The Impact of a Bi-national Forestry Training Project "BnFTP" on Trainees' Experiences Exchange

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Abstract

Through the last few decades, the world had witnessed several pervasive challenges: the climate change, the energy crisis, and more recently the Global food crisis, etc. These challenges impose the necessity of rethinking the present approaches of natural resources management and parenthetically rethinking their managers' skills.

The forestry education sector is not so exempted from this situation. Nowadays, the professional practice of forest engineering is not related only to the socio-economic circumstances and local social needs but also to worldwide context. The awareness of this fact motivates the educationists in forestry sector to rethinking their methods of education and training.

Nowadays, several forestry institutions around the world seek to add some cross-border training sequences within their training plans. This method intends to enable the future engineers to be more skilful in the international arena.

This method of training which I call BnFTP (Bi-national Forestry Training Project) represents a suggestion toward a practical educational action to move against several of the above-mentioned worldwide pervasive challenges.

This paper explores the impacts of an example of a bi-national real-life forestry training project on trainees' experiences exchange.

1- Introduction:

Through the last few decades, the world had witnessed several pervasive challenges: the climate change, the energy crisis, and more recently the Global food crisis, etc. These challenges impose the necessity of rethinking the present approaches of natural resources management and parenthetically rethinking thier managers' skills.

Rethinking a manager skills means, to some extent, the updating of the educational sector to be able to rejoin not only the worldwide knowledge expansion but also the human societies' needs. Moreover, harmonizing educational methods with interdisciplinary approaches is increasingly becoming a trend in several ecological fields.

The forestry education sector is subsequently not far away from this situation; nowadays, the professional practice of forest engineering should take into consideration these facts. As a result of considering these facts, educational institution could produce new capable graduates to rejoin various challenges and needs in forestry, wildlife and environmental themes or disciplines.

The desire of updating educational forestry sector motivates several forestry institutions to reorganize their educational programmes and their methods of teaching. Nowadays, a number of forestry institutions around the world seek to enhance their training cycles through the organization of training stages in a foreign country, this procedure could enable the future engineers to be more skillful in the international arena.

2- Conceptual background:

Engineering practice today is increasingly international, with cross-border practice of the profession becoming pervasive (Jones, 1999). For Jones, the new engineering education should widen the practice at the international level, and it needs to have some additional dimensions and requirements such as:

- Foreign language proficiency, written and spoken, in at least one foreign language, preferably two.
- Cultural background development: education concerning the culture of peoples in regions of the world where engineers may have practice.
- International business issues: competitiveness, free market developments, multinational companies, varying ethical norms, varying consumer protection mechanisms, etc.
- Technical issues: measurement systems, varying standards and codes, environmental concerns, etc.

The above-mentioned proposed dimensions of engineering practice lead to an investigation of the term "engineer". What is the meaning of this term? What is the role of engineer in societies?

Etymologically, General English dictionaries such as "The American Heritage Dictionary of the English Language" define the term "engineer" as "the one who is trained or professionally engaged in a branch of engineering, or the one who operates an engine or the one who skillfully or shrewdly manages an enterprise."

Didactically speaking, the definition of the term "engineer" is primarily associated to the historical evolution of the engineering profession. In 2007, after carrying out an epistemological analysis on this term, Cheikho concluded that the definition of engineer could be formulated as follow: "*The engineer is the person who is talented to generate solutions to rejoin unanticipated given problems*."

This definition could be generalized to cover different fields of human interest. Accordingly, carrying out training stages in a foreign country could be seen through this definition as a manner of insertion of trainees in a context which allow them to deal with an unanticipated problem.

Unfortunately, the above-mentioned context could never be standardized through merely the literature of traditional curricula. Indeed, neither the future real-life problems to be solved nor its priorities are predictable by the curricula designers.

Generally, training outputs are severely influenced by the source of treated problems or exercises (Cheikho, 2001). According to Cheikho, the treated problem in forestry engineers training could be classified according to its sources into two main types:

1. Hypothetical educational exercise:

The exercise is prearranged, according to curricular needs, to rejoin explicit educational objectives. The outputs of this type of exercise are not applicable in real-life; they are intrinsically evaluated inside the educational institution. The hypothetical exercise leads to theoretical concepts learning rather than to real-life applicable skills. This could limit the operational quality of future engineers.

