Using the "Socialization of the Survey of Expectations" (SSE) tool to develop Projects, Programs and Courses.

Utilização da ferramenta "Socialização do Levantamento de Expectativas" (SLE) no desenvolvimento de Projetos, Programas e Cursos.

GRUPO DE PESQUISA: 11. EXTENSÃO RURAL

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ABSTRACT

By contextualizing the ramifications of government public policies on planning, development and evaluation of capacity-building programs and projects and on technology transfer and dissemination, under Embrapa Strategic Studies and Training's scope of action, and under the expansion of South-South dialogue, this article aims to explore the connection between the different contingencies to which such programs, projects and courses are subjected, and the development of educational solutions or even innovating educational technologies to increase effectiveness and efficiency of these capacity-building actions and thus of their impacts. Herein we specifically analyze the use of the tool "Socialization of the Survey of Expectations" (SSE) with stakeholders (participants, instructors and organizers) in one of these projects, treated here as a case study: the International Course "Sustainable Coconut Production System and Fruit and Vegetables Quality Classification", jointly held by the Ministry of Agriculture, the Brazilian Cooperation Agency of the Ministry of Foreign Affairs, Embrapa Coastal Tablelands and Embrapa Strategic Studies and Training.
Given the other contingent constraints present in this class of events, this tool proved to be a simple and practical method of promoting a confluence of general and specific educational objectives among the different actors involved.
The SSE, a tool for learning ecologies, reinforces effective results for capacity building and for technology dissemination efforts, creates participatory opportunities with reflections in participants' motivation and commitment, securing the bases for better results in teaching and learning processes, boosting impacts of these courses, on an incremental pursuit towards new integrated training systems.

KEYWORDS: Capacity Building Systems, Survey of Expectations, Commitment, Courses Planning, International Cooperation.

1. INTRODUCTION

1.1. General principles for an Integrated Technological Capacity-Building System

According to (Pfeiffer, 2000), p. 145, in the context of international cooperation and development aid since the 1960s, difficulties concerning planning with low precision hindered the effectiveness of these projects, with little correlation between objectives and activities, lack of clarity regarding the responsibility of management, and evaluations disconnected from the improvement of projects.

In view of the urgency about tackling this scenario that encompasses different needs, demands, expectations and intentions, there is an attempt to sediment new solutions in educational systems, technologies[3] and expertise in teaching-learning processes, as well as in formatting content and technologies for capacity-building, training and development, within the scope of technology transfer and dissemination, training of multipliers, and broad awareness-raising and development.

It is perceived that in this new context, given the various restrictive contingencies, there is need to re-dimension this type of event, seeking to plan and provide a dynamic learning environment, using all available resources to facilitate access to information and the construction of knowledge and know-how[4], valuing horizontal cooperation and partnership, and the development of specific competences[5] according to the different general and specific objectives of each program, project or course.

It is also in view of this not only national but also international context that it was necessary to adopt a broad frame of reference of a supranational character, the theoretical basis for proposed actions or interventions, present in the "Four pillars of education for the 21st century" (Delors, 1998), a report to UNESCO of the International Commission on Education for the 21st Century, which proposes work on four know-hows:

Learning to know: building cognitive schemes with comprehensiveness and depth;

Learning to be: working with autonomy, discernment and responsibility;

Learning to live with others: the exercise of living together, working towards common objectives; sharing visions;

Learning to do: using skills and competences to solve complex and original problems. (Delors, 1998)

In this line of thought, such programs adopted a concept of teaching and learning that takes into account that human beings learn not only by getting to know a certain content presented in the classroom, forming cognitive schemas that relate to one another in extent and depth, but also by:

Living: sharing visions, common projects, searching for convergences, similarities and points in common;

Doing: developing competences, abilities and skills, troubleshooting, transposing solutions to new problems and contexts;

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[3] For a general approach of educational technologies, cf. (Mazzi, 1981); (Saviani, 1985); (Luckesi, 1986); (Tajra, 2012) and (Simões, 2002).
[4] It is important to highlight that the present text adopts "know-how" as wider and more comprehensive term than "knowledge", and both as broader than "science", understood as a method of a positivist slant. Cf. (Hello, 2009) p. 52.
[5] "Competence" is understood as the ability to mobilize knowledge, know-how, attitudes and skills/procedures for a satisfactory performance in different life situations: personal, professional and social circumstances. Cf. (Perrenoud, 1999; 2000); (Fleury, 2000); (Dutra, 2001); (Zarifian, 1996; 2001); (Prahalad, 1999) *apud* (Hello, 2009).

Being: developing autonomy, insight, accountability and commitment[6]. (Delors, 1998; Morin, 2000)

The adoption of this broad theoretical framework defines the bases from which educational interventions and/or technologies are being tested and implemented, with ramifications for a series of elements that compose the structure of these programs, projects and courses.

1.2. Categories, Structures and Articulation

Among the various possibilities of intervention that were made in these programs as possibilities for innovation in educational technologies, this article highlights the effort to particularly approach the category 'commitment' among the people concerned in the program, project, or course as closely and directly proportionally related to participants', instructors' and organizers' expectations[7] as categories and focus of intervention, with the purpose of improving course impact indicators[8] from an andragogical perspective.

According to (Pfeiffer, 2000), p. 146:

"The rationale for this innovation lies in the concept that effective participation is facilitated by good communication. And, if such participation works, decisions are more easily understood and shared, which, in turn, leads to greater commitment to the project. With more commitment and more involvement, results tend to be enhanced, and goals are more likely to be achieved. That benefits both the organizations responsible for the project and its end users."(Pfeiffer, 2000), p. 146)

Expectations may be associated with the desires and beliefs that anticipate future events.

In his Expectancy Theory, (Vroom, 1985) offers a more detailed view on this key category in our field, whereby, through a cognitive process theory, he creates a multiplicative model that suggests that the motivation for someone to make a decision is a function of three variables: valence versus instrumentality versus expectancy. (Cf. (Vroom, 1985) apud (Lacerda e Abbad, 2003) p. 82).

According to the author, valence refers to the extent to which an individual wishes for a reward or wishes to make a choice about a particular result; instrumentality refers to the estimate that a particular performance would be the adequate means to reach a reward; and

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[6] "*Commitment*", according to (Dicionário Houaiss da língua portuguesa, 2012), is the 'act or an instance of committing (oneself to something)', from the Latin *compromitto, is, mísi, missum, tère,* 'to make a mutual obligation, pact or promise'. As (Becker, 1992) posits, to define "commitment" beyond the common sense, we adopt multiple bases - the reasons which engender a connection to a particular focus, according to (Oreilly e Chatman, 1986) *apud* (Becker, 1992) p. 232-233, and their own foci - private entities such as individuals, groups or organizations, with whom a connection is established (Reichers, 1985) *apud* (Becker, 1992) p. 232-233. Here, the focus comprises a program, project or course, and even actors from different entities. There is also a differentiation between 'commitment', 'involvement' and 'alienation'. The definition of "involvement" expresses the act or effect of involving (oneself), a verb that etymologically derives from the lat. *involvo, is, volvi, volútum, ère* 'roll, turn, enwrap' whose transitive and pronominal version [means] "to engage in or make someone engage in; embroil". (Dicionário Houaiss da língua Portuguesa, 2012) With that, we would like to highlight a gradient from the most tenuous to the most intense connections of actors with each other and with aspects of accomplishment and success in the event itself, which initially translate into simple "involvement" and subsequently evolve to "commitment", both opposites of "alienation". About these categories, see. (Kanungo, 1979).

[7] The term expectation refers to "situation in which someone expects the occurrence of something or its likelihood of occurrence at any given time". (Houaiss, Villar e Franco, 2001) According to (Gonçalves *et al.*, 2011), "in common language, the term expectation means 'hope founded on alleged rights, odds or promises'. In psychology, expectation is defined as 'a somewhat tense and emotional attitude towards a certain event--sign, anticipation that is underscored by motor preparation, premeditation and an intellectual aspect'" (Comprehensive dictionary of psychological terms).

