7. Does the company use training evaluation results? If yes, for what purposes?

**Learning Results Uses**

8. What is the importance of learning assessment results for the company?
   - Not important
   - Little importance
   - Few importance
   - Important
   - Very important
   - Crucial
   - Does not apply/answer/know

9. Does the company use learning results (for example, test/exam scores)? If yes, how (criteria)?

10. What is the evaluation grade scale?
    - 0 to 20
    - 0 to 10
    - 0 to 5
    - No scale – participants only do the test/exam
    - Other:

11. Who has access to the learning results (final scores)? Why?

12. How does the company communicate the learning results (scores) to the supervisor?

**Specific Best Practices (national and international if applicable)**

13. How does the company relate training evaluation and learning results with employee development?
<table>
<thead>
<tr>
<th></th>
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<tr>
<td>14.</td>
<td>How does the company relate learning assessment and potential?</td>
</tr>
<tr>
<td>15.</td>
<td>Does the company have a training model (formal or informal)?</td>
</tr>
<tr>
<td>16.</td>
<td>What summarizes company’s best practices?</td>
</tr>
</tbody>
</table>
1.3. Training Trends in Portugal – Interview

Training trends in general in Portugal

1. **What is the profile of the Portuguese companies that most invest in training?**

Companies that invest on training are typically companies that maintain a positive track record in business results, and not because of its size. Therefore, the companies that most invest in internal training for its employees are the following: multinational companies, national companies and companies that highly depend on the global market.

2. **What is the trend on the investment in training, for the last three years?**

Overall, the investment in Portugal in training is decreasing (number of hours decreased); however there is an increase on the customization and specialization of the training. Companies are reducing the investment on training since they are focusing the training programs in specific topics that are most relevant to its business.

- Multinational companies are focusing on priority themes and people, putting extra control on its training budget and target groups due to the economic crisis in Portugal. Therefore, these companies must be much more sophisticated regarding its client relation, and so it is important to prepare employees in this topic, which is done through training.

- A lot of National companies must reinvent themselves to become more efficient; so it is important to empower its employees in specific topics.

- Companies that highly depend on the global market are concerned about training and enabling its employees in issues such as globalization, entering
new markets and culture.

In conclusion, companies are providing training regarding specific topics and to key employees. For example, there was a great resize in the pharmaceutical sector in Portugal in 2013, which results on new positions to some employees; therefore the investment in training increased for this particular case.

3. What are the top investment areas?

It depends on the company. Soft skills area is still a gap in Portugal.

4. What is the learning methods most used? eLearning, blended learning, classroom?

Classroom training is decreasing and e-learning is increasing, since e-learning allows time and cost reduction, which leads to convenience. However, blended learning is also an increasing trend. It a combination of e-learning and classroom, which allows companies to reduce costs and still, keep the control and guarantee the acquisition of knowledge.

5. What are the major reasons for companies in Portugal invest in training during the crisis?

Companies are focusing its training programs in the most relevant topics that differentiate the company in the market. This means that due to the crisis, companies changed their business priorities, which leads them to sophisticate the training programs make it much more focused. Moreover, the crisis lead to a change in the employee’s profile (the employee must be more dynamic) and so training has the role to carry this transition.
6. **How far the concept of Corporate University is developed in Portugal?**

The concept of Corporate University is more suitable to large companies, since it aims to create synergies, reduce costs and optimize training. Still, there is an increasing trend of the concept mostly in multinational/global companies.

**Training evaluation trends**

7. **Is it common for companies to evaluate training?**

There is an increasing trend regarding training evaluation; training is becoming more controlled and well-organized. Training is an investment and so the company needs to justify it, which is leading to a structured and grounded training.

8. **In what levels of the Kirkpatrick model\(^1\) are most of the companies?**

Companies tend to stay in the first two levels (level one and two). However, there is an increasing trend for structured training programs in multinational companies, which is reflected in an increase of the importance of the next levels (level three and four).

9. **For what purposes do companies use training evaluation?**

Companies use mainly the results from level one to improve the existing training programs. The results from level two are used to link knowledge evaluation and performance in the case of technical skills. Additionally, in some specific not common cases, level two results are used in knowledge management; this means that companies link knowledge results with career and succession issues in key areas.

---

\(^1\) Level 1 – Reaction/Satisfaction
Level 2 – Learning
Level 3 – Behavior
Level 4 – Results
Best practices

10. How are these topics developed in companies in Portugal?

Multinational companies and large national companies tend to have these topics well-defined and structured.

11. How do companies link training evaluation and employee potential?

The definition of potential differs from company to company. When talking about potential, it is important to understand one key issue: “potential for what”, which refers to the area or function. Overall, companies tend to link potential with the topic of leadership, in which the results from knowledge tests are a minimum requirement, since behavior competencies are more valued.

12. How do companies relate tests’ scores and potential?

The weight of the scores in potential estimation in companies is around ten percent.

13. What are the assessment tools that companies should use to support individual development and potential?

In order to assess potential, companies can use a large variety of tools. The most common are the following: personality questionnaires, such as “Talent Q”; leadership diagnoses; soft skills diagnoses, to assess behavior competencies such as leadership competencies and emotional intelligence. Additional tools are interviews, team challenges, and case studies, usually used in the assessment center.

14. Best practices in general

The 70/20/10 model is considered a best practice; however it is not common in
companies, yet. Consulting companies are the ones that firstly embody this model. The model states that 70% of the learning comes from on-the-job learning and experience, 20% from others, mentoring and coaching, and only 10% from formal training. It means that the employee learns more effectively from on-the-job experiences in an informal environment. Therefore, the next step in companies is the 70%.
1.4. Company A Interview

Benchmark of Corporate Universities – Interview – Company A

Company A is a global company of consulting services, technology services and outsourcing. The company collaborates with clients on helping them to improve its business performance. (Company A Website)

General Overview about Training

1. What is the training target of the company, in general?
The company provides training to all company’s employees (technicians, middle and top management).

2. How many hours does the company spend on training per year, approximately?
   Year 2010: 19,397 h
   Year 2011: 29,952 h
   Year 2012: 9,573 h

   There was an increase from 2010 to 2011; however, in 2012, the company has reduced its training.

3. What is the training programs content/purpose?
   Training at Company A is divided in behavioral and technical training. The later aims to address specific business needs (IT, Finance, etc.).

Training Evaluation

4. What is the importance of training evaluation for the company?
   □ Not important
   □ Little importance
5. **Does the company evaluate training? If yes, how (levels²)?**

Yes, the Training Evaluation (satisfaction and knowledge – level one and two of the Kirkpatrick model) is often used to improve training structure and methods. Company A evaluates training using surveys (at the end of the training sessions), either online or paper-based.

**Evaluation Utilization**

6. **What is the importance of training evaluation utilization for the company?**

□ Not important

□ Little importance

□ Few importance

□ Important

✓ **Very important**

□ Crucial

□ Does not apply/answer/know

7. **Does the company use training evaluation results? If yes, for what purposes?**

Yes, to evaluate the learner’s satisfaction level after each training session, as an

² Level 1 – Reaction
Level 2 – Learning
Level 3 – Behavior
Level 4 – Results
Level 5 – ROI
indicator used to evaluate the suppliers quality as well as the content adequacy, in order to improve the training programs. As the primary indicator to evaluate the supplier quality and content adequacy.

**Learning Results Uses**

8. **What is the importance of learning assessment results for the company?**
   - □ Not important
   - □ Little importance
   - □ Few importance
   - □ Important
   - ✓ Very important
   - □ Crucial
   - □ Does not apply/answer/know

9. **Does the company use learning results (for example, test/exam scores)? If yes, how (criteria)?**
   Yes, as one of the indicators for evaluating the effectiveness of the training session and, for some specific technical training, to allow for certification. Depending on the type of training, the results can give access to certifications and also indicate the level of expertise in each core competencies.

