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Understanding and representation of organizational training programs and their evaluation

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Abstract: The evaluation of the organizational training is a necessary strategy to guarantee the quality of the training activities in organizations. This research had as an initial objective the development of the first phase of a project funded by the EIT Raw Materials in the "Call for KAVA Education projects". It officially started on January 2019. The main aim of this research was to define a training program for workers of a specific industrial sector and to evaluate the impact of the skill acquisition of workers through the training program. This paper presents the initial part of the project, the authors were part of the team at that stage. This phase was helpful to obtain the resulting conceptual model from the analysis of the variables involved in an effective learning process. The research tool used for variable identification were three Group Model Building (GMB) sessions with the partners of the project. The resulting model of this paper was helpful to represent through Systems Thinking the phases of a learning process and its evaluation.

Key words: organizational training, training, training evaluation, training program, Group Model Building, Systems Thinking.

1. Introduction

Human intangible resources are essential, as they fit perfectly the necessary conditions to generate competitive advantage.

These resources are valuable, scarce, and difficult to be imitated or replaced. The training processes within this human based paradigm are considered key, as the evolution of the company on its own could devalue the worker competencies. Frequently, the competencies that generated competitive advantage in the past, are not useful tools in the present to solve the current necessities of the organization.

Consequently, knowledge and skills of workers are devalued, and it is necessary to apply human resource management policies to ensure the durability of human labour in the company. This durability which is dependent on factors such as experience, skills, abilities, or capacity to adapt are the elements that bring to the company the sustainable competitive advantage necessary to be successful (del Valle and Castillo, 2005).

As a result, training must be understood as a vital part for the definition of their organization rather than a function or area of the organization (Sarramona et al., 1994); in addition, this definition must be related to the rest of the departments for the development and success of the organization (Gasalla, 2003).

Thus, the final purpose of training is to empower the individual to conduct properly an specific task or work resulting from a technological change, to look for new ways of organizing, new conditions,

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new tasks to do or to delete the existent deficiencies. Acquisition of new knowledge, tools and techniques is an alive activity that must be feed continuously during the training programs (Bassi et al., 2002).

Organizations need a set of methods to canalize and transfer the expected knowledge for the development of their work. In this way, workers will be able to develop their work in an efficient and profitable way. Organizations may turn training into a constant and integrated habit in the daily activities of the workers. As a result, training and work must be merged rather than compatible (del Valle and Castillo, 2005).

Due to the impact of training programs for the competitiveness of the organizations, it could be stated that the main aim of this research was to analyse and represent using Systems Thinking philosophy, the process of evaluation of training programs to define them in a more effective and profitable way.

2. Objective

The objective of the evaluation of training programs, as a generic activity, is to give value to learning, and its outcome as a whole process. This objective is the factor that promotes the selection of one type of evaluation or another.

The functions and objectives of an evaluation process could be different. These functions are connected to the understanding and meaning of the learning process to be analysed, to the agents that are going to learn the skills needed, and to the role this learning process acquires for the society or the institution.

Thus, for this research the main aim is to analyse and represent using Systems Thinking, the process of evaluation of training programs to define them in a more effective and profitable way. Systems Thinking is defined as a skill set to better understand the deep roots of complex behaviours to better predict them, and ultimately, adjust their outcomes. Systems Thinking can be viewed as a system, a system of thinking about systems. And systems thinking consists of three kinds of things: elements (characteristics), interconnections (the way these characteristics relate to/or feedback into each other), and a function or purpose. Though not all systems have an obvious goal or objective, systems thinking does (Arnold and Wade, 2015). After the analysis of this paradigm, it could be stated that the specific objectives of this research are:

1. **Identification of the connection** between the variables that represent the phases of the learning process, and the evaluation of the process, using a conceptual model.
2. **Representation of the connection** between the learning process and the phases needed for evaluation of the process using Systems Thinking.

3. Methodology

The methodology followed for the definition of the model was focused on three main steps: i) literature review and identification of the challenge to be addressed, ii), identification of significant variables, and iii) definition of the conceptual model as a final result.