2. Real-life educational exercise:

The exercise is firmly connected to a social context; it is planed in the form of a contract to rejoin not only explicit educational objectives but also unpredictable implicit real-life ones. The outputs of this type of exercise are applicable in the real-life; they are intrinsically and extrinsically evaluated. In addition to the theoretical concepts learning, the real-life exercise leads to learn contextual socio-economic applicable skills. This could enhance the operational quality of future engineers.

In fact, the problem-based learning through real-life exercises leads to trainees sharing experiences and acquiring multidimensional competences: professional, socio-economic and personal. These dimensions are not completely available through the traditional

educational practices. Kruger (2004) indicates that in recent years there have been a number of efforts to meet this growing demand with innovative programming, such as "travelling short courses", field courses. Etc.

McDermott et al (2002) describe the attributes expected by some professional institutions in their graduates or beginning practitioners; these qualities contain seven main categories: body of knowledge, life-long learning, effective problem solving, working alone and in teams, ethical action, communicating effectively, and international perspectives. McDermott et al (2002) conclude that, due to its considerations, physiological, psychological, epistemological and pragmatic, the experiential learning is seen to be essential in engineering formation.

In the same direction, Burns & Chisholm (2003) emphasized, particularly in the domain of engineering education, the work-based learning which, according to them, can support lifelong learning, continuous professional development and wider access and social inclusion.

3- Research context and methodology:

3-1-Training project description:

The training project entitled "Project of integrated management Agro-Sylvo-Pastoral" was organized by the French National School for Rural Engineering, Water and Forestry (ENGREF) in partnership with three Syrian Universities (Damascus, Aleppo and Tishreen). This project was carried out in the northern forests of Syria. The total surface of studied forests is about 870 hectares located in the region of Al-Ghâb.

The project teamwork, who worked for fifteen days on the study zone, consists of six groups; each group contains two Syrian and three French trainees. These groups were supervised by three Syrian and three French professors.

Main tasks of trainees:

- Achieving field surveys to recognize the status of studied area; climate, geology, plants and animal, etc.
- Evaluating natural resources; forest degrading, soil erosion, grazing, etc.
- Achieving a socio-economic survey; local populations, domestic economy, etc.
- Identifying forests' needs and functions.
- And finally the proposition of a new integrated management plan.

3-2-Research purposes:

As mentioned above, the reinforcement of forestry education

programmers through the incorporation of cross-border training sequences is a new tendency in the world.

Didactically, this kind of training represents a multidimensional field of learning for trainees who came with their educational and cultural differences. In fact, in these types of activities each trainee, native or foreign, plays paradoxically two roles; he is a teacher and at the same time he is a learner vis-à-vis of his counterparts.

This situation stimulates the inquiry about the entire learning process occurring during the training project for two reasons; on the one hand, this learning process takes place throughout the gathering of trainees from two different countries, and on the other it is important to know if this process rejoins the educational purposes of the institutions implied in this kind of activities. Accordingly, the problematic question of this paper could be formulated as follow:

What is the impact of a bi-national real-life forestry training project (BnFTP) on trainees' experiences exchange?

To simplify the treatment of this problematic issue, the research will try to provide answers to the following specific questions:

1- What are the potential fields of learning through this type of training?

2- What differences could be seen through the discourses of native and foreign trainees?

3- What are the acquired experiences through this BnFTP for Syrian trainees?

4- What are the acquired experiences through this BnFTP for French trainees?

5- What is the experiential effect of the native trainees on the foreign ones?

6- What is the experiential effect of the foreign trainees on the native ones?

3-3-Methods:

To answer the above-mentioned research questions it was necessary to observe few actual training days and to talk to trainees. Therefore, two techniques of data collection were used; the interview as a main technique and the observation as a supplementary technique.