[8] Pursuant to the "Assessment Report on the Strategic Managerial Development Project of the Government of Mozambique" (*Relatório de Avaliação do Projeto de Desenvolvimento Gerencial Estratégico do Governo de Moçambique)* (Enap, 2012), within an impact and assessment logic, the results of a planned intervention translate into effects on or changes to a given situation. Such changes can be perceived and organized into impact scales or levels. In this sense, the "logic" of planning assumes that, with the analysis of the data from the situation and from the actors involved, and with the supply of the necessary resources (human, financial, technological, and other resources), the desired changes (results) can be promoted.

The management of said results is a continuous process of assessment and learning about the situation in which the intervention is going to take place. Results are generated through a combination of manageable and not manageable factors that occur in given conditions. The planning process starts so as to organize an assessment model through which decisions must be taken to achieve objectives (results), feeding back into the whole process.

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expectancy refers to the estimate that an individual's effort will result in a successful performance or the chance that this performance will produce the expected result.

Here the premise that "a greater or lesser degree of expectation that individuals have about a particular event would contribute to the result of their planning[9]" (Gonçalves *et al.*, 2011) is adopted. That is, the possibility of greater or lesser participation in the planning stage is directly related to general level of motivation among event participants and actors.

Incrementally and synergistically, the categories expectation, motivation for the event and participation in the planning stage are hence articulated with the aim of achieving greater overall impact from the capacity-building event.

And, if participation works, decisions are more easily understood and shared, which, in turn, would lead to greater commitment to the project. With more commitment and more involvement, results would tend to be better and achieving the goals would become more likely. Both organizations responsible for the project and end users benefit from that.

This procedural model of participatory planning brings forth interactions and iterations that are centered on the implementation of the SSE tool.

As stated by (Knowles, Holton Iii e Swanson, 2011):

"The andragogical teacher ([or] facilitator, consultant, agent of change) prepares a set of procedures to engage learners (and other parties concerned) in a process that contains the following elements: (1) preparing the learner; (2) establishing an atmosphere that leads to learning; (3) creating a mechanism for mutual planning; (4) diagnosing learning needs; (5) formulating program objectives (content) that will meet such needs; (7) conducting these learning experiences with appropriate materials and techniques; and (8) evaluating learning outcomes and making a new diagnosis of learning needs. That is a model for a process. [...] the difference is that a content model deals with transmitting information and skills, while the process model deals with the provision of procedures and resources to help learners acquire information and skills. [...] The content model is deemed pedagogical, and the process model, andragogical." (Knowles, Holton Iii e Swanson, 2011) p. 121-122. (highlighted)

In this context, the category "expectation" centralizes a series of processes and decision-making, becoming the pivot of different actions at different levels and instances of work to hold this kind of event, which are directly linked to expected end results and impacts[10] from the event.

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[9] Carlos Matus (Matus, 1993), thus defines planning as a situational systematic calculation which, to a certain extent, relates the present to the future and also knowledge to action. In other words, the action of planning, according to Matus (1993), is about trying to submit to the will of man a chained course of everyday events in which their actions determine a direction and a speed: therefore, the intention is to make something desirable happen in the future, which, according to him, redefines planning as being essentially the 'pretension of creating a future ', i.e. going against the entropy of the system.

Also according to Matus (1993), this action of creating a future can be exercised in two possible ways: either by overcoming a force that contradicts intentions or by accentuating and accelerating an ongoing trend. In addition, in view of the eminently social and collective nature of these actions, each individual simultaneously drives and is driven by the ongoing process of change, merging individual and collective goals and intentions, which makes planning, according to this author, a problem among men, unlike a problem between men and things, a case in which an eminently technical solution would almost always suffice. In that sense, according to Matus (1993), planning is a social issue that is developed in a medium that manifests a certain level of resistance, whose opposition comes from men with different objectives and resources, who in turn also have different projections about the future, with different possibilities to lead the social process to divergent paths.

Planning thus becomes essentially a tool to convert future possibilities into real options, in spite of counter forces and intentions, that is, the entropy of the system. Its greatest triumph is the possibility to choose a future without improvising it or, among other possibilities, simply resigning to it because of a lack of choices.

[10] Although it is not the focus of this study, with regard to results or impacts of training programs and projects, an evaluation process that questions what is meant by "impact", to be assessed by specific evaluation tools, is assumed.

Assessment of training programs at Embrapa are based on models from the literature, particularly the MAIS model (Integrated Summative Assessment Model - *Modelo de Avaliação Integrado e Somativo* in (Borges-Andrade, Abbad e Mourão, 2006) p. 334). Currently, assessments involve reaction and impact levels. More specifically, based on a literature review by the company's Personnel Management Department, it is presumed that Impact of Training on Work concerns "*the effects produced by training on participants' performance, motivation and self-confidence*" (Embrapa, 2012) p. 16, which generally entails higher quality, greater productivity, fewer errors and lower cost of production, and it is a function of instructional methods, procedures and media, including organizational support as a key factor for the application of the knowledge acquired. In accordance with the document, "*the impact of training on work can be assessed in two ways: in*

Therefore, different expectations generate different levels of commitment among various actors, who have different levels of expertise and involvement and from whom the directions to be given to certain program or project, as well as respective results obtained in terms of impact, derive.

A study by (Tannenbaum *et al.*, 1991) apud (Knowles, Holton Iii e Swanson, 2011) found evidence that satisfaction with the training was associated with organizational commitment to academic effectiveness, to physical effectiveness, and to motivation to use the training, and that positive outcomes were more associated with a positive correlation between commitment and motivation to use the training. In other words:

"These conclusions clearly reveal the importance of understanding participants' expectations and desires through the diagnosis of needs and through mutual planning." (Tannenbaum *et al.*, 1991) apud (Knowles, Holton Iii e Swanson, 2011) p. 214.

For this focus, by means of the SSE tool[11], we can highlight that working on and with the expectations of the actors concerned opens interesting possibilities of participation in the planning stage and consequent intensification of participant's involvement with the event, and also fosters motivation through the confluence of actors' interests, important determinants in teaching-learning outcomes and course impacts. As Knowles (2011) states:

"One of the main conclusions of applied behavioral research is that people often feel committed to a decision or activity in direct proportion to their degree of involvement or influence in planning and decision-making. The opposite is even more relevant: people tend not to be committed to any decision or activity that they believe was being imposed on them without having had the chance to influence it." (Knowles, Holton Iii e Swanson, 2011) p. 145.

(Kanungo, 1979) p. 127, upon reviewing the concepts of alienation and involvement from sociological and psychological viewpoints, citing (Rabinowitz e Hall, 1977), tells us that people involved with a particular job have strong growth needs and stimuli which give them a high degree of autonomy and of opportunity to participate. He also quotes (Lawler e Hall, 1970) highlighting that, in terms of participation, the psychological state of involvement indicates an individual's behavioral acts directed at the satisfaction of their needs for autonomy and control, also pointing to the fact that the lack of satisfaction of needs that are intrinsic to the work itself is the basic condition to increase alienation. In these considerations, (Kanungo, 1979) suggests that psychologists follow the sociological tradition when considering perceived lack of individual freedom, power and control over a job as a necessary precondition to the psychological state of alienation.

One can note that attaining objectives that outline this scope of analysis, which are results of what can for the moment be called "technological educational intervention" in various programs, projects, and courses, comprises both objective and subjective categories that

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depth or breadth. *The first format refers to specific training effects, which relate to the instructional objectives outlined in the event planning or raised by the analysis of the teaching material. The second relates to the general effects of the training on participants' performance in tasks that are not necessarily directly related to the course contents, e.g. participants' motivation and self-confidence.*" (Embrapa, 2012) p. 16.