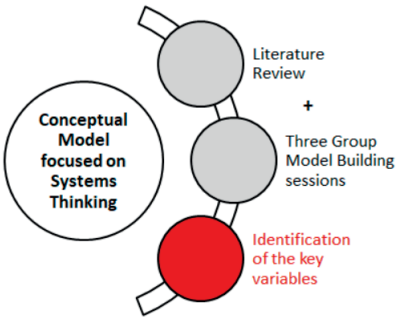

Figure 1. Methodology followed in this study.

3.1. Literature review and identification of the challenge to be addressed

Organizational training is one of the most important human resource strategies that organizations are dealing with. In such a current changing and competitive environment, training becomes a factor of excellence and a key to obtain successful organizations (Herrero, 2000).

In recent years, organizations are investing importantly in training programs. However, they are not investing in a function directly connected to these programs to guarantee their quality: training evaluation.

Training evaluation in the organizations could be defined as "the analysis of the total value of a system, a training program, or a training course from both financial and social perspectives" (Kenney-Donnelly, 1976; Aragón et al., 2003).

The evaluation of the impact and profitability of training is one of the modalities of evaluation of the training that occurs in organizations. The impact of training is understood as the repercussions that carrying out training actions entails for the organization, in terms of response to the training needs, of solving problems, and contributing to the achievement of strategic objectives that the organization has defined. Thus, the impact of training is based on the changes resulted from the learning and the transfer to the workplace generated in both, the department or area of the trained person, and the whole organization (Herrero, 2000; Aragón et al., 2003).

As a systematic process for developing needed workplace knowledge and expertise, instructional systems design requires an evaluation component to determine if the training program achieved its intended goal—if it did what it purported to do. However, evaluation, the last phase of the ADDIE (analysis, design, develop, implement, evaluate) model, is often overlooked when organizations create and implement training programs. Strictly speaking, the larger view of evaluation may not be treated as a separate phase during the process. It is indeed an ongoing effort throughout all phases of the ADDIE process (Hannum & Hansen, 1989; Wang & Wilcox, 2006) and culminating at the last phase. A number of reasons have been noted for organizations failing to conduct systematic evaluations. First, many training professionals either do not believe in evaluation or do not possess the mind-set necessary to conduct evaluation (Swanson, 2005). Others do not wish to evaluate their training programs because of the lack of confidence in whether their programs add value to, or have impact on organizations (Spitzer, 1999). Lack of evaluation in training was also attributed to the lack of resources and expertise, as well as lack of an organization culture that supports such efforts (Desimone et al., 2002; Moller, Benscoter, & Rohrer-Murphy, 2000). Even for limited efforts in training evaluation, most are retrospective in nature (Brown & Gerhardt, 2002; Wang & Wang, 2005). A study of a group of instructional design practitioners indicated that 89.5% of those conduct end-of-course evaluation, 71% evaluate learning; however, only 44% use acceptable techniques for measuring achievement. Yet merely 20% of those surveyed correctly identified methods for results evaluation (Moller & Mallin, 1996; Wang and Wilcox, 2006). Brown & Gerhardt (2002) concluded that companies expend even less effort in evaluating the instructional design process (Nadler & Nadler, 2012; Wang & Wilcox, 2006).

The success of training depends on the correct execution of all steps of the process: previous analysis of training needs, development and implementation of an adequate training plan and evaluation (Pineda, 1995: 33; Gómez-Mejía et al., 1996: 253; Solé & Mirabet, 1997: 35, 63; Aragón et al., 2003).

However, despite the significance of both the training needs analysis, which influences the development, application and evaluation of training (McGehee & Thayer, 1961; Agnaia, 1996; Gray & Hall, 1997; Al-Khayyat, 1998; Legare, 1999; Dickenson & Blundell, 2000; Holton, 2000; Selmer, 2000) and the plan development and implementation stage where the training characteristics are established and put into practice (Buckley & Caple, 1991; Goldstein, 1993; Foot & Hook, 1996; Bee & Bee, 1997; Frazis et al., 1998, 2000), they are not studied enough to ensure the success. The model proposed in this paper goes into the evaluation of training in greater depth because this stage is the least studied of the whole process, following the objective pursued by Aragón et al. (2003).