- The interviews. Each trainee was interviewed "either in Arabic or in French language". In this research, the interview was indispensable to understand the trainees' experiences exchanges. Thus, the objective was to make the trainee talk not only as a learner but also as a teacher vis-à-vis his counterparts. Therfore, two main open-ended questions were asked:

- For Syrian trainees:

1- What have you taught French trainees?

2- What have you learned from French trainees?

- For French trainees:

1- What have you taught Syrian trainees?

2- What have you learned from Syrian trainees?

- The observations. This technique involved fifteen days of data collecting (from 8 am to 6 pm) through field notes taking.

- To analyze the content of interviews, the discourses were enumerated as follows:

	French trainee as a teacher	French trainee as a student	Syrian trainee as a teacher	Syrian trainee as a student
Code	**Ft**	**Fs**	**St**	**Ss**
Trainee N° 1	Ft1	Fs1	St1	Ss1
Trainee N° 2	Ft2	Fs2	St2	Ss2
Trainee N° 3	Ft3	Fs3	St3	Ss3
Etc.				

The discourses' components were exhaustively classified by using a specific analytical table. The table containing the code of trainees' responses and their discourses' elements is open-ended to incorporate new probable categories. The analysis aims to identify the field (or fields) of learning (categories) in which each phrase could be classified according to the possible understandable meaning(s). Thus the analytical categories were identified little by little according to the presence of new meaning. Here is an example:

code	Phrase	Context	Ecology	Concept	…	…	Etc.
Fs1	Connaissance sur la forêt syrienne.	+	+	+			
Fs1	Botanique.			+			
Fs2	Reconnaître les essences autochtones.		+	+			
Etc.							

The inter-observer reliability was established through carrying out three intervallic analyses of the whole data by the researcher him-self. This repetitive work was indispensable to insure the consistency of categorization procedures.

The next step of this analytical process is to quantify the obtained categories of learning fields according to research variables. To rejoin the specific needs of this research, the quantification outputs were statistically analyzed by using the software "SYSTAT 8.0" (SPSS Products).

4- Results, discussion and synthesis :

4-1- Classification of learning fields:

With reference to the question number (1), the discourses' content analysis has lead to identify thirteen fields of learning which include:

4-1-1-Techniques: This category denotes any procedure used to accomplish activities or professional tasks in forestry sector. It also refers to the systematic procedure or the way in which the forestry work is handled. The representative quotations and key-words of this field of learning are as follows:

… using GPS . // … method of data collection. // … phase of discussion. // … method of considering needs. // … management' methods. // … field procedures. // … sampling . // … etc.

4-1-2-Methodology: This category represents practices, procedures, general principles, and rules used by foresters through a specific order, such as theoretical analysis or working methods. The representative quotations and key-words of this field of learning are as follows:

… the necessity of field trips to observe. // … holistic approach. // … rationalization phase. // … scientific protocol. // … thematic group . // … foresters work is intimately close to local needs. // … information exchange. // … etc.

4-1-3-Fieldwork skills: The field is an essential area of forestry practices; this category represents any work done, observations made or data collected in the field. The representative quotations and key-words of this field of learning are as follows:

… the utility of working on field. // … stakeholders interview. // … way of leading a project. // … working more on field. // … works of plantation. // … Using instruments of measurement. // … technique of grazing in these zones . // … etc.

4-1-4-Context: This category refers to the totality of external surrounding circumstances in which the training project has been implemented, such as social and cultural conditions or atmospheric factors affecting the trainees' work. The representative quotations and key-words of this field of learning are as follows:

… local elements. // … local ecosystem function. // … stakeholders. // … translation into English. // … mediterannean forest dynamics. // … considering the dry summer climate. // … the local customs. // … local topography. // … etc.

4-1-5-Tools: This category represents instruments, apparatus, materials, devices, etc., with which a forester is equipped in order to facilitate the solution of practical problems or to execute a manual or mechanical work. The representative quotations and key-words of this field of learning are as follows:

… using GPS. // … using some other instruments. // … informatic manipulation of data. // … topographic measurements. // … using computers. // … facilitating work through instruments using. // … their equipments. // … etc.