10. **What is the evaluation grade scale?**
    - □ 0 to 20
    - □ 0 to 10
    - ✓ 0 to 5
    - □ No scale – participants only do the test/exam
    - □ Other:
11. Who has access to the learning results (final scores)? Why?
Due to confidentiality requirements, only HR has access to the scores from level one (satisfaction). Regarding knowledge scores, the supervisor has access to it.

12. How does the company communicate the learning results (scores) to the supervisor?
Depends on the training type, and if it is mandatory or not. Example: level of English, supervisor evaluates the need for further training.

Specific Best Practices (national and international if applicable)
13. What are the main uses of the results of the company regarding training evaluation?
Training is one of the primary tools for developing the company’s professionals and is at the heart of their progressions within Company A. As such, they are able to develop the business and contribute decisively towards the company’s results. It is one of the most valued tools by employees and one of the strategies of Company A: To be a “School” of reference.

14. How does the company relate training evaluation and learning results with employee development?
The training evaluation and knowledge assessment reveal relevant information on the adequacy, effectiveness and efficiency of training. The relation is made through competencies proficiency analysis.

15. How does the company relate learning assessment and potential?
Depending on the training session’s objective, the training evaluation and knowledge assessment can provide important information on how prepared employees are for a
step up in their career. However, it is not a direct or deterministic relation, once it is more important to analyze competencies development through training.
1.5. Company B Interview

Benchmark of Corporate Universities – Interview – Company B

Company B is a Portuguese financial services group with headquarters in Lisbon and international presence in twenty five countries. Company B provides “a broad range of financial products and services that meet the specific needs of the all client segments - companies, institutions and individual clients”\(^3\).

General Overview about Training

1. What is the training target of the company, in general?
Company B has two different natures of training to its internal employees, which are managed by Company B’s University and HR Training. Both target all internal employees. In more detail, B University targets senior managers, offering longer and highly structured training programs that provide a degree in the end.

2. What is the training programs content/purpose?
The training purpose of both B University and HR Training is to provide training on technical competencies and soft skills. In more detail, B University provides training on transversal competencies to all employees.

In summary, the purpose of the training programs managed by (1) B University and (2) HR Training are the following:

(1) B University is a project based on partnerships between leading universities in Portugal and company’s top managers. It aims to create and execute programs and initiatives regarding employee’s academic education (Bachelor/Undergraduate degrees, Master degrees, PhDs, Post-graduations and MBAs). It is targeted mainly to two groups of employees: young high potential graduates, and non-graduate employees.

\(^3\) Annual Report 2012
with significant professional experience. (Company’s Website)

Therefore, there are two distinctive programs, which are the following:

- Executive Master in Management & Banking – It is a customized two-year program to young high potential undergraduates, according to their needs. It is provided by a partnership between Catolica Lisbon School of Business and Economics and the company. This Master provides innovative techniques about the banking sector and strategy.

- Undergraduate Degree in Bank Management – It supports employee’s development by providing an opportunity to non-graduated employees with relevant professional experience to acquire an Undergraduate Degree. It relates with professional competencies provided by a specialized institute in banking, the Portuguese School of Bank Management - ISGB. This program includes a mentoring program that aims to follow the employee’s development and performance.

(2) HR Training provides training to all its internal employees in order to improve employee’s technical competencies (hard skills) and behavior competencies (soft skills). Additionally, it aims to attract and retain talent. (Company’s Website)

Therefore, HR Training provides the following training programs:

- Training in Human Rights – since the company is present in twenty five countries, it recognizes that Human Rights are fundamental to its business. Therefore, the company launched this program in 2012 that aims to “reinforce the existing internal labor regulations, practices and culture of protection and respect”. This program is targeted to all employees of the company and it

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4 Company’s Website
5 “Instituto Superior de Gestão Bancária” (the Portuguese School of Bank Management)
6 Company’s Website
recalls the Universal Declaration of Human Rights and it refers to ethical principles, financial crime prevention and corruption issues.

- School Branch – it is a project in thirty-four company’s branches that aims to provide training to employees that directly deal with clients. It allows the acquisition of know-how on the retail banking in different business areas.

The following (new) training programs relate to behavior competencies and are linked to career development.

- Bank of Ideas - it is a behavior training program that aims to evolve employees in the company’s management by challenging them to provide innovative ideas. Then, these ideas are analyzed and some are implemented.

- B’s Attitude Plan – it is targeted to regional branch managers, private retail managers and sales managers, and its ultimate goal is to improve client service quality. The program refers to manager’s behavior competencies such as customer service skills and team management.

- Methodology of Innovative Training – it is targeted to retail sales assistants and it refers to a mentoring program between the employee and its mentor. It aims to develop skills to reach the service quality standards of the company, through classroom and blended learning.

- B’s Talent – It identifies, assess and prepare young managers who are potential branch managers. The program is composed by three phases: first the potential candidates are identified and selected; then they attend the training program about branch manager’s competencies and functions; and in the end, the participants are evaluated and become its new functions as a branch manager if selected.
Training Evaluation

3. **What is the importance of training evaluation for the company?**
   - Not important
   - Little importance
   - Few importance
   - Important
   - Very important
   - **Crucial**
   - Does not answer/Does not know

4. **Does the company evaluate training? If yes, how (levels)?**
   Both B University and HR evaluate training at the four levels of the Kirkpatrick model: level one, satisfaction/reaction; level two, learning; level three, behavior; level four, impact on results. Additionally, the company assesses the fifth level, which is return on investment.

Evaluation Utilization

5. **What is the importance of training evaluation utilization for the company?**
   - Not important
   - Little importance
   - Few importance
   - Important
   - Very important
   - **Crucial**
   - Does not answer/Does not know

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7 Level 1 – Reaction
Level 2 – Learning
Level 3 – Behavior
Level 4 – Results
Level 5 – ROI
6. **Does the company use training evaluation results? If yes, for what purposes?**

The results from level one (satisfaction/reaction) are used to improve the existing training programs, for example, change the length of the program, its objectives, content, instructors and methods, as well as adjust expectations and facilities.

The results from level two (learning) are used to assess the effectiveness of the course (whether the participant acquired knowledge and skills) and to certify the employee in order to declare that he/she has a certain level of competencies. The certification process is not only based on the learning evaluation results but also on other variables such as on-the-job performance assessment, which is done by a jury under a Training Simulation. These results are used to determine further training needs. Level two is linked with level three, since at the latter, behavior results are assessed by on-the-job observation as well.

At level four, the impact of training on business results are assessed by quality indicators, such as clients’ satisfaction. The results from level five come from the analysis of the return on the (training) investment - ROI - for example, to assess product profitability.

**Learning Results Uses**

7. **What is the importance of learning assessment results for the company?**

- Not important
- Little importance
- Few importance
- Important
- Very important

✓ **Crucial**
8. Does the company use learning results (for example, test/exam scores)? If yes, how (criteria)?
Knowledge assessment results are used to design and customize senior managers’ training programs, for example.

9. Who has access to the learning results (final scores)? Why?
The employee, supervisor and HR. Additionally, administration has access to generic data.

10. How does the company communicate the learning results (scores) to the supervisor?
The results support the advice given by the superior to the employee regarding further training needs.

Specific Best Practices (national and international if applicable)

11. How does the company relate training evaluation and learning results with employee development?
The company relates training with employee development, more specific with career management. The employee development and employee career is supported by the attractiveness and retention of the best professionals, the availability of a training plan, the internal mobility and the evaluation and compensation merit. (2012 Social Report)
In 2012, training allowed the employee development in terms of middle and back-office functions; it increased employees’ competencies in identifying new business opportunities and in upgrading the client service quality. Additionally, it developed employee’s technical competencies and soft skills in the segments of B’s 360-degree and Business. In Central Departments, training focused on technical competencies
(Compliance, IT and Auditing); in Private Banking focused upgrading employee’s know-how on management and leadership. (2012 Social Report)

12. How does the company relate learning assessment and potential?
The concept of potential depends from company to company. For B University, potential is assessed in terms of comparison among employees based on a variety of variables or criteria that are pre-defined. It also requires a target to be reached.

Performance assessment “permits to identify potential talent, to determine promotions by merit or change of function, and to establish the amount of variable remunerations and bonuses.”