3.1.1. Training evaluation models

The existing literature proposes different models for carrying out training evaluation (Kirkpatrick, 1997; Kirkpatrick & Kirkpatrick, 2016; Phillips & Philips, 2016; Hamblin, 1974; Tannenbaum & Woods, 1992; Kaufman & Keller, 1994; Holton, 1996; Pineda, 1998). The one that Kirkpatrick developed at the end of the 1950s, called the 'Model of Four Levels' or 'Kirkpatrick's Model, can be highlighted. This is the most widely used by organizations and the most widely referenced in studies about this subject due to its simple and practical ideas (Plant & Ryan, 1992; Oberman, 1996; Alliger et al., 1997; Phillips & Philips, 2016; O'Neill, 1998; Aragón et al., 2003).

Training evaluation is the measurement of a training program's success or failure with regard to content and design, changes in learners, and organizational payoffs. The evaluation techniques used to assess these depend on the evaluation model chosen, as four different models have been proposed. The first

model, Kirkpatrick's fourdimensional measurement typology (i.e., reactions, learning, behavior, results), is perhaps the simplest method for understanding training evaluation and the most frequently cited technique. In this model, learning is measured during training and refers to attitudinal, cognitive, and behavioral learning. Behavior refers to on-the-job performance and, thus, is measured after training. Additionally, reactions to training are related to learning, learning is related to behavior, and behavior is related to results (Alvarez et al., 2004).

In the second model, Tannenbaum et al. (1993) expanded on Kirkpatrick's typology by adding posttraining attitudes and dividing behavior into two outcomes for evaluation: training performance and transfer performance. In their model, reactions to training and posttraining attitudes are not related to any other target of evaluation. However, learning is related to training performance, training performance is related to transfer performance, and transfer performance is related to results (Philips, 2012; Álvarez et al., 2004).

In the third evaluation strategy, Holton (1996) included three evaluation targets: learning, transfer, and results. Reactions are not a part of Holton's model because reactions are not considered a primary outcome of training; rather, reactions are defined as a mediating and/or moderating variable between trainees' motivation to learn and actual learning. In this model, learning is related to transfer and transfer is related to results. In addition, Holton argued for an integration of evaluation and effectiveness. As a result, in his model particular effectiveness variables are outlined as important for measurement when evaluating training outcomes (Álvarez et al., 2004).

The fourth and final evaluation strategy was provided by Kraiger (2002). This model emphasizes three multidimensional target areas for evaluation: training content and design (i.e., design, delivery, and validity of training), changes in learners (i.e., affective, cognitive, and behavioral) and organizational payoffs (i.e., transfer climate, job performance, and results). Reactions are considered a measurement technique for determining how effective training content and design were for the tasks to be learned. Kraiger asserted that reaction measures are not related to changes in learners or organizational payoffs but that changes in learners are related to organizational payoffs (Álvarez et al., 2004).

3.2. Definition of the conceptual model

Three Group Model Building (GMB) sessions were developed for the definition of the conceptual model. GMB is a form of causal modelling based on systems thinking. Its main strength is its insistence on feedback loops. The different structures within an organization are defined through variables and causal relationships (Hoppenbrouwers and Rouwette, 2013). Based on this logic, the resulting model of this study has four main groups: i) assessment typology, ii) assessment impact, iii) striker, and iv) initial diagnosis assessment.

3.2.1. Variable Selection

The inputs used for the selection of the variables that compose the conceptual model were two: i) variables identified in the literature review, and ii) variables identified through the GMB sessions.

In the following Table 1 are shown the narratives and cycles identified in the GMB sessions. The narratives highlighted in red refer to the ones that were repeated in the three sessions, so they were considered relevant. Moreover, the colour of the four circles surrounding them corresponds to the cycles of our final conceptual model. The variable surrounded by a blue circle define the narrative behind the "initial diagnosis assessment" feedback loop of the final conceptual model. The variable surrounded by a green circle define the narrative behind the "striker" feedback loop of the final conceptual model and taken from the GMB session. The variable surrounded by a black circle defines the narrative behind the "assessment typology" feedback loop of the final conceptual model and taken from the GMB session. Finally, the variables surrounded by a red circle defines the narrative behind the "assessment impact". This coloured circles will be used for the trazability of the identification of the final feedback loops in both Table 1, and Image 1. Moreover, explanation of each of the variables mentioned in the GMS sessions and included in the table and the text is presented in Appendix I.