4-1-6-Social aspect: This category can refer to human society and its modes of organization, social problems, social issue, relations or communal activities, human welfare, etc. The representative quotations and key-words of this field of learning are as follows:

… questionning the inhabitants. // … local population. // … needs of the populations. // … their conception of the forest. // … different public. // … the local customs. // … the human level. // … villagers training. // … etc.

4-1-7-Professional skills: This category represents the nature and standards of forester career such as conduct, professional performance, high quality skills, etc. The representative quotations and key-words of this field of learning are as follows:

… real-life working. // … importance of real-life project. // … cartographic synthesis. // … technical proposition. // … the way of leading a project. // … data manipulation. // … using appropriate species. // … utilization of wood. // … etc.

4-1-8-Values: This category can refer to principles, standards, ethics, qualities, symbols, beliefs of foresters such as the self-esteem. The representative quotations and key-words of this field of learning are as follows:

… indispensable real-life phase. // … considering the local population. // … considering management procedures. // … learning. // … protection of plants after plantation. // … patience. // … taking into account some habits. // … etc.

4-1-9-Communicative skills: This category denotes either to written or oral communication skills such as expressing oneself easily, engaging in conversations, receiving or giving information or expressing opinions, etc. The representative quotations and key-words of this field of learning are as follows:

… phase of discussion. // … interview stakeholders. // … technical proposal. // … answer. // … their question. // … linguistic aspect . // … accept ideas. // … information exchange. // … opinions. // … etc.

4-1-10-Teamwork skills: This category represents the cooperative effort of members of a group or team to achieve a common goal or mission. The representative quotations and key-words of this field of learning are as follows:

… our work. // … French and Syrians. // … the proof of a successful collaboration. // … was in my group. // … thematic group. // … solving

problems together. // … help them. // … information exchange. // … teamwork. // … etc.

4-1-11-Economy: This category refers to forest economy, resources management of a country, community, region or forest such as production of wood or any economic activity. The representative quotations and key-words of this field of learning are as follows:

… utilization of wood. // … considering the private public. // … increase the benefits of local populations. // … poor populations. // … the local populations needs. // … popular forests. // … etc.

4-1-12-Ecology: This category denotes the system of interdependence or the relationships between organisms and their environments: animals, plants, soil, etc. The representative quotations and key-words of this field of learning are as follows:

… impact of the livestocks and bovines on forest. // … avoiding making too much tracks in forest. // … the native species. // … dry summer climate. // … little rainy. // …recognizing the flora. // … local ecosystem. // … etc.

4-1-13-Concepts: This category refers to notions, abstracts, generalizations, facts or ideas derived from specific instances or occurrences. The representative quotations and key-words of this field of learning are as follows:

… species. // … the soil. // … the livestocks. // … bovines. // … Syrian forest. // … botany. // … native species. // … recognizing some plants in forest. // … phytoecology. // … plants with medicinal properties. // … etc.

4-2- The BnFTP as a learning ground:

The data analysis shows that the BnFTP offers to trainees several fields of learning: **Techniques, Methodology, Fieldwork skills**, **Context**, **Tools, Social aspect**, **Professional skills, Values**, **Communicative skills**, **Teamwork skills**, **Economy**, **Ecology**, **and Concepts**.

For more understanding of the intersection among these fields, the same data was statistically retreated by using a factors correspondence analysis, (Figure 1).