In a literature review and analysis of national and international scientific and technological production in the area of training assessment made by (Abbad, Pilati e Pantoja, 2003), in general, researched background variables are grouped into three broad categories: the influence of individual characteristics on training results; the influence of characteristics of the training itself on results; and the influence of social, managerial and material support, and organizational and social environments that are favorable to learning transfer and to other impacts on their work. In this field, the focus is on the influence of participants', organizers' and instructors' individual characteristics on impacts from training on their work, analyzing categories such as interest in applying learned contents, job satisfaction, freedom to make decisions on how to perform tasks, routine activities, level of innovation, self-efficacy, control locus, among others. (Abbad, Pilati e Pantoja, 2003). For program assessment, cf. (Lorenz e University, 2012).

[11] In our case, we're dealing with the concept of "socialization" in its sense in political economy and in sociology, as the collectivization of information and its effect on the development of a spirit of social solidarity and cooperation, cf. (Dicionário Houaiss da língua portuguesa, 2012); and the "survey of expectations" tool as: "*prospection and promotion of signs (anticipation that is underscored by motor preparation, forecasting or premeditation in the symbolic register) concerning the desires and beliefs in anticipation of a future event*". (Gonçalves *et al.*, 2011)

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delimit our experimental design in the arena of "learning ecologies" at multiple levels (Kelly e Lesh, 2000) apud (Cobb, Confrey, Disessa, Lehrer, Schauble, *et al.*, 2003), which entails:

A conceptual articulation among the categories involved in our analysis, considering aspects ranging from those in the individual and subjective field to ramifications and implications of those same aspects in proposed methodologies for interventions, thus connecting the particular to the general and the general to the particular, in an "iterative design" process (Cobb, Confrey, Disessa, Lehrer, Schauble, *et al.*, 2003);

A bridge category to link large and cyclical aspects involving from government public policies to the implications of these ramifications at classroom level and in individual and collective learning by participants of these programs, projects and courses, in the hope of answering the question of " what counts as a ' good ' scientific question in a classroom" (Wertsch, 1998) apud (Cobb, Confrey, Disessa, Lehrer, Schauble, *et al.*, 2003);

A possibility of qualitative analyses (Lüdke, 1986; Triviños, 1987) to assess results including in terms of categories, with support from intervention tools, which in turn are based on participants' very own discourse, obtained from a survey of expectations.

Therefore, the route undertaken by the present work includes logically and theoretically structuring categories that provide the basis for a topical technical intervention at this level, that is, the use of SSE at a program, project or course planning stage, more specifically, and a case study of said intervention in a specific course, as well as qualitative assessment of its results.

Particularly, in this study, we analyzed the implementation of this tool in the international course on Coconut Production and Classification of Fruit and Vegetables, offered in partnership with the Brazilian Ministry of Agriculture (MAPA), Brazilian Cooperation Agency (ABC) of the Ministry of External Relations (MRE), Embrapa Coastal Tablelands, and Embrapa Studies and Training, and which will be presented as a case study.

Moreover, in those terms, the conceptual and categorical articulation involves both technological aspects and technological learning by problem-solving and by transposing learning, whose results derive from a third central category we put forward as the intensity of effort to transmit knowledge, added to the aspect of " participant's commitment ", a direct function of how big their expectations with regard to the course are.

Thus the intention here is to focus on a specific and topical aspect of the use of a given instructional resource tool, linking it to larger and broader contexts of an integrated capacity-building system in its practical-conceptual base, determining its instrumental value: the reinforcement, at an individual level, of the obtainment of effective results for technological capacity-building efforts. As (Knowles, Holton Iii e Swanson, 2011) assert upon proposing a mutual planning mechanism in capacity-building events:

"The role that learners play in planning is an aspect of educational practice that most clearly differentiates the pedagogical from the andragogical school, the mechanistic from the organismic one, and teaching from the 'facilitation of learning'. For the first of each of the abovementioned pairs, the responsibility for planning is assigned almost exclusively to an authority figure (programmer teacher or trainer). This practice, however, is in direct conflict with the need for the adult to be self-directed – a cardinal principle of andragogy (and, indeed, of the whole of adult and humanist education theory) is that there must be a mechanism that includes all the parties involved with the educational activity in planning." (Knowles, Holton Iii e Swanson, 2011) p. 145. (highlighted)

In addition, in this line of work, based on the impact of the event (ramifications), we seek to reconfigure targets ("results" to be obtained), and redefine values, means, strategies and tactics for capacity-building, via logical articulation, adopting:

an attempt to minimally draw configuration parameters of the field of research on capacity-building as a complex object, which demands an inter-transdisciplinary approach;

a research methodology by "successive approximations" in the configuration of said field and of the research object;

the aim of structuring an articulated and dynamic capacity-building system, inter-relating the countless demands that befall certain programs, projects or courses, especially demands from participants, to the remaining stakeholders who comprise our focus of analysis, in a cyclical movement.

Therefore, from the standpoint of a more integral conception of the human being and its structural and psycho-ontological aspects, in the light of the structural characteristics of the desiring subjects in their subjective, social and professional dimensions, articulating the affective (being/living), cognitive (know-how as significant articulation) and operational ("doing" as an "act") aspects, overlapping knowledge, know-how, science and praxis, composing new institutional/organizational intervention ethics that, from an administrative/managerial and personnel management point of view [and even from a systemic point of view, within a capacity-building system], innovatively redimension, dialectically rearticulate and incisively entail a confluence between discourse and practice.

1.3. Connections and Ramifications

Well-structured and well-planned programs and projects are often not successful at their implementation stage.

There is great difficulty of connection when we leave the macro level of national and international public policy and branch out our examination of parameters until we reach educational actions at micro-level, that is, classroom activities.

Nevertheless, the importance of expanding the analysis until such ramifications is precisely the fact that it is the level at which there is an actual validation of the efficacy, efficiency and effectiveness of ongoing policies and of the programs, projects and actions derived therefrom.

In an experiment reported by Kim (1999), the author indicates that technological learning to build technological capacity[12] in a developing country or region is founded on two main bases: on existing technological knowledge, regardless of whether it is available, explicit or tacit; and on the intensity of efforts spent in capacity-building, training and development actions, now involving individuals (Cohen e Levinthal, 1990; Kim, L, 1999).

The present work is not going to specifically address the issue of existing technological knowledge. Our focus is on the "intensity of effort" expended in capacity-building, in view of its inversely proportional relation to each participant's involvement in such actions, a required counterbalance to the teaching-learning process based on problem-solving and subsequent internalization/adoption of concepts and categories, components of the foundations of technological capacity-building actions.

As a key-category in articulation, participants' commitment thus becomes a variable that is difficult to control, and though critical to the success of all efforts, it is essentially problematic from the point of view of the intentionality present in the elaboration of programs, projects, and capacity-building events, and their efficacy, efficiency and effectiveness with regard to results to be obtained. In addition, it is a psychic component that involves each participant's

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[12] We understand "technological capability" as "*the ability to make effective use of technology*" (Kim, L, 1999) which, according to the author, is "*the biggest determinant of industrial competitiveness.*" (Lall, 1990.; Oecd., 1996; Schacht, 1997; Kim, L., 1999)

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unique and subjective issues, different reasons and motivations, cultural and conjunctural differences that directly affect their individual participation in course activities.

Therefore, the use of the SSE tool specifically aims at establishing strategies to strengthen participants' overall commitment to capacity-building programs, projects and actions, empowering results and minimizing the waste of efforts in the broad process of technological learning, effect of the ramifications of organizational guidelines which are, in turn, in line with national and international public or governmental technology transfer and dissemination policies.