Consequently, it could be said that the most relevant narratives and feedback loops extracted from the GMB sessions were: i) identification of real learning needs according to industrial needs, ii) stakeholder satisfaction, iii) learning engagement, iv) design of the course and methodology, and v) willingness of the learner.

Table 1. Narratives identified in the GMB sessions and their linkage to the final conceptual model.

	1st GMB	2nd GMB	3rd GMB
Identification of real learning needs according to industrial needs			
Duration of the course			
Abilities of the experts for knowledge transfer			
Interactive tools			
Dynamicity of the courses			
Stakeholder satisfaction			
Time management (working/learning)			
Contents for the courses			
Accessibility of the learner to the course			
Learning Engagement			
Balance theory and practical part			
Knowledge transfer			
Knowledge retention			
Pedagogical objectives			
Company policies			
Market evolution			
Willingness of the learner			
Selection of the profile			
Turnover			
Budget			
Design of the course and methodology			
Updated contents and methodologies			
Long term know how			
Knowledge			
Availability			
Tailored Training			
Competence oriented training			
Training flexibility			
Evolution of brain research			
New generation learners			
Evolution of technology			
New fields of skills			

The participants in the session defined *identification of real learning needs* as the key variable for "matching industrial needs", which undoubtedly is directly related to the impact that training could have in the industrial needs fullfilment. This identification is considered the first step for the definition of the real necessity of the client. Work situation analysis refers to the study needed prior to the planning of the course to analyze who will be the people that need to take the course, and which are the topics to be hold. Identification of learners facilitates and conditions the definition of "number of jobs required" and "language ability". The number of jobs required influences the job topology, and at the same time, this typology influences the number of jobs. On the other hand, the competence oriented methodology of learning enables the definition of specific jobs, and tailored training. This tailored training helps to increase the trainee interest and satisfaction level. It is understood that tailored training refers to a personalized course depending on the needs of the learners and their company.

In addition, *stakeholder satisfaction*, the second cycle, was contemplated as a central part in the sessions. This satisfaction will turn into the striker that will engage the learner to take another training program. The narrative behind this loop is related to cost, when cost of both training and final product are increased, stakeholder satisfaction is decreased. On the other hand, quality of the final product, competitive advantage, and employability positively influence stakeholder satisfaction. The participants in the sessions defined the confidence in the training system as the consequence of stakeholder satisfaction. Due to this confidence, recognition on the training system is increased, which increases competitive advantage, helps in the identification of new fields of skills, and enables the meet of governmental rules to get the fund. Finally, worker ability to perform his work is considered a key variable for the quality of the final product, and employability.

On the other hand, learning engagement is considered as an initial situation variable. In the loops based on *learning engagement*, this engagement is dependent on the positive competition between the trainees, content up to date, new training methodologies, and relevance of the means. These four factors are defined as direct influencers of both learning engagement and the increase of trainee interest satisfaction. Training environment, number of equipment, and number of professionals available influence the relevance of the means. When we mention relevance of the means we consider the whole group of resources needed for an efficient training course. Training environment refers to behavior and attitude between the learners, if they recognize the importance of the training, and the training course is developed fluently.

Design of the courses is related to the assessment typology, depending on the arquitecture of the course, the most appropriated assessment method will be one or another. Referring to the influence of the *design of the courses*, the participants in the sessions defined "knowledge transfer" as the central variable to be analyzed in the session. The key variable directly influencing the challenge was the design and methodology used for the definition of the course. The type of design chosen for knowledge transfer is dependent on trainer abilities, contents selected for the course, age of the public, previous knowledge of the learners about the topic to be hold, duration of the course, and the use of interactive tools. On the other hand, the type of methodology selected will influence another factors such as the dynamicity of the course, and the easy accessibility of the learners to the contents and tools.