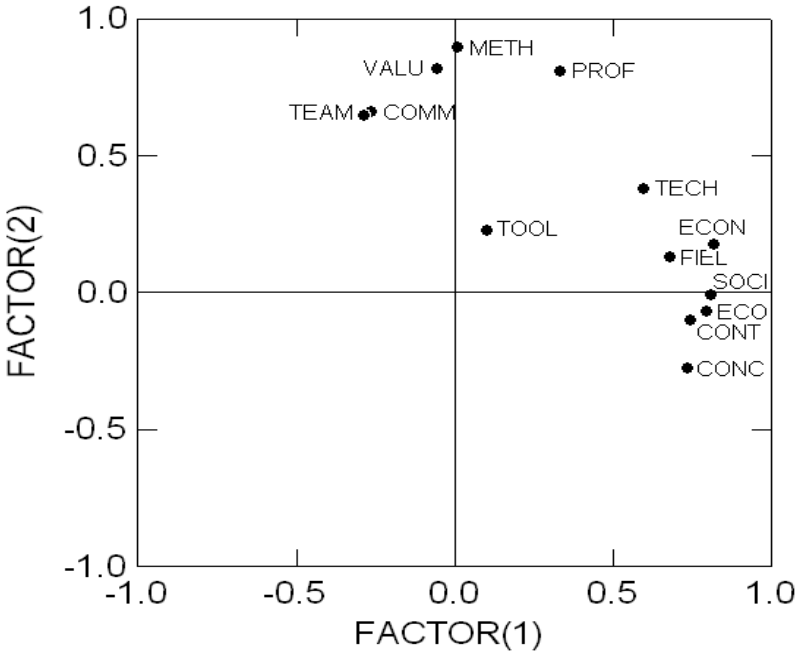

Figure (1) –The factors correspondence analysis outputs of learning fields.

The factors correspondence analysis shows almost three main combinations of learning fields. This classification was also ensured throughout a hierarchical clustering of the matrix of data, (Figure 2).

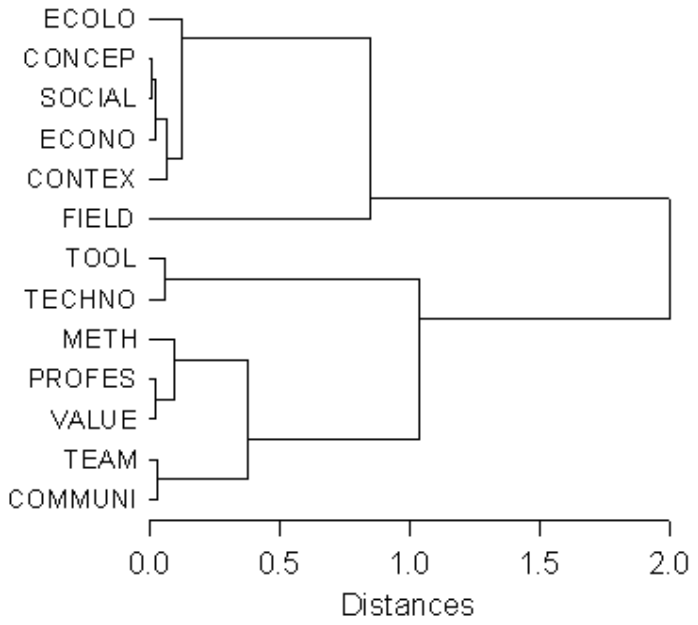

Figure (2) –The hierarchical clustering of the matrix of data.

The three combinations of the field of learning are as follows:

1. The first combination contains the fields of "Teamwork skills, Communicative skills, Values, Methodology and Professional skills"
2. The second combination contains the fields of "Tools and Techniques"
3. The third combination contains the fields of "Economy, Fieldwork skills, Social aspect, Ecology, Context and Concept".

4-3- Quantification of learning fields:

The results obtained through the quantification of learning fields should help in bringing answer to the question number (2).

1- The entire discourses of trainees:

In counting the number of pronounced phrases and their percentages to the total analyzed corpus, the content analysis of Syrian and French discourses shows that trainees gave more importance to professional skills, methodology of forestry work and the project context in comparison with other categories such as the field of ecology, fieldwork skills, professional values, the techniques of foresters and their disciplinary theorical concepts, (Figure 3). The social aspect, teamwork skills, communicative skills, the field of economy and tools were permanently present as fields of learning but they seemed to be less important in trainees' discourses.