We present the construction of SSE procedures and instruments with participants in one of our courses, a case study aiming to establish standard procedures for the use of the tool and to qualitatively analyze its effects, in support of its adoption as educational technology and as instrumental part of a capacity-building system.

2. MATERIALS AND METHODS

The "International Course on Sustainable Coconut Production and Fruit and Vegetable classification", which applied the model, was jointly held in the city of Aracaju, SE, Brazil, from 21 to 25 November, 2011, by the Ministry of Agriculture, Livestock and Food Supply (MAPA), the Brazilian Ministry of External Relations (MRE) Brazilian Cooperation Agency (ABC), Embrapa Coastal Tablelands, and Embrapa Studies and Training. The course was part of a catalogue of courses offered by the Brazilian Cooperation Agency for the years 2011-2012 (Mre e Abc, 2011).

The course was composed of two modules: Module I on "Sustainable Coconut Production" and Module II on "Fruit and Vegetable Classification".

The total course load was of 40 hours and 30 places were offered for enrolment during the period between 01 and 30 July 2011, via ABC's official website. The desired candidate profile, as published in the course catalogue and on ABC's website, called for technical-level professionals from different spheres of government, with higher education and work in agricultural or biological sciences or related areas. Candidates also had to comply with the general requirements for participation in the program (Mre e Abc, 2011).

The course was taught in Portuguese, with simultaneous translation into English.

The original general objectives of the course module I - "*Sustainable Coconut Production"* were to build the capacity of technicians from South Pacific Islands and the Caribbean for the transfer of Brazilian technologies and experience in the area of sustainable coconut production, as it is an agricultural product of considerable relevance to those countries, and, in module II -" fruit and vegetable classification"-, building technicians' capacity and transferring Brazilian technology and experience in this area as means for improving the quality of these products for trade in domestic and international markets (Mre e Abc, 2011), approaching several topics (Table 1).

Table 1 – Initial themes in ABC's Catalogue.

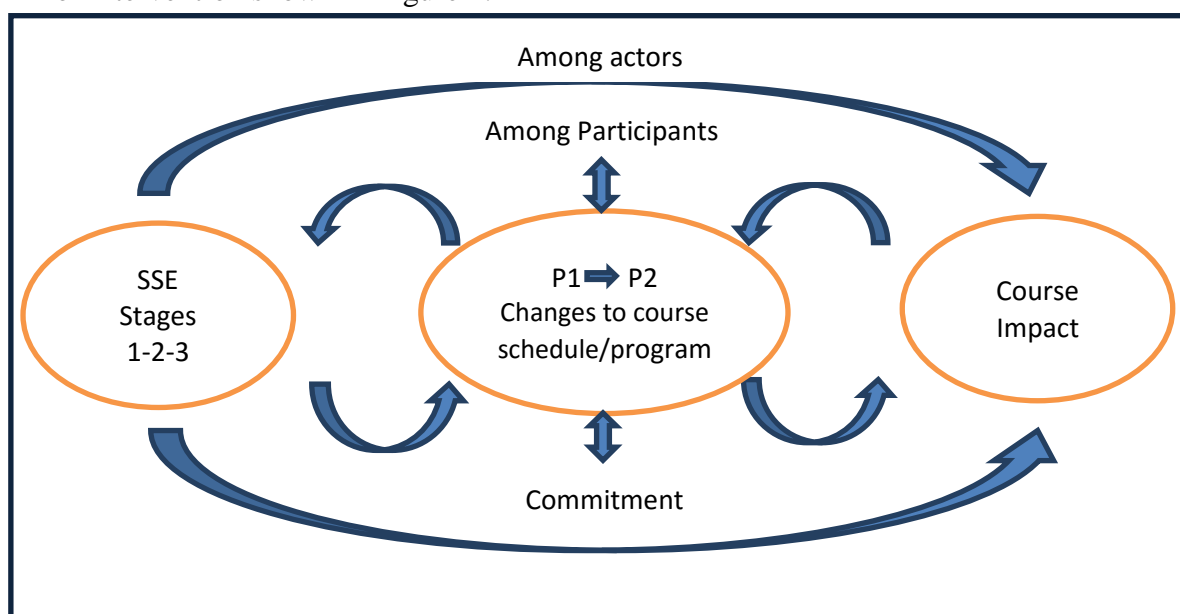| MODULE I - "Sustainable coconut production" |
|---|
| Debate on the current state of coconut crops and production chain in Brazil and South Pacific countries; |
| Integrated production – Official protocol for best practices in agriculture and traceability; |
| Coconut Palm Varieties and Hybrids; |
| Preparing seedlings and setting up a coconut grove; |
| Crop management and farming practices; |
| Biological aspects of the coconut palm tree (morphology and ecophysiology); |
| Coconut grove nutrition and fertilization; |

Coconut grove irrigation management;		
Coconut palm pests and pest control;		
Use and processing of coconut by-products;		
Harvest and post-harvest;		
Market and trade for coconut and by-products;		
Technical visits.		
MODULE II - "Fruit and vegetable classification"		
Need for classification systems;		
Classification goals and specifications;		
Indexes used to determine quality standards;		
Elaboration of standards for fruit and vegetable classification;		
Implementation of classification standards;		
International and Brazilian standards and regulation;		
Fruit and vegetable inspection in ports, airports and domestic markets;		
Trade classification standards.		

This was the initial syllabus structure available on ABC's website and course catalogue when the public calls for enrolment in the course were open. It reproduced the broad contents of a classic course, proposed by experts on the subject and disciplinarily structured in sub-topics. It had been elaborated based on many courses offered to different audiences in the course of the years by researchers from Embrapa Coastal Tablelands and subsequently validated by technicians from MAPA.

From the applications received through ABC's official website, eighteen participants were selected based on the criteria of curriculum and technical expertise. Out of the selected, thirteen confirmed their presence and effectively came to participate in the course. This group was composed of seven women and six men from different countries of the Americas (Belize, Colombia, Cuba, Honduras, and Paraguay), Africa (Angola, Cape Verde, Guinea-Bissau and São Tomé and Príncipe), Asia (Indonesia, East Timor) and Oceania (Fiji and Tonga).

Since the early start and up to immediately before the course would take place, the different organizers worked as a network to make adjustments to the original program, defining which contents would be taught in the course *a priori* based on the origin of participants selected; then, adjustments were made to the sequence in which contents would be taught based on the schedules and availability of expert speakers for each topic.

After this step, the intervention in the course programming, using the tool of Socialization of the Survey of Expectations (SSE) with the actors involved took place as per the logical model for intervention shown in Figure 1:

FIGURE 1: Logical Model of the fields of intervention, interaction and iteration.

Five open questions to compose the structured, non-disguised questionnaire (Boyd Jr. e Westfall, 1964) were drafted.

Broadly speaking, the structure of the questions respected the technical premises that sought to involve participants in the event planning and in the event, dealing with the motivations which engender commitment, through the use of the SSE. In those terms, it was established that the questions would be elaborated in conformance with a gradient of lower to greater levels of involvement, based on a focus from:

- the most unspecific to the most specific points;
- the most objective to the most subjective points;
- the most individual to the most collective aspects;
- the most theoretical to the most practical aspects;
- the present to the future;
- the real to the imaginary;
- the simple involvement level to the commitment level (Table 2):

Table 2: Questions for the Pre-event Survey of Expectations.

CATEGORIES FROM THE FOUR PILLARS OF EDUCATION	KNOW	a) What are your main topics of interest among those offered in the course?
	LIVE/BE	b) Which are the themes where you can offer a contribution to knowledge building within the course?
	DO/BE	c) How do you expect your professional skills to change after this course?
	DO/BE	d) How do you expect to apply this knowledge?
	KNOW/DO/BE/LIVE	e) How do you expect this course to help solving existing problems in your area [professional field of work]?