13. What summarizes company’s best practices?
B University provides to employees adequate and customized training, adapted to their career. The company creates its training programs based on needs identified by each area of the Bank. It is done through methodologies and process that analyze training gaps, evaluate post-training knowledge gains and assess the training program effectiveness. (2012 Social Report)

The most outstanding best practice is the fact that the company evaluates training at the five levels. Despite the fact that is considered an extremely relevant practice, it is thoroughly structure at company B.

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8 Annual Report 2012
1.6. Company C Interview

Benchmark of Corporate Universities – Interview – Company C

Company C is a worldwide company committed to deliver solutions by building trust and adding value to the client. The company provides services on the following areas: assurance, advisory and tax. (Company C Website)

General Overview about Training

1. What is the training target of the company, in general?

In Portugal, Company C provides internal training to all its employees. It is managed by its Corporate University under the 70/20/10 Model, which is a fresh concept within the company that is still in the implementation phase. Company’s Corporate University aims to identify training needs (diagnostic phase), develop training plans and evaluate training. The diagnostic phase is based on performance evaluation, 360-degree feedback, and international guidelines (mandatory competencies that all employees must develop).

C’s Corporate University is composed by four schools that develop programs regarding the following competencies: technical, behavior, business and management, and leadership. These training programs are supported by “Training Champions”, who are employees of each line of service that work directly with the Human Capital Department on helping the development of training programs, by identifying competencies’ needs for each business area (assurance, advisory and tax).

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2. How many hours does the company spend on training per year, approximately?
Corporate University C provided 201 classroom courses and a total of approximately 38,000 hours⁹. However, there is an increasing tendency for eLearning and blended learning methods.

3. What is the training programs content/purpose?
Overall, Corporate University C focuses on providing training on technical skills and relationship skills, since the company considers these two areas the ones that most contribute to create a differentiator factor within the sector it operates. These training programs are taught by internal certificated instructors.

Company’s training programs are divided on the following stages:

- Initial programs that aim to welcome and integrate new employees (usually new hires) – it is composed by technical courses and behavior courses (company’s scope, procedures, methods, behaviors, culture, etc.).

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⁹ Corporate Responsibility Report, FY2012
• Programs along employees’ career that intent to develop technical competencies, behavior, business and management, through courses in Portugal or international. These courses are operationalized through eLearning, classroom, blended learning, conference calls and webex.

• Programs that include Master programs and Post Graduations, which evolves an evaluation of the employee’s needs.

• International programs that focus on sharing best practices, networking and information sharing.

Training Evaluation

4. What is the importance of training evaluation for the company?

☐ Not important
☐ Little importance
☐ Few importance
☐ Important

✓ Very important

☐ Crucial
☐ Does not apply/answer/know

5. Does the company evaluate training? If yes, how (levels10)?

The company evaluates training on the first three levels of the Kirkpatrick Model (satisfaction, learning and behavior). At level one, a questionnaire is performed in which participants assess the training program regarding the session, the instructors, etc.

Level two relates with eLearning courses - the participant has to perform a test/exam.

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10 Level 1 – Reaction
Level 2 – Learning
Level 3 – Behavior
Level 4 – Results
Level 5 – ROI
on LMS (Learning Management System\textsuperscript{11}) and reach at least 70\% to conclude the course.

At level three, behavior changes are assessed through two ways: a questionnaire, one year after the course, and informal observation at the workplace.

Level four is in progress since the company is developing indicators to measure the impact of training, which is the main focus of the company’s Corporate University for the next year.

**Evaluation Utilization**

6. **What is the importance of training evaluation utilization for the company?**
   
   - Not important
   - Little importance
   - Few importance
   - Important
   - Very important
   - Crucial
   - Does not apply/answer/know

7. **Does the company use training evaluation results? If yes, for what purposes?**

The company uses reaction results (level one) for improvements on the existing training programs, for example adapting the length and methodology of the program. Behavior results (level three) are used on the employee’s performance assessment.

**Learning Results Uses**

8. **What is the importance of learning assessment results for the company?**
   
   - Not important

\textsuperscript{11} This platform is suitable for the employee and its supervisor. It includes the past training programs and the current training plan.
9. Does the company use learning results (for example, test/exam scores)? If yes, how (criteria)?
The company applies a test/exam for eLearning courses, and the employee must reach at least 70% to be approved. If not, the employee repeats the test until reaches this percentage. Moreover, competencies are assessed informally at the workplace, through supervisor’s observation. Then, the results coming from this observation are included on the employee’s performance assessment.

10. What is the evaluation grade scale?
- 0 to 20
- 0 to 10
- 0 to 5
- No scale – participants only do the test/exam
- Other: percentage for eLearning exams (it is the only knowledge evaluation done in the company), in which the employee is approved when reaches at least 70%.

Specific Best Practices (national and international if applicable)

11. How does the company relate learning assessment and potential?
Training is related with career progression and performance evaluation, which is based on the Career Development Plan and the performance management process. This
process helps superiors to assess individual performance and give feedback regarding essential competencies, behaviors and values of the company (excellence, teamwork and leadership). Overall, this plan aims to create a coaching culture within the company based on regular face-to-face feedback meetings managed by coaches (employee managers). The employee development plan is done by the employee himself with the support of the coach, and it includes the employee’s own preferences and development choices.

12. What summarizes company’s best practices?

- 70/20/10 Model Implementation:

The creation of the Corporate University under the 70/20/10 Model aims to operationalize the company’s strategy and to transform the company in a learning organization. The company bets in learning by doing based on on-the-job training/experience (70%) for the development of new competencies and the acquisition of skills. Therefore, 20% of learning comes from others (peers, supervisor, library, platforms\textsuperscript{12}) and only 10% comes from formal training.

- Learning Technologies:

The company invests in tools, such as eLearning, webex, calls, mobile learning (pilot), to support self-training. It also aims to reduce costs and time spent on training.

\textsuperscript{12} The company has an “internal and international Facebook” where employees have access to news, can post opinions, start a debate, etc.
1.7. Company D Interview

Benchmark of Corporate Universities – Interview – Company D

Company D is a multinational corporation that develops, sells and licenses software, as well as supports computing products and services. Its business activity and global strategy are based on eight business areas: operating systems, hardware devices, applications and services, cloud and companies, “dynamics” business applications, R&D and strategic planning, operations management, and business management. (Company’s Website).

General Overview about Training

1. What is the training target of the company, in general?
The training programs are diversified and include international and national initiatives. Company D training programs covers from specific target, such as young graduates, talents, team managers, to all its internal employees.

2. How many hours does the company spend on training per year, approximately?
The time spent on classroom training sessions has been decreasing, as well as, the number of classroom sessions. Sessions are more concentrated and the company bet on eLearning and virtual methods to deliver courses. Additionally, the company increases the importance of pre-work before a session, which has also contributed to decrease the time spent on classroom training. Moreover, due to the daily workload, the company tends to provide specific training courses that effectively accomplish employee’s needs, which leads to a decrease on the time spent by employee in training courses.
3. What is the training programs content/purpose?

The company’s training programs are based on the company’s training catalog, which is “a comprehensive collection of Company D Learning resources, including online training, books, classroom training, exams, and more”\textsuperscript{13}. The Catalog is at the corporative level and so for Portugal, Company D chooses the courses based on the current needs. Overall, the company provides training on technical skills depending on the business area of the employee and her/his competency’ needs, as well as soft skills. The most relevant programs of the 2013 Company D Training Plan\textsuperscript{14} in Portugal are the following:

- **Playing to Win – Local Integrated Development Program** – aims to provide a common transversal mindset, attitudes and language in order to build a winning organization. It is a partnership between Company D and Nova School of Business and Economics and Conceito O2, based on four development topics: Positive Leadership/Positive Thinking, New Era (the company had shifted from sell software to sell devices and services), Teamwork & Collaboration, Customer & External Focus. The program has two targets: people managers (through the two-year People Managers Community Development Program) and all employees (through the Keyotes Program – two-hour sessions).