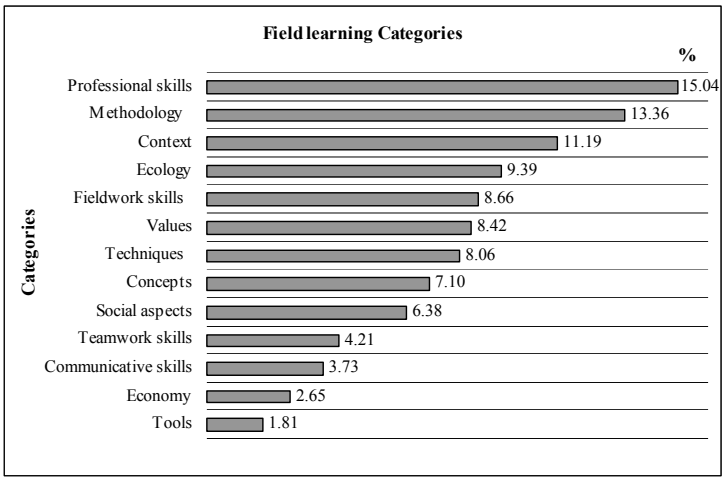

Figure (3) – Main field learning categories.

2- Discourses of Syrian trainees:

The content analysis of Syrian trainees' discourses shows that that trainees gave more importance to professional skills and methodology of forestry work in comparison with the other categories which could be ordered according to their importance in the discourse as follows: The field of ecology, the project context, professional values, teamwork skills, the techniques of foresters and their disciplinary theorical concepts, the social aspect, communicative skills, fieldwork skills, and finally the field of economy and category of tools, (Figure 4).

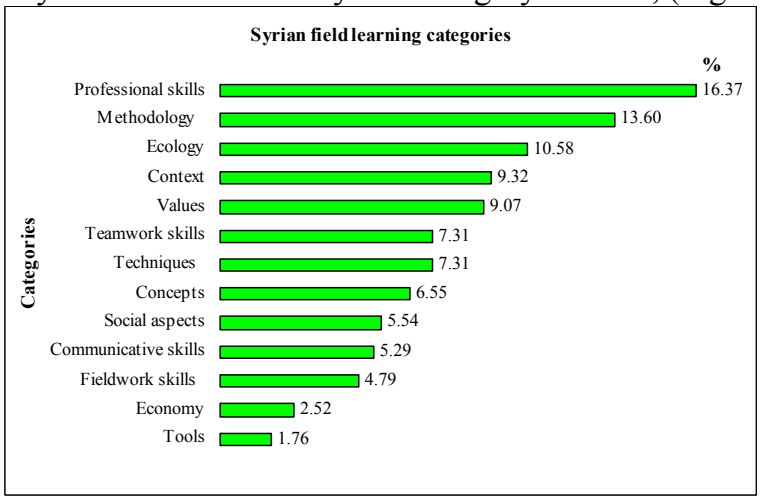

Figure (4) – Categories order as said by French trainees.

3- Discourses of French trainees:

The content analysis of French trainees' discourses shows that the thirteen fields of learning are distributed into quasi three groups: the

first is the most important, it contains professional skills, methodology of forestry work, the project context and fieldwork skills; the second symbolize significantly the techniques of foresters, the field of ecology, professional values, disciplinary concepts and the social aspect; the last group includes the field of economy, communicative skills, tools and teamwork skills, (Figure 5).

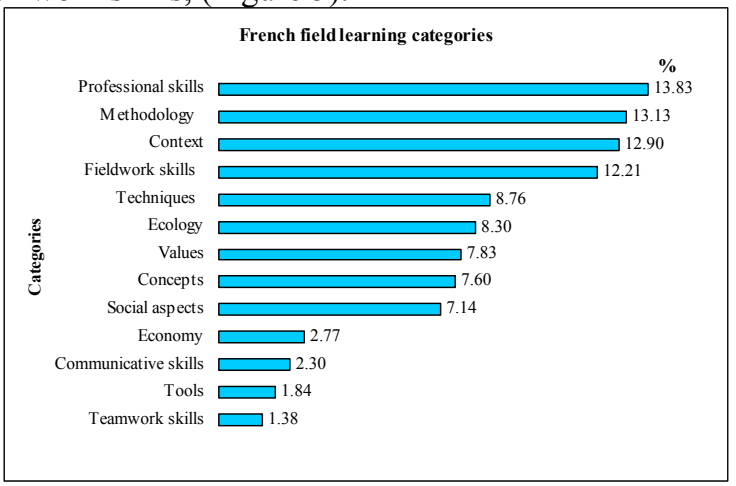

Figure (5) – Categories order as said by French trainees.