Thus, the intervention was divided into three phases (cf. Figure 1):

STAGE 1: At this first stage, the SE was applied three weeks before the course start date. The survey was sent to selected participants by e-mail as part of a newsletter. Messages thanking the participants for the information they provided were also sent to those who replied within the deadline of a week.

The answers were compiled into a single document, including the identification of each respondent, and then submitted for socialization and information of all partner actors in the course organization, support staff and technicians acting as speakers (SSE – Stage 1). Subsequently, after the socialization of such expectations among actors, there were discussions that resulted in different suggestions of changes to the original course program and technical contents, such as the inclusion, exclusion, re-elaboration remodeling, or reorganization of the sequence of certain activities.

Further on, the answers to each question were consolidated into categories through discourse analysis based on the Evidential Paradigm (Ginsburg, 1989). Discourse analysis was used to categorize expectations by abstracting the most important key-category from the statement and from the enunciation; categories which were either nouns (e.g., "theme", "practice", "knowledge", etc.) or verbs (e.g., "adopt", "apply", "transmit"), qualified by the "general/specific" or the "broad-general/restricted" opposition when necessary.

STAGE 2: The SSE was once again applied on the first day of the event and after participants' individual presentations (SSE – Stage 2).

The same five questions were now re-addressed in a group activity of an hour and a half, divided into three half-hour moments: a meeting for group discussion, a meeting to elaborate a synthesis document and a plenary meeting to present the content of such document. Three small groups were organized per language (Portuguese-speaking, Spanish-speaking and English-speaking) to facilitate internal communication. They were requested to exchange information on their expectations about the course and to elaborate a final document by the end of the activity, summarizing the discussions in the small groups. Right after that, this document was once again socialized, as it was presented to all in a plenary meeting by a representative chosen by the group.

STAGE 3: During this last stage, a week after the event, the same questions, but then referring to course events in the past tense, were sent to participants, with the deadline of a week for replies, for the purposes of course assessment, reflection on learning, and the effect of systematizing and recording experiences during the event.

Like in STAGE 1, answers were compiled into a single document, including the identification of each respondent, and then submitted for socialization and information of all partner actors in the course organization, support staff and technicians acting as speakers (SSE – Stage 3). The socialization of these answers among the actors was followed by discussions that resulted in different proposals for improvement in different stages, in project management, and in the course itself.

The contents of the replies to the SE were again analyzed based on the Evidential Paradigm (Ginsburg, 1989) to devise the broad content categories to be addressed, such as, for instance, general themes, specific themes (specific to their country of origin), best practices, (specific techniques), among others; and in terms of expectations per se, for instance, broad expectations, improving, applying, (re)transmitting knowledge, adopting best practices, directing and focusing skills, obtaining better results, solving general or specific problems, and adopting technologies, which were summarized and listed further on.

3. RESULTS

Out of 13 questionnaires sent on STAGE 1, nine, i.e. approximately 70%, were answered and returned in less than a week, showing a positive response to the survey of expectations.

The SSE effectively had an effect on the event program and schedule, provoking different reactions among actors, which were recorded by triangulating the e-mails.

Some actors were surprised with participants' expectations as they had imagined other needs, intentions, demands and desires with regard to the course.

There was a symbolization[13] effect as aspects by then essentially imaginary were named and could then generate more well-founded, mediatized and consensual actions in the implementation of the course.
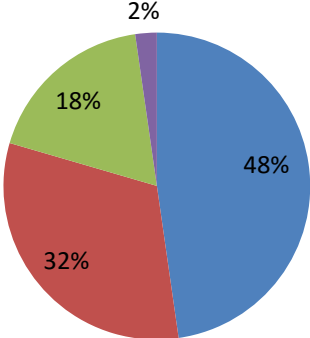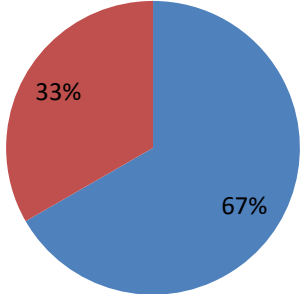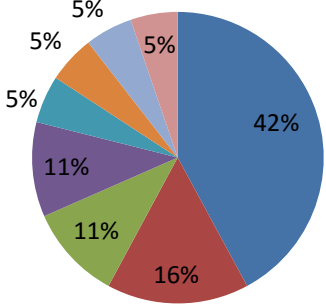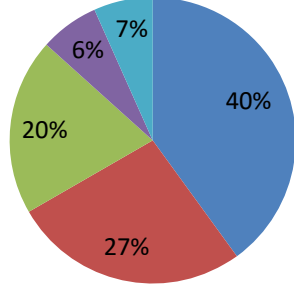
From an intersubjective point of view, the SSE tool allowed for a collective "trade-off" between different actors' needs, intentions, demands and desires at the planning stage, aligning, rectifying, and converging expectations within a doable and achievable scope in the new program.

A condensed version of the categorization is shown in Table 3 below:

Table 3: Questions for the Pre-event Survey of Expectations *versus* Results per Categorized Themes – STAGE 1.
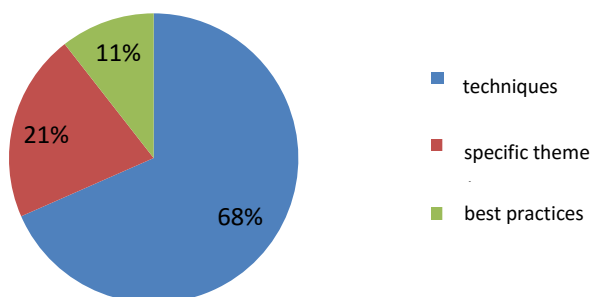
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[13] With regard to the three orders proposed by Jacques Lacan, the *Real*, the *Symbolic and the Imaginary*, and the categories which he reconstructs as *Need*, *Demand* and *Desire*, cf. (Lemaire, 1979).

Pre-event Survey of Expectations	STAGE 1 - Results per Categorized Themes
a) What are your main topics of interest among those offered in the course?	48% specific theme; 32% best practices; 18% techniques; 2% general themes
b) Which are the themes to which you can offer a contribution to knowledge building within the course?	67% specific theme; 33% best practices
c) How do you expect your professional skills to change after this course?	42% improving knowledge; 16% adopting best practices; 11% transmitting knowledge; 11% applying knowledge; 5% acquiring experience; 5% focusing skills; 5% directing skills; 5% implementing actions
d) How do you expect to apply this knowledge?	40% transmitting knowledge; 27% obtaining better results; 20% effectively applying knowledge; 6% broad expectations; 7% transmitting materials

e) How do you expect this course to help solving existing problems in your area [professional field of work]?

After the socialization of such material and after actors read it by-email at the planning stage, significant changes to the course schedule and content of the theoretical-technical topics of the course were mutually agreed in the light of specific issues raised by participants, redefining special foci of attention, particularly with regard to technical visits, some practical-pedagogical activities and some specific contents so that the initial schedule was redistributed and redirected, and finally established as shown in Table 4 below:

Table 4: Initial Schedule and Final Schedule.