- **Readiness Program** – it is an online course that creates training plans suitable for the employee’s profile and function.

- **People Managers Community** – it is a communication platform that aims to promote employees’ development.

- **People Managers Training Programs** – Currently, Company D is developing

\textsuperscript{13} Company D Website
\textsuperscript{14} T&D Report (October 2013)
and renewing Managers Excellence Offerings and Employees Excellence Offerings. In summary, People Managers – Managers Excellence Offerings are related with understanding Company D priorities and annual HR processes; manage teams, time and resources; leadership; coaching competencies; tools to support employee’s development; hiring tools; change management; skills for communicating feedback. Additionally, Individual Contributors - Employees Excellence Offerings are related with cross-boundary collaboration; conversation competencies; leadership; decision making and problem solving; change; trust; how to provide a consistent and customized service to clients; influence strategy.

The training plan is wider diverse and also includes other programs such as extensive technical courses (that usually occur in the USA).

Training Evaluation

4. **What is the importance of training evaluation for the company?**

- □ Not important
- □ Little importance
- □ Few importance
- □ Important
- □ Very important
- □ Crucial

✓ **Does not apply/answer/know**

5. **Does the company evaluate training? If yes, how (levels$^{15}$)?**

In Portugal, the company evaluates training at level one, satisfaction, through a

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15 Level 1 – Reaction
Level 2 – Learning
Level 3 – Behavior
Level 4 – Results
Level 5 – ROI
questionnaire, in which it is assessed the content of the course, instructor, etc.

**Evaluation Utilization**

6. What is the importance of training evaluation utilization for the company?

- [ ] Not important
- [ ] Little importance
- [ ] Few importance
- [ ] Important
- [ ] Very important
- [ ] Crucial

✓ Does not apply/answer/know

7. Does the company use training evaluation results? If yes, for what purposes?

The results from level one (satisfaction), are used to change the Portuguese Training Catalogue every year. Depending on the level of satisfaction of employees regarding the training programs (and the employee’s needs), the company chooses other courses from the Corporative Catalogue.

**Learning Results Uses**

8. What is the importance of learning assessment results for the company?

- [ ] Not important
- [ ] Little importance
- [ ] Few importance
- [ ] Important
- [ ] Very important
- [ ] Crucial

✓ Does not apply/answer/know

9. Does the company use learning results (for example, test/exam scores)? If yes, how (criteria)?
Technical competencies in technology are related with a certification. In this specific case, the level of knowledge influences the certification, which is based on an exam done in the end of the course. Therefore, the results are taken into account for future opportunities (for example, projects) and for performance assessment.

Specific Best Practices (national and international if applicable)

10. How does the company relate training evaluation and learning results with employee development?
Training and Development aims to improve employee’s performance, preparing employees for future challenges. Therefore, performance results impacts employee’s career progression.

11. How does the company relate learning assessment and potential?
Company D has specific training programs for high potential talent employees, which are based on the concept of “Leaders Building Leaders”. Bench Program aims to support employee’s development through coaching and mentoring and it relies on on-the-job experiences, leadership engagement, networking and community, manager involvement, and development planning. The Responsible Leadership Program targets employees that are participating in the Bench Program for at least three years and it is related with leadership and citizenship.

12. Does the company have a training model (formal or informal)?
The company’s Professional Development Model is the 70/20/10 Model. This model states that 70% of employee’s learning comes from on-the-job experiences, 20% of learning comes from others (peers, mentor, teams), and only 10% comes from

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16 T&D Report (October 2013)
17 The mentor shares ideas with the employee, helps on specific tasks and shares topics according to employee’s future objectives.
training. Overall, the model highlights the importance of experience at the workplace, as well as, information sharing among employees and teams, as a complement to classroom training and online.

This model enables the employee to develop her/his career path according to its own objectives and expectation. It is up to the employee to individually prepare the professional development plan according to her/his competency’s needs in order to improve current performance, as well as, long-run career objectives.

13. What summarizes company’s best practices?
For company D, there are no standard career paths. Instead, there are multiple professional development options, which aim to retain talent, keep employees motivated and satisfied. At company D, employees are responsible for their own career and professional development, with the support of the manager and of tools and resources, such as the Career Guide. The company also provides a variety of training programs.

The company considers its Transversal Training as a best practice since it provides transversal knowledge to all employees. The largest part of this training is related to soft skills. Additionally, company D values as a best practice the fact that each department develops its own training and thus provides customized programs to employees. This is done by expertise teams with experience background: they identify the current needs in the field and develop its own training programs.

Overall, training is based on “learning by doing”. It refers to learn from on the job experiences, which is consistent to the Professional Development Model adopted by the company.

18 “Is a tool that describes careers across the company and provides visibility to those opportunities to help the employee manage own career.” (Company’s Website)
1.8. Company E Interview

Benchmark of Corporate Universities – Interview – Company E

Company E is a global telecommunications company that operates in the following segments within the telecommunications sector: fixed, mobile, multimedia, data and business solutions. (Company’s Website)

General Overview about Training

1. **What is the training target of the company, in general?**
Training to all its internal employees, which are around eleven thousand.

2. **How many hours does the company spend on training per year, approximately?**
   - **Year 2010:** average 41 hours per employee
   - **Year 2011:** average 50 hours per employee
   - **Year 2012:** average 33 hours per employee

By law, the average time spent on training per employee over three years is thirty five hours. Despite the decrease from 2011 to 2012, the company exceeded this value. The time spent on training over the years varies according to the training needs and also the economic context.

3. **What is the training programs content/purpose?**
The company provides training in technical skills and soft skills. Technical training represents the largest proportion. The training programs are in the following areas (values for 2012\(^{19}\)): technology (30%); codes, policies and procedures (20%); social responsibility and human rights (14%); information systems (9%); management (9%), academic (5%); and behavioral (4%).

\(^{19}\) 2012 Sustainability Report
The training programs aim to develop competencies in order to improve employee’s performance indicators. The programs are supported by classroom (85%), eLearning (13%), and blended learning (2%)\(^{20}\).

**Training Evaluation**

4. **What is the importance of training evaluation for the company?**
   - □ Not important
   - □ Little importance
   - □ Few importance
   - □ Important
   - □ Very important
   - ✔ Crucial
   - □ Does not apply/answer/known

5. **Does the company evaluate training? If yes, how (levels\(^{21}\))?**

Company E evaluates training courses at three levels: level one, satisfaction; level two, learning; and level three, change in behavior and impact.

At level one, satisfaction is assessed through a questionnaire in order to analyze the utility of the course and if its objectives were reached. This questionnaire assesses course content, instructors, facilities’ conditions, and contribution to employee’s development.

At level two, learning is assessed through two ways depending on the purpose of the course. One way is to do a test few days after the course. The other way is to assess three to six months after the course if there are behavior changes, which is done by the

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\(^{20}\) Values for 2012 from the 2012 Sustainability Report

\(^{21}\) Level 1 – Reaction

Level 2 – Learning

Level 3 – Behavior

Level 4 – Results

Level 5 – ROI
employee’s supervisor that assesses employee’s performance on the job.

At level three and four, it is assessed the impact of training on business results, which is a combination of transfer/change (linked with level two) and return. At this level, business KPIs and financial indicators are measured, such as response times in the commercial area, investment calculations (training costs plus salary according the number of days of the training), return (average salary times the percentage of participant’s that training had a positive impact on-the-job divided by performance), training investment per person (two years), career progression, performance evaluation. These indicators vary according to the nature of training and the relevance of the indicator for the business area affected.

**Evaluation Utilization**

6. **What is the importance of training evaluation utilization for the company?**
   - Not important
   - Little importance
   - Few importance
   - Important
   - Very important
   - Crucial
   - Does not apply/answer/know

7. **Does the company use training evaluation results? If yes, for what purposes?**
   
The results from level one are used to improve course content, facilities, and what is related with the training course. Level two results are used to analyze if the course is effective in developing employee’s skills and knowledge, as well as, to understand the course’s applicability in a real context within the company.
Level three results are used to perceive what the impact of training is on company’s business. However, it is extremely difficult to isolate the effect of training since there are other variables that explain the indicator. Therefore, the company tries to explain the impact of training through a global analysis of the three levels: after having the results from level three, the company analyzes the results from the previous levels (level one and level two) in order to confirm the trend on results. This means that the three levels are linked and when there are positive results on level one and level two, the results on level three tend to be positive. In summary, for company E, when the company is operating at level one and two, it is in fact operating at level three, and if the results are positive, it is concluded that there is impact.