Willingness was directly connected to strker variables that will engage the learner to take the course. When speaking about the influence of the *willingness of the learner* for knowledge transfer, learner behavior was defined as the central pillar. Depending on the behavior taken by the learner the knowledge transfer will be done or not. At the same time, this behavior will be dependent on the same variables that influenced the design and methodology used for the courses. The age of the public will be decisive due to the importance participants gave to the fact of previous knowledge of the learners. Selection of the profile referred to the study needed to choose workers that really need the training course to apply the skills acquired in their workplaces. Finally, pedagogical objectives are used to define the competencies needed to achieve through the courses. Accessibility as mentioned before describes the way to obtain data, and how to access the information.

After this analysis of the variables from the GMB, in the Image 2 below could be seen the variables identified in the literature. The ones highlighted in orange refer to the narratives that appear in both GMB sessions and literature. In addition, the coloured circles correspond to the feedback loops that define our final conceptual model. Red circle refers to "striker" loop, green circle to "Initial diagnosis assessment", black to "assessment typology", blue refers to "assessment impact".

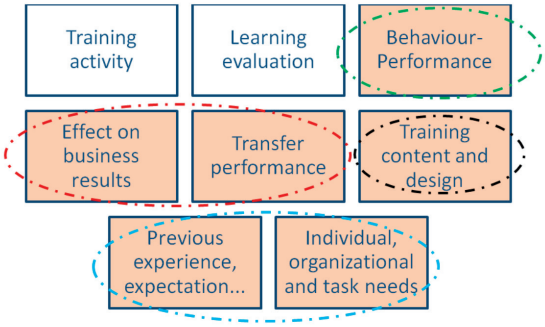

Figure 2. Variables identified in the literature.

4. Results

The identification of groups used for the definition of the conceptual model is based on the principal phases of the learning process presented by Alsina and Rodriguez (2001).

1. **Assessment typology/ Training assessment**: This loop explains how the training evaluation is done. Interaction with students is a direct way to do it. The results of this interaction are i) an adaptation of the teaching process to define adequately the skills that are needed to learned, and ii) the diagnosis of the obstacles to adapt the learning strategies to obtain more effective learning processes.
2. **Assessment impact:** This loop refers to the effect of the assessment on the principal phases of the learning process. These variables help to the obtaining of the objective (effective training). Three different variables were identified as key for this outcome obtaining, the satis faction level of the learner with the program, the effectivity of the program to acquire new skills, and the transfer of the learning competencies to the workplace.
3. **Striker:** This loop refers to the phase in which learners have achieved new skills, and their self steem is higher. So, their wish to improve is higher, and they are opened to learn and accept more complex challenges.
4. **Initial diagnosis assessment:** This loop refers to that phase of "wish to improve" mentioned in the previous loop, and its effects. This wish results in a higher autonomy level of the learner, and more identification with the learning process. At the same time, this loop is focused on the strategies defined for the learning proces

5. Conclusions

The increasing interest that organizations have been showing in the last decades in employees and practices related to human resource management,