INITIAL SCHEDULE	FINAL SCHEDULE
DAY 1	
MORNING	**MORNING**
Registration / Hand-out of Materials / Course Opening	Registration / Hand-out of Materials
Debate on the current state of coconut crops and production chain in Brazil and South Pacific countries– Lecturer to be designated by MAPA	Course Opening
Questions and answers	
	Welcome and General Information (*Practical Information*)
	Directed Presentation of Participants
	Survey of Expectations using materials brought by participants (Work in small groups, to be resumed on the last day)
	Presentation of the Survey of Expectations - Proposals (plenary and comments)
Integrated production – Official protocol for best practices in agriculture and traceability	Integrated coconut production
Questions and answers	
Coconut Palm Varieties and Hybrids	Coconut Palm Varieties and Hybrids
Questions and answers	Questions and answers
AFTERNOON	**AFTERNOON**
Preparing seedlings and setting up a coconut grove.	Preparing seedlings and setting up a coconut grove.
Questions and answers	
Crop management and farming practices	Crop management and farming practices
Questions and answers	Questions and answers
DAY 2	
MORNING	**MORNING**
	Good Morning Dynamics - MILY Dynamics (Most Important Learning from Yesterday) - General Notices - Start of Work
Coconut grove nutrition and fertilization	Coconut grove nutrition and fertilization
Collection of samples of soil and leaves. Interpreting analysis results	Collection of samples of soil and leaves. Interpreting analysis results
Questions and answers	Questions and answers
AFTERNOON	**AFTERNOON**
Plant Morphology and Ecophysiology	Plant Morphology and Ecophysiology
Questions and answers	Questions and answers
DAY 3	
MORNING	**MORNING**
	Good Morning Dynamics - MILY Dynamics (Most Important Learning from Yesterday) - General Notices - Start of Work
Coconut Tree Pests and respective Control Methods	Coconut Tree Pests and respective Control Methods

Questions and answers	Questions and answers
AFTERNOON	**AFTERNOON**
Major Coconut Tree Diseases in Brazil	Major Coconut Tree Diseases in Brazil
Processing coconut by-products	Processing coconut by-products
Questions and answers	Questions and answers
DAY 4	
MORNING	**MORNING**
	Good Morning Dynamics - MILY Dynamics (Most Important Learning from Yesterday) - General Notices - Start of Work
	Visit to the laboratories of Embrapa Coastal Tablelands
Irrigation	
Questions and answers	
AFTERNOON	**AFTERNOON**
	Free afternoon for tourist and cultural activities and social integration
Harvest and post-harvest	
Questions and answers	
Harvest and post-harvest	
Questions and answers	
DAY 5	
MORNING	**MORNING**
	Good Morning Dynamics - MILY Dynamics (Most Important Learning from Yesterday) - General Notices - Start of Work
Market and trade for coconut and by-products	
Technical visit to COCO DUVALLE industry– Paraíba – João Pessoa	
	Fruit and vegetable classification standards
	Questions and answers
AFTERNOON	**AFTERNOON**
	General Information - Continuation to Morning topics - Warm-up Dynamics
	Fruit and vegetable harvest and post-harvest
	Questions and answers
	Oral assessment of the course and Closing with delivery of certificates

The differences between the two schedules are the product of the SSE intervention process.

More room was given to students' participation, with several moments when they could express their opinions and give various contributions, in addition to time for questions and clarification of doubts regarding the contents.

On the expert researchers' side, even though there was a strong intention to cover all the technical content about each particular topic in extent and depth, after the SSE it was realized that it was more important to give more room for possible subsequent dialogues on the topics addressed than choosing to encompass the entire thematic content. Thus, an extensive program that was intense in content quantity was replaced by a program with the dialogical quality of socializing knowledge and more aimed at specific topics pinpointed by participants themselves.

This approach benefited from the activities at the start of each day, the Good Morning Dynamics for group mingling, and the MILY Dynamic ("*Most Important Learning from Yesterday*") in which, the most important topics from the previous day were resumed in dialogue, including other issues that were relevant to the smooth progress of the course.

The SSE's STAGE 2 had participants rework on their previously expressed expectations with regard to the course, which were then expressed verbally to colleagues as a dialogic task in small groups.

Without this stage, it is not likely we would have obtained such level of interaction, socialization and bonding that was much beyond that which naturally occurs in an event of this nature, despite the international, linguistic, cultural and socio-economic barriers.

From that work, three reports were obtained and presented in a plenary session through dialogue and subsequently transformed into reports. With this procedure, the goal was to have

participants verbally express their expectations to their colleagues in order to individually and collectively implicate themselves in their achievement, and also for them to know each other's expectations not only with regard to the course itself, but also to desirable and possible course impacts and ramifications, with the aim of provoking greater socialization, emulation, synergy and sharing of responsibilities and information within the group, especially concerning the explicitation of the issues that could contribute to the course. Cf. (Gonçalves *et al.*, 2011; Knowles, Holton Iii e Swanson, 2011) p. 121-122; 145; 214.

It was noticed that the list of suggested topics to be covered tends to increase due to the synergy of the group work, in which a topic refers to another, establishing intrinsic relationships of sense and with participants' reality. Cf. (Kelly e Lesh, 2000) *apud* (Cobb, Confrey, Disessa, Lehrer e Schauble, 2003).

We also realized that the effect of students offering to contribute with their own knowledge to a specific topic engages them in that task and commits them to the overall results to be achieved in the course. Cf. (Vroom, 1985) *apud* (Lacerda and Abbad, 2003) p. 82; (Knowles, Holton Iii e Swanson, 2011) p. 121-122; 145. An indicator of this fact is the spontaneous presentation of several illustrations and examples of good practices adopted in their respective home countries, diversifying the array of solutions in global terms, which suited the course's international scope.

As for the proposals themselves, all groups have expressed interest in applying and multiplying the knowledge acquired during the course, with special emphasis on genuinely Brazilian experiences.

As for expectations to solve problems in their areas of expertise, they were about learning about new high-yield and fast-production-cycle varieties; about how to prepare coconut seedbeds and nurseries; increasing profits for smallholders through a consortium with grains, diversification of coconut products and by-products; use of irrigated lands or wetlands for production; exchange of Brazilian plant materials; incrementing sustainable coconut and fruit production and classification; coconut technology transfer, and coconut fertilization and nutrition.

At STAGE 3, out of thirteen surveys sent after the course, seven, i.e. approximately 54%, were answered and returned within the stipulated limit of a week.

The aim of this new contact with participants was to open a channel of expression to assess and finalize the event and the SSE process, an opportunity to resume control points throughout the project and previously established connections.

From an intersubjective point of view, the SSE tool once again provided a collective trade-off at the end of the process by relating actors' different initial needs and intentions, demands and desires to what effectively happened, evaluating the extent to which expectations were met during the course.

The tone of the responses was quite positive, and it was an opportunity to reaffirm the ties established between participants and the institution that offered the course.

The actors involved in the project also received the comments very well, as e-mails were shared and several comments were made, which makes us reaffirm with (Knowles, Holton Iii e Swanson, 2011) the assertion that:

> "[...]a cardinal principle of andragogy (and in fact of the whole theory of adult and humanist education) is that *there should be a mechanism that includes all the parties involved with the educational activity in its planning*."(Knowles, Holton Iii e Swanson, 2011), p. 145. (highlighted)

The content of the answers from STAGE 3 is summarized and listed below in Table 5.

Table 5: Questions for the Post-event Survey of Expectations X Results in Categorized themes – STAGE 3.

Post-Event Survey of Expectations	STAGE 3 - Results in Categorized Themes
a) Were your main topics of interest (among those offered in the course) addressed?	- The answers indicated that their main topics of interest had been addressed during the course; some highlighted those that were extensively covered, while others indicated those that were insufficiently covered, for information purposes;
b) Which are the themes where you can offer a contribution to knowledge building within the course??	- The answers were affirmative, and stated they did so by/through: presentation giving an overview of the theme in their country of origin; presentation on the topic of in-lab coconut cultivation in and in nursery conditions; giving suggestions for improvements to the course; the very presence and attention, zeal and dedication in learning; the difficulty in trying to give a contribution;
c) How do you expect your professional skills to change after this course	- By: incrementing their skills; perfecting techniques in the area of rural extension; changing the business plan for a project in their country; acquiring new knowledge about the phases of coconut tree processing, its economic importance and the use of coconut by-products in agriculture; gaining more experience with the newly acquired knowledge;
d) How do you expect to apply that knowledge?	- In farmer training programs; dissemination among colleagues, friends, communities and rural extension agents; putting it into practice through technology transfer, training and technical visits with farmers, using fertilization and management techniques; conducting lectures in farmer field schools; reviving the important local coconut industry; with teaching and research at a university; building capacity and multiplying knowledge among farmers to improve competitiveness;
e) How do you expect this course to help solving existing problems in your area?	- By: helping to improve the maintenance of coconut farms, motivate farmers through integrated management and pest control techniques, and produce a quality product; paving the way for major research to face the challenge of reawakening interest in coconut cropping in my country; tackling the issue of fertilization and of pest management; learning about fertilization and soil correction techniques to avoid empirical fertilization; convincing farmers to replant coconut trees to produce coconut and by-products; applying knowledge to practical cases; using organic products, planning production, with soil analysis and consorted crop techniques that are more convenient for smallholders' livelihoods, improving their diet.