4- Syrian trainees' discourses compared to the French:

Percentages quantification of considered categories to the total analyzed corpus indicates that Syrian and French discourses have some resemblance; both discourses emphasized the importance of professional skills, methodology of forestry work and, to some extent, the project context; both gave as well a moderate importance to professional values, the field of ecology, and somewhat, the techniques of foresters, disciplinary concepts and the social aspect. Finally they classified tools and the field of economy as less important, (Figure 6).

In contrast, Syrian and French discourses are clearly different concerning the category of fieldwork skills which is more presented in French discourse compared to Syrian's. On the other hand, Syrians trainees gave more importance to teamwork skills and communicative skills compared to their French counterparts.

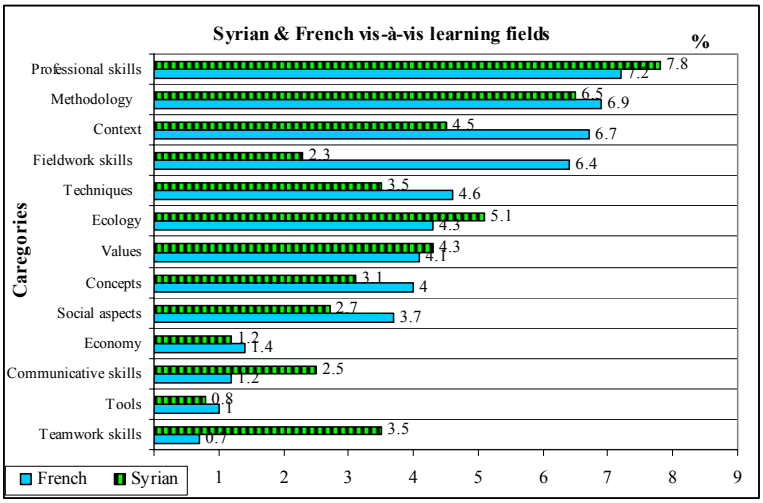

Figure (6) – The categories of French trainees' discourses compared to the Syrian.

Statistically, the calculated correlation coefficient (r) exceeds the tabulated (r) values[1]; the tabulated (r) values at both the significance levels (p = 0.05 and p = 0.01) for 11 degrees of freedom (df = n-2) are correspondingly 0.553 and 0.684; whereas, the calculated correlation coefficient is 0.71. There is less than a 1% probability of getting a value as high as this by chance alone. So the correlation between Syrian and French discourses is statistically significant; i.e. ***it could be reasonable to say that Syrian and French trainees show agreement on the available fields of learning through this BnFTP. This result also confirms that there was real experiences exchange between the two categories of trainees.***

4-4- Detailed analysis of discourses (Ft, Fs, St, Ss):

The detailed analysis of discourses will help in bringing answer to questions number (3, 4, 5 and 6).

1- Syrian trainees as teachers (St):

Syrian trainees believed that they taught French trainees several things which could be mentioned according to the importance of the presence in the discourse within three levels as follows, (Figure 7):

- Field with high importance: things connected to the context, the field of ecology and disciplinary theorical concepts.
- Field with moderate importance: the social aspect, professional skills, fieldwork skills and the techniques of foresters.

[1] - In Al Najjar & Gazal (1990), p. 372.

- Field with low importance: the field of economy, the methodology of forestry work, teamwork skills, communicative skills, professional values and forestry tools.

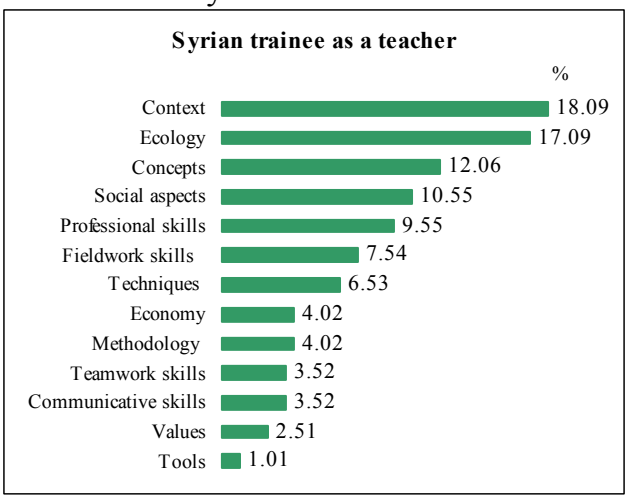

Figure (7) – Field of teaching as perceived by Syrian trainees.