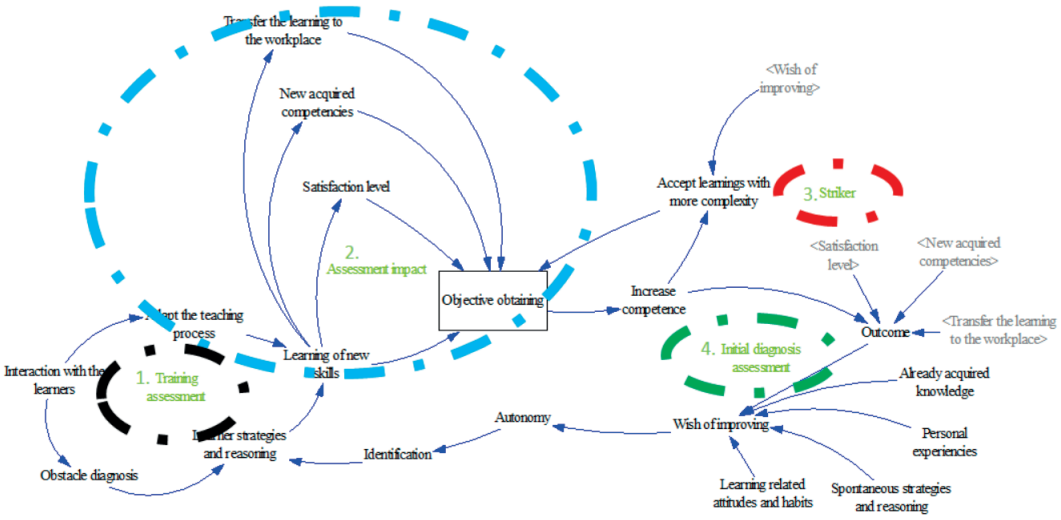

Figure 3. Whole conceptual model.

especially training, can be explained by the general acceptance of the fact that human resources and organizational knowledge are, at present, two of the main sources of sustainable competitive advantages for the organization. However, the significant role of training in the organization is not supported by an adequate level of investment, mainly due to the lack of knowledge about the contribution of training programs to the achievement of organizational outcomes.

As a systematic process for developing needed workplace knowledge and expertise, instructional systems design requires an evaluation component to determine if the training program achieved its intended goal. However, evaluation, the phase considered as the most important one for the definition of effective training programs, is often overlooked when organizations create and implement training programs. Several reasons have been identified for organizations failing to arrange systematic evaluations (lack of confidence, lack of resources and expertise, lack of organizational culture, etc.).

This study was based on the identification of variables that influence training effectiveness and evaluation. For this identification the input sources used were literature on the one hand, and Group Model Building (GMB) sessions on the other hand. This identification of variables was needed for the definition of a conceptual model in which variables were interconnected defining feedback loops, and focused on the logic of systems thinking.

This final model represents the process of training evaluation with four main feedback loops: i) assessment typology, ii) assessment impact, iii) striker, and iv) initial diagnosis assessment. Each of them encompasses all the key variables and narratives considered relevant in both literature and GMBs.

As a future line, it was contemplated the transformation of the conceptual model into computational through the use of System Dynamics. This computational model will be helpful for the interactive representation of the conceptual model, the effective communication of the conclusions of the model to the management board of every organization interested in the implementation of effective training programs. Moreover, this model will facilitate the simulation of different scenarios to extract patterns related to the behaviour of the variables that influence the effectiveness of training programs and their evaluation.

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Appendix I

This appendix is included with the aim of explaining the variables identified during the GMB sessions. After the individual variable definition of the participants, we made groups according to the similarities of the variables, the groups were: i) training typology (variables related to the characteristics of the training), ii) prior analysis for definition of the course (variables related to the planning of the course), iii) commitment of the learner (variables related to the behavior of the learner and their predisposition for learning), iv) new learner generation characteristics (this refers to the characteristics of the new generation of learners), v) trainer tools (this refers to the available techniques and tools for the trainer), vi) resources (available human and physical resources), vii) government and investment (this describes governmental and investment issues), viii) prior knowledge of the learner (variables related to the knowledge learners have when the course starts), ix) job detail (variables related to the need of specific jobs, and the number of jobs required), x) Design/methodology (variables related to the methodology used and the design of the courses), xi) Learner behavior (variables related to the willingness of the learner to learn and attend the course), xii) Needs identification (variables related to the study they have to do before defining the contents of the course), xiii) Contents (variables related to the definition of the contents of the course), xiv) Evaluation (variables related to the phase of evaluation and feedback after the course), and xv) Expert (variables related to the specific characteristics of the experts). In the following tables, each group and the corresponding variables to each group are explained.

Training typology
Tailored Training: It refers to personalized training, adapted training courses to the needs of the learner and their companies.
Competence oriented training: It refers to the identification of the training modules, knowledge and needed skills.
Training Flexibility: It refers to the opportunity the training course gives to adapt to it.
Training duration, schedule: It refers to the duration of the course, and its schedule.
New training methodology: It refers to the importance of choosing the training system that best fits our objectives.

Prior analysis for definition of the course
Work situation analysis: It refers to the relevance of an analysis prior to the definition of the course.
Definition of needed skills: It refers to the definition of the skills needed according to the industrial needs.
Identification of industrials needs: It refers to the real necessity of the companies in order to make them more competitive.
Working learning time management: It refers to the management of working and learning equilibrium.