4. CONCLUSIONS

The SSE was thus formed in process that was parallel to the implementation of the project, centralizing intersubjective propositions and serving as a privileged forum for the interface among actors with their respective needs and intentions, demands and desires.

It redistributes and divides responsibilities regarding the results and goals to be achieved, with major effects on participants' commitment to their own success and with the success of the event.

The dissemination of such information that had been identified and addressed by the process of event planning and execution among actors (STAGE 1 and STAGE 3) and among participants (STAGE 2) relativized it under the different points of view. In this manner, participants assume a more active role in the conduction and development of the course, which allows for a possible reorientation of the event towards their needs and intentions, demands and desires; similarly, the other actors within the executive team can also in turn

restructure and re-signify their propositional-interventional base, no longer in an unilateral way but rather in the context of a participatory multilateral forum.

There was effective progress in mutual recognition among actors and their respective roles in the project, which provided more integration among the team while planning and executing a specific event, especially in this case, with participants from different backgrounds, cultures and languages, coming from very different socio-economic realities and with diverse personal and professional profiles.

In this sense, the SSE proved to be a practical, almost costless, and easy to use tool to obtain a positive synergy in the planning, construction and conduction stages of capacity-building projects, enabling greater involvement and commitment from participants in the various activities included in each project.

The use of the SSE also indirectly extended the period of project implementation, with greater interaction and iteration among actors before and after the event, increasing the opportunities for networking and to exchange experiences and reciprocal perceptions, which restructured and re-signified the entire propositional-interventional base of different actors, certainly scaling up new learning opportunities.

Thus the prospect of dialogue, exchange of experiences, and sharing of views and knowledge as foundations for learning in this type of event was preserved , which harmonically suits the andragogical perspective of operating at classroom level, as well as Brazilian policy guidelines for a new style of international South-South cooperation, at a political macro level.

One can also highlight the exchange and dialogue through effective individual participation in the event planning stage, a direct function of their expectations and commitment, critical factor of success in education, capacity-building and development, training, dissemination, and technology transfer activities, in which much value is given to the exchange of know-how, respect for diversity, peer cooperation, and the collective construction of knowledge as well as its influence on the adoption of technologies or practices or not, an adoption which in turn becomes a central category of analysis.

This study brings forth issues that demand a deeper understanding of the broad subjective effects of applying the SSE, proposing new research agendas.

Hence, the intention with the SSE is to propose a simple and practical method for planning, building and conducting training courses and capacity-building programs that makes the different expectations involved converge more harmonically, generating results and more consistent and significant impacts by means of successive iterative and interactive approaches, so as to enable the emergence of different connections, as (Ginsburg, 1989) asserts:

> [...] "the idea of a deep connection that explains the superficial phenomena can be confirmed whenever it is recognized that the direct knowledge of such connection is an impossible task. Reality is opaque, but there are certain points-clues, symptoms that allow us to decipher it.
>
> This idea, which is at the heart of the semiotic or conjectural paradigm, found a place in the broad spectrum of intellectual contexts, affecting the humanities more deeply." (Ginsburg, 1989)

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BIBLIOGRAPHY

ABBAD, G.; PILATI, R.; PANTOJA, M. J. Avaliação de treinamento: análise da literatura e agenda de pesquisa. **Revista de Administração da USP,** v. 38, n. 3, p. 177-280, 2003. ISSN 0080 - 2107. Disponível em: < http://www.rausp.usp.br/busca/artigo.asp?num_artigo=1101 >.

BECKER, T. E. FOCI AND BASES OF COMMITMENT - ARE THEY DISTINCTIONS WORTH MAKING. **Academy of Management Journal,** v. 35, n. 1, p. 232-244, Mar 1992. ISSN 0001-4273. Disponível em: < <Go to ISI>://WOS:A1992HE68100011 >

BORGES-ANDRADE, J. E.; ABBAD, G. S.; MOURÃO, L. Avaliação Integrada e Somativa em TD&E. In: (Ed.). **Treinamento, desenvolvimento e educação em organizações e trabalho**. Porto Alegre: Artmed, 2006. p.343-358.

BOYD JR., H.; WESTFALL, R. **Pesquisa mercadológica: textos e casos**. Rio de Janeiro: Fundação Getúlio Vargas, 1964.

COBB, P. et al. Design Experiments in Educational Research. **Educational Researcher,** v. 32, n. 1, p. 9-13, 01/01/2003 2003. ISSN 1935-102X. Disponível em: < http://edr.sagepub.com/content/32/1/9.abstract >.Disponível em: < http://edr.sagepub.com/content/32/1/9.full.pdf >.

_____. Design Experiments in Educational Research. **Educational Researcher,** v. 32, n. 1, p. 9-13, 01/01/2003 2003. ISSN 1935-102X. Disponível em: < http://edr.sagepub.com/content/32/1/9.abstract >.Disponível em: < http://edr.sagepub.com/content/32/1/9.full.pdf >.

COHEN, W. M.; LEVINTHAL, D. A. ABSORPTIVE-CAPACITY - A NEW PERSPECTIVE ON LEARNING AND INNOVATION. **Administrative Science Quarterly,** v. 35, n. 1, p. 128-152, MAR 1990 1990. ISSN 0001-8392.

DELORS, J. C. **Educação: um tesouro a descobrir. Relatório para a UNESCO da Comissão Internacional sobre Educação para o Século XXI.** São Paulo: Cortez, 1998. ISBN 85-249-0673-1. Disponível em: < http://ftp.infoeuropa.eurocid.pt/database/000046001-000047000/000046258.pdf >. Acesso em: 04abr2012.

Dicionário Houaiss da língua portuguesa. 2012. Disponível em: < http://atlas.sct.embrapa.br/houaiss2009/cgi-bin/HouaissNet.exe >.

DUTRA, J. S. O. **Gestão por competências.** São Paulo: Gente, 2001.

EMBRAPA. **Ações de educação corporativa (treinamento, desenvolvimento e educação - TD&E) desenvolvidas pelo Departamento de Gestão de Pessoas - DGP 2007 a 2011 - Sistematização de Dados**. PESSOAS, D. D. G. D. Brasília: EMBRAPA 2012.

ENAP. **Relatório de Avaliação do Projeto de Desenvolvimento Gerencial Estratégico do Governo de Moçambique**. Brasília: Ministério do Planejamento e Gestão e ENAP-Escola Nacional de Administração Pública 2012.

FLEURY, A. F., M. T. L. **Estratégias empresariais e formação de competências: um quebra-cabeça caleidoscópico da indústria brasileira.** São Paulo: Atlas, 2000.

GINSBURG, C. **Mitos, emblemas, sinais**. São Paulo: Cia. das Letras, 1989.

GONÇALVES, A. et al. A expectativa em relação ao treinamento influencia o impacto das ações de capacitação? **Rev. Adm. Pública,** v. 45, n. 2, p. 483-513, 04/2011 2011. ISSN 0034-7612. Disponível em: < http://www.scielo.br.ez103.periodicos.capes.gov.br/scielo.php?script=sci_abstract&pid=S0034-76122011000200009&lng=pt&nrm=iso&tlng=en>.