Learning Results Uses

8. What is the importance of learning assessment results for the company?
   - Not important
   - Little importance
   - Few importance
   - Important
   - Very important
   - Crucial
   - Does not apply/answer-know

9. Does the company use learning results (for example, test/exam scores)? If yes, how (criteria)?

   The learning results (level two) are composed by two methods depending on the course:
   - Internal tests – the participant must reach a minimum of correct answers to be approved in the test. These results allow the company to analyze what
employees acquire the knowledge and skills of that specific course. Therefore, these results are used to conclude if the employee needs to repeat the course and what other methods/alternatives need to be used in order to guarantee that the employee acquire new competencies. For example, excel course is an eLearning course, in which in the end a test is performed. If the employee does not reach a certain minimum set by the company in the test, other alternatives are considered, such as a classroom course, for example, to ensure the employee acquire these skills. In summary, test results are used to understand the effectiveness of a course (it is not consider on employee’s performance assessment).

- Behavior changes assessment – the superior evaluates the participant at the workplace by assessing her/his behavior on the job. For example, after a teamwork course, is expected that the participant has acquired new behavior competencies. Since teamwork is a competency that is included on performance assessment, the results from it are taken into account in this case.

Additionally, the company uses external suppliers for specific training that needs to be certified. In order to receive the certification, the participants on the course do an exam in the end. Usually, the level of certification is a factor that influences the choice of an employee for a project.

**10. What is the evaluation grade scale?**

- 0 to 20
- 0 to 10
- 0 to 5
- No scale – participants only do the test/exam

✓ **Other:** percentage 0 - 100%
11. Who has access to the learning results (final scores)? Why?
The participant, her/his superior and the HR department. The score is available via Campus Online, which is an online platform that includes eLearning courses, training evaluation questionnaires (satisfaction – level one) and tests to assess the participant learning (level two).

Specific Best Practices (national and international if applicable)

12. How does the company relate training evaluation and learning results with employee development?
The results from tests are not related with performance assessment. It is the other way around: the results from performance assessment are linked with training in terms of identifying training needs.

Certifications influence the “employee value” in the market. The employee tends to be more prompted in the market depending on the level of certifications. Additionally, employee’s certifications are related with mobility; however not directly nor linear. Certifications are one variable that contributes to be selected to a project and it also influences employee’s mobility; however, there are other factors that are related to these topics.

13. How does the company relate learning assessment and potential?
Potential for development is within the talent management program: employees are identified from performance assessment results. Therefore, potential employees are integrated in an “advanced training”, which are educational programs financed by the company, such as MBAs, Masters.

Potential is assessed through an assessment center that includes team challenges, individual challenges, creativity challenges, individual interviews, peers assessment
about potential competencies. It aims to assess competencies such as communication, innovation, openness to change.

14. **What summarizes company’s best practices?**
The company fairly values evaluation in the real context. Employee’s competencies must be evaluated on the job since it is where employee’s performance can be watch in action. Additionally, the company evaluates training at beep levels, such as KPIs and financial indicators, in order to assess the impact of training on business results, which is considered a best practice in the training evaluation subject.
1.9. Company F Interview

Benchmark of Corporate Universities – Interview – Company F

Company F is a telecommunications company with global presence in more than thirty countries. The company focuses on innovation and client orientation. It provides the following services and products: mobile and fixed communications (services and tariffs), mobile banking, cloud, web, messenger, TV, and the Internet, etc. It invests on the convergence between the Internet, mobile and computer, in order to provide new opportunities to simplify clients’ daily life. (Company’s Website)

General Overview about Training

1. What is the training target of the company, in general?
In general, the company provides training to all its internal employees. Depending on the training objectives, the company also provides training to a specific group of employees if necessary. Additionally, training is defined and prepared for external partners and outsourcing, for example the Contact Centers. Moreover, the training is provided by external entities (20%) and online (80%). “There are no internal trainers in the company: classroom training is delivered by external partners (specialized suppliers and trainers from the outsourcing companies who deliver the service for Customer Operations)”

2. How many hours does the company spend on training per year, approximately?
   
   FY 10/11: Average 25.7 hours per employee
   
   FY 11/12: Average 27.1 hours per employee
   
   FY 12/13: Average 25.1 hours per employee

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3. What is the training programs content/purpose?

The courses objectives depend on the training needs. The main training areas are the following:\n
- Functional/Technical Skills – corporate functions, technology, commercial.
- Professional Skills – business skills (products, services, support technologies, systems and procedures), relationship skills, industry/customer knowledge.
- Leadership & Management – leading self, leading others, leading the organization.
- Compliance – policies, norms, code of conduct and legal requirements.

The training programs are operationalized through the following resources:\n
- eLearning – eLearning courses relates to business (products, services and technology), compliance (policies, code of conduct and legal requirements).
- Harvard Management Mentor – it refers to a portal with high quality learning and development resources (videos, tips, worksheets) for personal development topics: coaching, customer focus, business plan development.
- Company’s Academies – are programs organized by group functions for functional areas, which are available online, in classroom and in webinars.
- Specific Global or Local Programmes – are technical, management or behavior programs that aim to address specific needs.

Training Evaluation

4. What is the importance of training evaluation for the company?

☐ Not important
☐ Little importance

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5. Does the company evaluate training? If yes, how (levels\textsuperscript{25})?

Training evaluation depends on courses’ nature and objectives. The company evaluates training at three levels: level one, satisfaction/reaction; level two, learning; and level three, learning usage and impact.

At level one, the company evaluates all training courses except online ones, through an online questionnaire. Level two refers only to the courses that its objectives consist on the acquisition of knowledge and skills. The employee does a test in the end of the course and must reach at least 80% of correct answers in order to pass. At level three, the evaluation is performed for functional/technical training courses to specific groups. It consists on identifying and measuring operational indicators for these specific groups’ business activity, before and after the course. It may refer to the number of complaints, number of first call resolution, waiting service time, etc.

Evaluation Utilization

6. What is the importance of training evaluation utilization for the company?

- Not important
- Little importance
- Few importance
- Important

\textsuperscript{25} Level 1 – Reaction
Level 2 – Learning
Level 3 – Behavior
Level 4 – Results
Level 5 – ROI
7. Does the company use training evaluation results? If yes, for what purposes?

The use of training results depends on the course objectives and the training effectiveness: if the results improve employee’s effectiveness or development, the employee will be the main beneficiary. Besides, the company gains with employee’s motivation and effectiveness achieved.

At level one, Learning & Development Team is responsible for the development and implementation of the programs and follows instructors and participants closely. The satisfaction results are used to intervene with corrective actions, in order to adjust the program and its methodology to reach the set objectives.

At level two and three, in the case that the knowledge and skills provided by the training course are needed to the employee’s daily work, the competencies acquired must be reflected directly on employee’s performance.

Learning Results Uses

8. What is the importance of learning assessment results for the company?

- Not important
- Little importance
- Few importance

- Important
9. Does the company use learning results (for example, test/exam scores)? If yes, how (criteria)?
The results obtained allow the company to understand whether the training course was successfully performed or not. As mentioned above, a result below 80% requires repeating the course (eLearning test). In the case of certified training courses, a result below the set level implies that the employee gets no certification.

10. What is the evaluation grade scale?

☐ 0 to 20
☐ 0 to 10
☐ 0 to 5
☐ No scale – participants only do the test/exam

✔ Other: Percentage

11. Who has access to the learning results (final scores)? Why?
The employee has access to the results because he/she needs to know if the course was successfully concluded or if it has to be repeated. Additionally, the Learning & Development Team also knows the score in order to monitor the training results.