Commitment of the learner
To increase the trainee interest (pleasure) satisfaction: It refers to the consequence of positive levers that increase trainee interest.
Learning engagement: It refers to the engagement shown by the learners, their commitment to the course.

New learner generation characteristics
New generation: It refers to the new generation of learners, the new trend appeared in the last years.
Evolution of brain research: It is related to biotechnology, analysis of the brain to help people and get more information.
New habits of students: It refers to the new habits of this new generation of learners.
Evolution of technology: It refers to the evolution, and the changes suffered in the field of technology.
Worker ability(skills) to perform his work: It refers to the the abilities of the workers, and how they impact the final performance and productivity.
New fields of skills: It refers to the new fields of skills appeared together when the evolution of technology and new learners.
Knowledge retention: It refers to the fact of not losing what they learn, how to retain that knowledge in order to facilitate its application.

Trainer tools
Manage to generate positive competition between trainees: It refers to climate, how to generate competitiveness between the learners to facilitate and create positive tension.
Feedback: It refers to the necessary feedback when the courses are ended, the evaluation of the efficiency of the course.
To have simple tools to assess the match: It refers to the tools used by the trainer, the participants defined simple tools as the most efficient ones.
Content up to date: It refers to the fact updating contents, these courses must be a live and dynamic.
Oblivion Curve: It refers to the point in which learners start to forget what they learned, hoe to make longer this horizon of knowledge retaining.
Resources
Number of equipment: It refers to the available physical resources.
Training location: It refers to place where the training is going to be hold.
Number of trainers available: It refers to the available human resources to give the training courses.

Government and investment
Meet governmental rules to get the fund: It refers to the french government as the principal source of funding of any training program, and how to meet their rules.
Cost: It refers to the cost of both the course, and the internal costs of the companies that take part in the training courses.

Prior knowledge of the learner
Original acquired skills: It refers to the basis of the students, which is the starting point from the point of view of prior knowledge.
Language ability: It refers to the language selected fro the training, the learners must be able to follow those courses in the corresponding language.

Job detail
Specific Jobs: It refers to the topics that must be hold in the courses.
Number of jobs required: It refers to the number of different workplaces that will appear taking into account the necessity of the company.

Design/ Methodology
Age: Makes reference to the age of the learner, depending on that some factors related to their behaviour will change.
Duration: Sets out the duration of the course, the participants considered that these courses must not be long to be effective and attractive.
Interactive tools: Refers to the tools used in the courses, the necessity of being interactive was mentioned.
Dynamicity: Explains the necessity of dynamic courses and contents to be updated and adapted to the real necessities of the market.
Access: Makes reference to the accessibility of the learner to the course and the contents.
Balance theory and practical part: Describes the necessity of a balanced distribution of theoretical and practical part.

Learner behaviour
Knowledge transfer: Sets out the central part of this GMB session, the transfer of basic knowledge from specialists to non specialists.
Knowledge retention: Explains the concept of how to retain knowledge and to avoid its lost.

Needs identification
Pedagogical objectives: Makes reference to the objectives defined as pedagogical, the expected results to be achieved after the course.
Company policies: Refers to the strategy and type of decisions made by company, their philosophy.

Contents
Market evolution: Explains the changes happened in the market and the society, changes that must be faced by the company to adapt to the client and be competitive.
Not deep technical explanation: Makes reference to the type of explanation that must be given in the courses. According to the participants these explanations do not need to be very technical.
Selection of the profile: Refers to the criteria that must be taken into account to select the profile of the future learners.
Turnover: Sets out the amount of money taken by a business in a particular period.
Budget: Refers to an estimate of income and expenditure for a set period of time
Updated: Explains the necessity of continuously updating contents and methodologies to be more effective and competitive.

Evaluation
Long term know how: Explains the concept of acquiring usable and long term knowledge.

Expert
Knowledge: Refers to knowledge the expert has, which is based on their previous knowledge basis.
Availability: Refers to the availability of the expert, if he or she is frequently available to respond to the doubts and questions of the learner.