HELLO, F. A. **Ciência e gestão na universidade pública: das interfaces epistemológicas à práxis possível**. 2009. Doutorado (Doutorado). Faculdade de Educação - FE, Universidade Estadual de Campinas - UNICAMP, Campinas, SP, Brasil.

HOUAISS, A.; VILLAR, M. S.; FRANCO, F. M. M. **Dicionário Houaiss da língua portuguesa**. Rio de Janeiro: Objetiva, 2001.

KANUNGO, R. N. The concepts of alienation and involvement revisited. **Psychological Bulletin,** v. 86, n. 1, p. 119, 1979. ISSN 0033-2909 (Print). Disponível em: < http://psycnet.apa.org/journals/bul/86/1/119 >.

KELLY, A. E.; LESH, R. A. **Handbook of research design in mathematics and science education**. Mahwah, NJ: Erlbaum, 2000.

KIM, L. Building technological capability for industrialization: analytical frameworks and Korea's experience. **Industrial and Corporate Change,** v. 8, n. 1, p. 111-136, March 1, 1999 1999. Disponível em: < http://icc.oxfordjournals.org/content/8/1/111.abstract >.

_____. **Korea's national innovation system in transition.** Technology, Learning and Innovation. New York.: Cambridge University Press. 1999.

KNOWLES, M. S.; HOLTON III, E. F.; SWANSON, R. A. **Aprendizagem de resultados: uma abordagem prática para aumentar a efetividade da educação corporativa**. Rio de Janeiro: Elsevier**:** 404 p. p. 2011.

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Desenvolvimento, Território e Biodiversidade

LACERDA, É. R. M.; ABBAD, G. Impacto do treinamento no trabalho: investigando variáveis motivacionais e organizacionais como suas preditoras. **Rev. adm. contemp.,** v. 7, n. 4, p. 77-96, 12/2003 2003. ISSN 1415-6555. Disponível em: < http://www.scielo.br/scielo.php?script=sci_abstract&pid=S1415-65552003000400005&lng=en&nrm=iso&tlng=pt >.

LALL, S. **Building industrial competitiveness in developing countries.** Paris.: Organization for Economic Cooperation and Development - OECD. 1990.

LAWLER, E. E.; HALL, D. T. RELATIONSHIP OF JOB CHARACTERISTICS TO JOB INVOLVEMENT, SATISFACTION, AND INTRINSIC MOTIVATION. **Journal of Applied Psychology,** v. 54, n. 4, 1970 1970. ISSN 0021-9010. Disponível em: < <Go to ISI>://WOS:A1970H044000003 >.

LEMAIRE, A. **Jacques Lacan: uma introdução.** Rio de Janeiro: Campus, 1979. 317 p.

LORENZ, K. M.; UNIVERSITY, S. H. Índices de Avaliação para Programas de Treinamento de Recursos Humanos [Evaluation Indices for Human Resource Training Courses]. **Tecnologia Educacional**, n. 37, p. 15-21, 1981 2012. Disponível em: < http://works.bepress.com/cgi/viewcontent.cgi?article=1109&context=karl_lorenz >.

LUCKESI, C. C. Independência e inovação em Tecnologia Educacional: ação-reflexão. **Tecnologia Educacional,** v. 15, n. 71/72, p. 55-64, jul-out 1986 1986.

LÜDKE, M. A., M.E.A. **Pesquisa em educação: abordagens qualitativas.** São Paulo: E.P.U., 1986.

MATUS, C. **Política, planejamento e governo.** Brasília: IPEA**:** 292 p. 1993.

MAZZI, Â. P. R. Tecnologia Educacional: pressupostos de uma abordagem crítica. **Tecnologia Educacional,** v. 10, n. 39, p. 25-29, 1981.

MORIN, E. **Os sete saberes necessários à educação do futuro.** São Paulo: Cortez, 2000.

MRE, M. D. R. E.-.; ABC, A. B. D. C.-. **Cooperação Técnica Brasileira: Agricultura, Segurança Alimentar e Políticas Sociais.** MRE, M. D. R. E.-. e ABC, A. B. D. C.-. Brasília: Agência Brasileira de Cooperação - ABC**:** 16-17 p. 2011.

OECD., O. F. E. C. A. D.-. **Industrial competitiveness.** DIRECTORATE FOR SCIENCE, T. A. I. Paris.: Organization for Economic Cooperation and Development - OECD. 1996.

OREILLY, C.; CHATMAN, J. ORGANIZATIONAL COMMITMENT AND PSYCHOLOGICAL ATTACHMENT - THE EFFECTS OF COMPLIANCE, IDENTIFICATION, AND INTERNALIZATION ON PRO-SOCIAL BEHAVIOR. **Journal of Applied Psychology,** v. 71, n. 3, p. 492-499, Aug 1986. ISSN 0021-9010. Disponível em: < <Go to ISI>://WOS:A1986D487600020 >.

PERRENOUD, P. **Construir as competências desde a escola.** Porto Alegre: Artes Médicas, 1999.

_____. **10 competências para ensinar: convite à viagem**. Porto Alegre: Artmed, 2000.

PFEIFFER, P. O Quadro Lógico: um método para planejar e gerenciar mudanças. **Revista do Serviço Público,** v. 51, n. 1, p. 81-122, 2000.

PRAHALAD, C. K. **Reexame de competências.**: HSM Management.**:** p. 40-46 p. 1999.

RABINOWITZ, S.; HALL, D. T. ORGANIZATIONAL RESEARCH ON JOB INVOLVEMENT. **Psychological Bulletin,** v. 84, n. 2, 1977 1977. ISSN 0033-2909. Disponível em: < <Go to ISI>://WOS:A1977CZ19600009 >.

REICHERS, A. A REVIEW AND RECONCEPTUALIZATION OF ORGANIZATIONAL COMMITMENT. **Academy of Management Review,** v. 10, n. 3, p. 465-476, 1985 1985. ISSN 0363-7425.

SAVIANI, D. **Educação: do senso comum a consciência filosófica.** São Paulo: Cortez, 1985.

SCHACHT, W. H. **Industrial competitiveness and technological advancement: debate over government policy.** Washington, D. C.: Congressional Research Service. 1997.

SIMÕES, V. A. P. **Utilização de novas tecnologias educacionais nas escolas da rede estadual da cidade de Umuarama – PR**. 2002. 119 (Master). Faculdade de Educação, UFU - Universidade Federal de Uberlândia, Uberlândia-MG.

TAJRA, S. F. **Informática na educação: novas ferramentas pedagógicas para o professor da atualidade**. 9a. São Paulo: Érica, 2012.

TANNENBAUM, S. I. et al. MEETING TRAINEES EXPECTATIONS - THE INFLUENCE OF TRAINING FULFILLMENT ON THE DEVELOPMENT OF COMMITMENT, SELF-EFFICACY, AND MOTIVATION. **Journal of Applied Psychology,** v. 76, n. 6, Dec 1991. ISSN 0021-9010. Disponível em: < <Go to ISI>://WOS:A1991GT80300001 >.

TRIVIÑOS, A. N. S. **Introdução à pesquisa em ciências sociais.** São Paulo: Atlas 1987.

WERTSCH, J. **Mind as action**. New York: Oxfor University Press, 1998.

ZARIFIAN, P. **Gestão da e pela competência.** In: SEMINÁRIO INTERNACIONAL "EDUCAÇÃO PROFISSIONAL, TRABALHO E COMPETÊNCIA, CIET - CENTRO INTERNACIONAL PARA A EDUCAÇÃO, TRABALHO E TRANSFERÊNCIA DE TECNOLOGIA". Rio de Janeiro 1996.

_____. **Objetivo competência: por uma nova lógica.** São Paulo: Atlas, 2001.