12. How does the company communicate the learning results (scores) to the supervisor?
The company does not communicate the results to the employee’s supervisor. This can happen only in the case that the employee did not pass the course. If needed, the front office team responsible reinforces the need to repeat the course. For specific population, Stores, Contact Centers and sales partners Supervisors receive the reports and monitor if all the target population completed the courses successfully.

Specific Best Practices (national and international if applicable)

13. How does the company relate training evaluation and learning results with
employee development?
The highly dynamic and competitive market, in which company F operates, presents the company with new opportunities and challenges every day that require the ability to adapt and constant innovate. This is only possible if the company tries to expand its employees’ knowledge and skills.

The company promotes a learning-oriented and self-development culture. The company provides to its employees broad and integrated opportunities to one’s development, which should contribute to the employee’s own personal desire to acquire knowledge and skills.

Personal development involves two important components. First, it includes the skill to take full advantage of the different experiences, resources and opportunities that the company provides. Second, one’s ambitions that influence the time and energy that the employee invests in her/his own professional growth.

For the company, personal and professional development is not restricted to training. There are several ways and learning sources, each with different levels of effectiveness in one’s development. The company provides equal access and opportunities of learning in the ways that best work for the employees. It includes: learning on the job (70%), which refers to on the job experiences such as changes in functions, participation in transversal projects, international experience, etc.; learning from others (20%), which consists on the interaction with other employees such as feedback from one’s superior, peers, coaching, discussion sessions, etc.; and formal training (10%), which refers to literature, courses, training programs, seminars, conferences, etc.

14. How does the company relate learning assessment and potential?
Potential assessment at company F integrates a set of criteria, in which knowledge assessment does not make part of. Rather, it is composed by specific indicators of
potential, past performance, experience, etc.

15. What summarizes company’s best practices?
Company F’s vision regarding training is “Making it simple for people to learn what they need to perform at their best, realize their potential and deliver Business Goals.”

In summary, the company encourages its employees to take responsibility for their own learning and development: provides access and opportunity to learn (70/20/10 Model), offers a range of formal and informal learning and innovative solutions, clarifies the needed skills, knowledge and behaviors, and regularly assess training.

1.10. Company G Interview

Benchmark of Corporate Universities – Interview – Company G

Company G is a Portuguese group from the energy sector that finds and extracts oil and natural gas, as well as, produces and delivers energy. The company has a training center that represents the evident investment in training and employee’s development.

General Overview about Training

1. What is the training target of the company, in general?

Company G provides training to all internal employees of the group in companies where G has majority ownership. Training is managed locally by four training technical.

2. How many hours does the company spend on training per year, approximately?

   Year 2010: 134 895 hours
   Year 2011: 141 235 hours
   Year 2012: 185 486 hours

The time spent on training in company G has been increasing over the last three years. (2012 Sustainability Report and Company Website)

3. What is the training programs content/purpose?

Company G provides training on technical competencies and behavior competencies in order to improve employee’s performance. Training programs depend on company’s business and its relevance.
The company has an annual training plan that includes: training courses on transversal issues such as culture, values, motivation, environment, quality, safety and health; and specialized conferences with a large variety of subjects relevant to the company.

In 2012, the company developed four training programs\(^{27}\) independently from the annual training plan, which are the following:

- A program that focuses on basic skills for managers - it refers to skills of leadership, team management and communication, as well as, the cross-departmental understanding.

- Intern-department training - it is a program that focuses on in-depth knowledge of the company and on developing behavior competencies of teamwork, communication and interpersonal skills.

- A program for employees in the commercial area that aims to enhance the business skills of the sales force.

- A program for company’s operators that focuses on developing technical skills.

Moreover, the company also provides advance training through company’s training academy that consists on a training and assessment center. It involves customized and high quality courses and focuses on developing the know-how of high potential employee and superior managers. The academy aims to promote and manage integrated and innovative training projects that aim developing management skills, as well as technical and behavior competencies, based on partnerships with leading universities in Portugal. Company’s academy focus on maximizing participant’s potential through four main programs of advanced training, which are the following: management advanced training; advanced training on refining, petrochemical and chemical;

\(^{27}\) Company Website
advanced training on geoengineering of carbonate containers; and commercial advanced training.

Training Evaluation

4. What is the importance of training evaluation for the company?
   - Not important
   - Little importance
   - Few importance
   - Important
   - Very important
   - Crucial
   - Does not apply/answer/know

5. Does the company evaluate training? If yes, how (levels28)?
   Company G evaluates training at three levels of the Kirkpatrick Model: level one, reaction; level two, learning; level three, behavior. Additionally, the company assesses training effectiveness, as well as, measures the return of training - ROI.

Evaluation Utilization

6. What is the importance of training evaluation utilization for the company?
   - Not important
   - Little importance
   - Few importance
   - Important
   - Very important
   - Crucial

28 Level 1 – Reaction
Level 2 – Learning
Level 3 – Behavior
Level 4 – Results
Level 5 – ROI
7. **Does the company use training evaluation results? If yes, for what purposes?**

Regarding level one, the company uses the results from reaction evaluation for improving training programs content and suppliers’ quality, to change the methods used and so on. These results can also contribute to generate a new course.

At level two, learning is assessed mainly on the academy. The results influence the progression of the participant on moving to the next level of the advanced training course. Also, these results from the exams are part of the promotion system (in case of draws) and mobility, but are not the only criteria taken into account in these decisions. However, there is no official guideline designed.

Regarding level three, the company assesses behavior changes (behavior measured before and after the course) on the following cases: defensive driving and individual objectives. Individual objectives are created by employee’s superior: the superior recognizes that the employee needs to develop a competency, then define objectives to be reached by the employee, and finally, the employee goes to training courses related to that competency.

Additionally, the company evaluates training effectiveness through an automatic system: it generates a positive or negative gap taking into account past and current performance. A positive gap means the employee improve performance, the opposite means the employee needs training. The results from the gap are first analyzed by employee’s superior who decides whether it corresponds to the reality and whether the employee is considered in training courses.

Finally, at the last level, ROI measures the financial impact of the human capital policy of the company, in which training investment is integrated as well as the amount
invested on social benefits and salary. Thus, it represents how much the company generated for each euro invested on the employee.

**Learning Results Uses**

8. **What is the importance of learning assessment results for the company?**
   - □ Not important
   - □ Little importance
   - □ Few importance
   - □ Important
   - ✔ Very important
   - □ Crucial
   - □ Does not apply/answer/know

9. **Does the company use learning results (for example, test/exam scores)? If yes, how (criteria)?**
   As mentioned above, the learning evaluation results are used on next level approval within the course, promotion (in case of draws) and mobility. However, there is no official guideline designed.

10. **What is the evaluation grade scale?**
    The scale used depends on the course and are the following:
    - ✔ 0 to 20
    - ✔ 0 to 10
    - □ 0 to 5
    - □ No scale – participants only do the test/exam
    - ✔ Other: percentage 0-100%

11. **Who has access to the learning results (final scores)? Why?**
    The employee and the director of area.
12. How does the company communicate the learning results (scores) to the supervisor?
The director of area shares the results with the superior of the employee.

Specific Best Practices (national and international if applicable)

13. How does the company relate training evaluation and learning results with employee development?
The company is under a legal restriction that is mandatory to provide at least 35 hours of training per employee per year in order to ensure the proper functioning.
Moreover, in the past, there were some cases in which the results from the advanced training (academy) were used on mobility. These cases correspond to employees from management area that revealed potential on engineering and are recommended to move to company’s refineries.

14. How does the company relate learning assessment and potential?
The relation is the opposite: potential is assessed and the results from that assessment influence the access to advance training. The potential assessment is performed by an external entity (consulting company) in order to avoid interferences.

15. Does the company have a training model (formal or informal)?
There is no training model designed for the company. The company used mainly traditional training, in which the company provides classroom training with dynamic technologies. Additionally, company G also resorts to eLearning platform for “welcome programs” related with courses to learn about company’s business units.

16. What summarizes company’s best practices?
Company G recognizes the academy as a best practice since it invests in advanced
customized training for high potential employees.

Moreover, effectiveness evaluation done automatic allows the company to quickly allocate employees to training programs, in order to improve the gap verified on performance evaluation.

The company evaluates training in three levels of the Kirkpatrick Model (reaction, learning and behavior) and also uses ROI, which is considered a general best practice in training evaluation.
1.11. Company H Interview

Benchmark of Corporate Universities – Interview – Company H

Company H is a “global management consulting firm that works with leaders to transform strategy into reality”\textsuperscript{29}. In summary, the company works not only in management, but also in human resources. The later aims to: provide support to Corporate Universities in terms of its structure, processes, mission, vision and model; develop specific training programs, support training needs.

General Overview about Training

1. What is the training target of the company, in general?
Company H provides training to all its internal employees.

2. How many hours does the company spend on training per year, approximately?
The time spent on internal training depends on the company’s needs. For the last 3 years, the time spent on training has been increasing due to the increase on the number of new employees. This is due to the fact that every new employee in the company has to attend an initial mandatory training program and a strong component of on job training.

3. What is the training programs content/purpose?
The company’s training programs are grouped in two major purposes, which are the following:

- On Boarding are training programs for new recruits. It refers to company’s culture, methods, values and behaviors.
- The company also has training programs that intend to improve and develop

\textsuperscript{29} Company’s Website
technical competencies and behaviors, which depends on the employee’s career. Every employee has a Learning Map that structures its own career path and includes several levels and the needed competencies for each level. In order to move to the next level, the employee has to increase its knowledge and skills, through training and projects.

Training Evaluation

4. What is the importance of training evaluation for the company?

- Not important
- Little importance
- Few importance
- Important

✔ Very important

- Crucial
- Does not apply/answer/know

5. Does the company evaluate training? If yes, how (levels\(^{30}\))?

Yes, because training has a great impact on the employee’s career, as well as, on the company, since the teams for the company’s projects are chosen based on the consultant’s level. The company evaluates training at the first three levels of the Kirkpatrick Model: reaction, learning and behavior evaluation.

At level one, the company assesses the participants’ satisfaction at the end of every training course.

At level two, company H evaluates the knowledge and skills acquired by the employees in the end of the course through a test/exam. Therefore, the level of knowledge of the

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\(^{30}\) Level 1 – Reaction
Level 2 – Learning
Level 3 – Behavior
Level 4 – Results
Level 5 – ROI

How training evaluation can be used to potentiate employee development in an organization
employee is certified based on the test score and on the service line leader’s assessment. At level three, the superior or service line leader is the responsible for reviewing and assessing the level of knowledge of the employee and behavioral changes at the workplace and mainly in a project, through an informal observation.

**Evaluation Utilization**

6. **What is the importance of training evaluation utilization for the company?**
   - [ ] Not important
   - [ ] Little importance
   - [ ] Few importance
   - [ ] Important
   - [ ] Very important

   ✓ **Crucial**

   - [ ] Does not apply/answer/know

7. **Does the company use training evaluation results? If yes, for what purposes?**
The company uses the satisfaction results (level one) for improvement of existing training programs. The learning and behavior results (level two and three) are used for deciding which consultant is allocated to a new project.

**Learning Results Uses**

8. **What is the importance of learning assessment results for the company?**
   - [ ] Not important
   - [ ] Little importance
   - [ ] Few importance
   - [ ] Important
   - [ ] Very important

   ✓ **Crucial**

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31 Service Line Leader is an expert responsible for the practices of her/his business area.
9. Does the company use learning results (for example, test/exam scores)? If yes, how (criteria)?
The test score is a component of the decision of the staffing manager/service line leader regarding the allocation of an employee to a project. The test score is also a minimum requirement to employee development and career progression.

10. What is the evaluation grade scale?
- 0 to 20
- 0 to 10
- 0 to 5
- No scale – participants only do the test/exam
- **Other**: Percentage: 0% – 100%

11. Who has access to the learning results (final scores)? Why?
The employee, his/her supervisor and the service line leader.

Specific Best Practices (national and international if applicable)

12. How does the company relate training evaluation and learning results with employee development?
The test score is a minimum requirement for career progression.

13. What summarizes company’s best practices?
The company considers that employees acquire most of his/her knowledge and new skills through on-the-job training (80%), and the rest through classroom training, eLearning and blended learning (20%).
### 1.12. Training evaluation levels

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CU: Corporate University  
NA: Not applicable

### 1.13. Types of Evaluation Utilization

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CU: Corporate University  
NA: Not applicable
2. Study II Appendices

2.1. Sensibility

2.1.1. Scores

- IEB

![IEB Histogram](image1)

- IEB SE

![IEB SE Histogram](image2)
How training evaluation can be used to potentiate employee development in an organization

- IBF I

![Histogram for IBF I](image)

- IBF II

![Histogram for IBF II](image)
How training evaluation can be used to potentiate employee development in an organization

- **RC**

![Histogram for RC]

- **SVMO**

![Histogram for SVMO]
• OC

![Histogram for OC]

- Mean = 24
- Std Dev = 276
- N = 625

• TW

![Histogram for TW]

- Mean = 671
- Std Dev = 261
- N = 254
• RO

Histogram

- Mean = 38
- Std Dev = .286
- N = 428

• CO

Histogram

- Mean = 37
- Std Dev = .253
- N = 629
How training evaluation can be used to potentiate employee development in an organization

- ICI

- COIE
• DTL

2.1.3. Individual Performance
2.2. Factorial Analysis

- Non-leaders

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How training evaluation can be used to potentiate employee development in an organization

- Leaders

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<th>Goodness-of-fit Test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>30.054</td>
</tr>
<tr>
<td>df</td>
<td>14</td>
</tr>
<tr>
<td>Sig.</td>
<td>.008</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communalities</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMVO</td>
<td>.381</td>
<td>.736</td>
</tr>
<tr>
<td>OC</td>
<td>.279</td>
<td>.253</td>
</tr>
<tr>
<td>RO</td>
<td>.341</td>
<td>.437</td>
</tr>
<tr>
<td>CO</td>
<td>.327</td>
<td>.320</td>
</tr>
<tr>
<td>ICI</td>
<td>.460</td>
<td>.548</td>
</tr>
<tr>
<td>COIE</td>
<td>.300</td>
<td>.323</td>
</tr>
<tr>
<td>DTL</td>
<td>.392</td>
<td>.626</td>
</tr>
</tbody>
</table>

Scree Plot
### How training evaluation can be used to potentiate employee development in an organization

#### Factor Matrix

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMVO</td>
<td>.711</td>
<td>-.480</td>
</tr>
<tr>
<td>OC</td>
<td>.502</td>
<td>-.029</td>
</tr>
<tr>
<td>RO</td>
<td>.541</td>
<td>.379</td>
</tr>
<tr>
<td>CO</td>
<td>.538</td>
<td>.177</td>
</tr>
<tr>
<td>ICI</td>
<td>.740</td>
<td>.029</td>
</tr>
<tr>
<td>COIE</td>
<td>.561</td>
<td>-.093</td>
</tr>
<tr>
<td>DTL</td>
<td>.575</td>
<td>.544</td>
</tr>
</tbody>
</table>

#### Goodness-of-fit Test

<table>
<thead>
<tr>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.539</td>
<td>8</td>
<td>.383</td>
</tr>
</tbody>
</table>

#### Rotated Factor Matrix

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMVO</td>
<td>.856</td>
<td>.048</td>
</tr>
<tr>
<td>OC</td>
<td>.417</td>
<td>.281</td>
</tr>
<tr>
<td>RO</td>
<td>.201</td>
<td>.629</td>
</tr>
<tr>
<td>CO</td>
<td>.321</td>
<td>.466</td>
</tr>
<tr>
<td>ICI</td>
<td>.571</td>
<td>.471</td>
</tr>
<tr>
<td>COIE</td>
<td>.502</td>
<td>.266</td>
</tr>
<tr>
<td>DTL</td>
<td>.128</td>
<td>.781</td>
</tr>
</tbody>
</table>

#### 2.3. Gender

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feminine</td>
<td>222</td>
<td>35.4</td>
</tr>
<tr>
<td>Masculine</td>
<td>406</td>
<td>64.6</td>
</tr>
<tr>
<td>Total</td>
<td>628</td>
<td>100</td>
</tr>
</tbody>
</table>

#### 2.4. Age

<table>
<thead>
<tr>
<th>Years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>36.93</td>
</tr>
<tr>
<td>Median</td>
<td>35</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>8.787</td>
</tr>
<tr>
<td>Variance</td>
<td>77.21</td>
</tr>
<tr>
<td>Minimum</td>
<td>24</td>
</tr>
<tr>
<td>Maximum</td>
<td>61</td>
</tr>
<tr>
<td>Total</td>
<td>628</td>
</tr>
</tbody>
</table>
2.5. Academic Background

<table>
<thead>
<tr>
<th>Field</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>410</td>
<td>65.3%</td>
</tr>
<tr>
<td>Economics, Management and Accounting</td>
<td>170</td>
<td>27.1%</td>
</tr>
<tr>
<td>Law, Social Sciences and Humanities</td>
<td>48</td>
<td>7.6%</td>
</tr>
<tr>
<td>Total</td>
<td>628</td>
<td>100%</td>
</tr>
</tbody>
</table>

2.6. Degree

2.7. Working Time

<table>
<thead>
<tr>
<th>Years</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Deviation</th>
<th>Variance</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>0.2</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>5.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor</td>
<td>71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Graduation</td>
<td>21.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters/MBA</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.8. Segment

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert</td>
<td>45.3</td>
</tr>
<tr>
<td>Managers and Senior Expert</td>
<td>49.9</td>
</tr>
<tr>
<td>High Direction and Direction</td>
<td>4.8</td>
</tr>
</tbody>
</table>
2.9. Impact of Potential Competencies on Individual Performance – H3

As a further research, it is examined the impact of potential competencies on individual performance, using correlation matrix and multiple regression analysis. From the correlation matrix below, it can be concluded that the eight potential competencies are highly correlated with individual performance, for Sig.< .001. However, it must be taken into account the fact that 20% of potential competencies are included on the variable individual performance.

<table>
<thead>
<tr>
<th></th>
<th>SVMO</th>
<th>OC</th>
<th>TW</th>
<th>RO</th>
<th>CO</th>
<th>ICI</th>
<th>COIE</th>
<th>DTL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.244</td>
<td>.356</td>
<td>.267</td>
<td>.296</td>
<td>.286</td>
<td>.377</td>
<td>.393</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>628</td>
<td>628</td>
<td>554</td>
<td>628</td>
<td>628</td>
<td>628</td>
<td>74</td>
</tr>
</tbody>
</table>

Moreover, a multiple regression analysis is performed. Since employees are evaluated either in Teamwork (TW) or Development and Team Leadership (DTL). It is performed two analyses, one for non-leaders and other for leaders, respectively. Therefore, it is considered a total of seven potential competencies for both analyses.

It must be considered that multiple regression analysis assumes that independent variables are not correlated among them, which means that they are independently. In
this case, since they are not, multiple regression analysis takes into account the other variables, and so it must be considered a multicollinearity effect.

- **Non-leaders**

Concerning the non-leaders, R Square is 0.231 for a significance level of .001, which means that 23% of the variation in individual performance can be explained by Strategic Vision and Market Orientation, Organizational Commitment, Teamwork, Results Oriented, Change Openness, Initiative and Continuous Improvement and Client Orientation External and Internal.

### Multiple Regression Model (Non-leader)

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Predictors: (Constant), SMVO, OC, TW, RO, CO, ICI, COIE</th>
<th>Dependent Variable: Individual Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>.480</td>
<td>0.231</td>
<td>0.221</td>
<td>4.14245</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Moreover, from the table below, it can be analyzed which and how potential competencies impact individual performance. In general, the equation that describes the data is $Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_n x_n$. For the non-leaders the equation is the following, based on the table below:

$$\text{Individual Performance} = 103.78 + 0.15 \text{OC} + 0.16 \text{ICI} + 0.22 \text{COIE}$$

### Coefficients (Non-leaders)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>103.779</td>
<td>0.407</td>
<td>255.221</td>
<td>.000</td>
</tr>
<tr>
<td>Strategic Vision and Market Orientation</td>
<td>-0.327</td>
<td>0.8</td>
<td>-0.018</td>
<td>-0.409 0.683</td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>2.412</td>
<td>0.761</td>
<td>3.171</td>
<td>0.002</td>
</tr>
<tr>
<td>Teamwork</td>
<td>0.37</td>
<td>0.741</td>
<td>0.022</td>
<td>0.499 0.618</td>
</tr>
<tr>
<td>Results Oriented</td>
<td>0.658</td>
<td>0.723</td>
<td>0.041</td>
<td>0.909 0.364</td>
</tr>
<tr>
<td>Change Openness</td>
<td>1.482</td>
<td>0.779</td>
<td>1.901</td>
<td>0.058</td>
</tr>
<tr>
<td>Initiative and Continuous Improvement</td>
<td>2.45</td>
<td>0.747</td>
<td>3.282</td>
<td>0.001</td>
</tr>
<tr>
<td>Client Orientation Intern and Extern</td>
<td>3.622</td>
<td>0.771</td>
<td>4.696</td>
<td>.000</td>
</tr>
</tbody>
</table>

Dependent Variable: Individual Performance

For example, if the employee increases 1 point of his/her commitment to the company (OC), employee’s performance will increase .15, with the other variables remaining constant. Based on this model, if the company invests on improving Organizational Commitment, Initiative and Continuous Improvement and Client Orientation External...
and Internal for the non-leaders, it will have a positive impact on employee’s performance.

- **Leaders**

For the leaders, R Square is 0.417 for a significance level of .001, which means that 42% of the variation in individual performance can be explained by Strategic Vision and Market Orientation, Organizational Commitment, Results Oriented, Change Openness, Initiative and Continuous Improvement, Client Orientation External and Internal and Development and Team Leadership.

### Multiple Regression Model (Leader)

<table>
<thead>
<tr>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.417</td>
<td>0.355</td>
<td>2.60396</td>
</tr>
</tbody>
</table>

For the leaders the equation is the following, based on the table below:

\[
\text{Individual Performance} = 104.70 + 0.25\text{SMVO} + 0.29\text{ICI}
\]

### Coefficients (Leaders)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>104.694</td>
<td>0.976</td>
<td>107.25</td>
<td>.000</td>
</tr>
<tr>
<td>Strategic Vision and Market Orientation</td>
<td>3.59</td>
<td>1.713</td>
<td>2.096</td>
<td>.04</td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>2.249</td>
<td>1.72</td>
<td>1.308</td>
<td>.195</td>
</tr>
<tr>
<td>Results Oriented</td>
<td>1.556</td>
<td>1.616</td>
<td>0.963</td>
<td>0.339</td>
</tr>
<tr>
<td>Change Openness</td>
<td>0.829</td>
<td>1.894</td>
<td>0.438</td>
<td>0.663</td>
</tr>
<tr>
<td>Initiative and Continuous Improvement</td>
<td>4.418</td>
<td>1.955</td>
<td>2.259</td>
<td>0.027</td>
</tr>
<tr>
<td>Client Orientation Intern and Extern</td>
<td>-1.638</td>
<td>1.761</td>
<td>-0.93</td>
<td>0.356</td>
</tr>
<tr>
<td>Development and Team Leadership</td>
<td>2.235</td>
<td>1.951</td>
<td>1.146</td>
<td>0.256</td>
</tr>
</tbody>
</table>

Dependent Variable: Individual Performance

For instance, if the employee increases 1 point in Strategic Vision and Market Orientation, employee’s performance will increase .25, with the other variables remaining constant. If the company invests on Strategic Vision and Market Orientation and Initiative and Continuous Improvement, it will have a positive impact on employee’s performance, based on this model.