2- French trainees as teachers (Ft):

French trainees believed that they taught Syrian trainees several things which could be mentioned according to the importance of the presence of the following three levels within the discourses, (Figure 8):

- Field with high importance: the methodology of forestry work, professional skills, fieldwork skills and to some extent the techniques of foresters.
- Field with moderate importance: professional values, things connected to the context and somewhat the field of ecology.
- Field with low importance: communicative skills, forestry tools, the social aspect, disciplinary theorical concepts, teamwork skills and the field of economy.

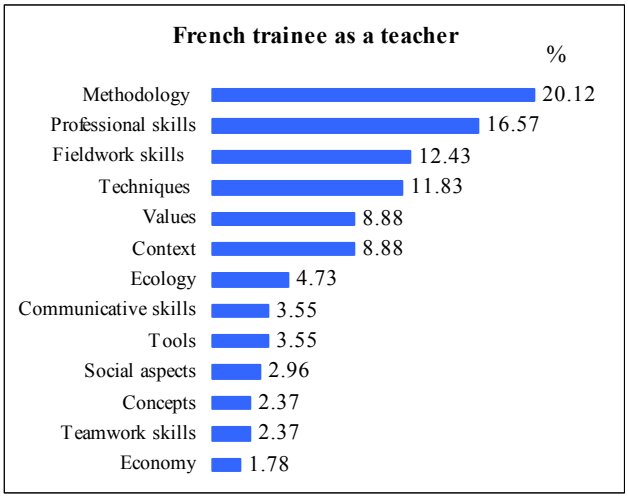

Figure (8) – Field of teaching as perceived by French trainees.

3- All trainees as teachers (Ft and St):

As teachers, the discourse of Syrian and French trainees is remarkably dissimilar; figure (9) shows that the unique category they gave almost the same level of importance is that of communicative skills.

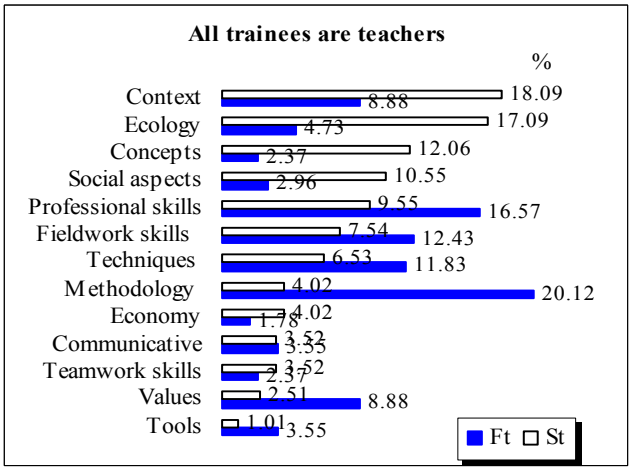

Figure (9) –The discourse of Syrian and French trainees as teachers.

Statistically, the calculated correlation coefficient (r) is smaller than the tabulated (r) value[2]; the tabulated (r) value at a significance level (p = 0.05) for 11 degrees of freedom (df = n-2) is 0.553; whereas, the calculated correlation coefficient is -0.011. So the correlation between the discourse of Syrian and French trainees "as teachers" is not

[2] - Ibid.

significant; i.e. ***it could be reasonable to say that Syrian trainees have taught their French counterparts something different compared to what they have been taught by French trainees. This result also confirms that the experiences exchange through a BnFTP is considered by trainees as a kind of a teaching learning process.***

4- Syrian trainees as students (Ss):

Syrian trainees believed that they learned from French trainees several things which could be mentioned according to the importance of the presence in their discourse within three levels as follows, (Figure 10):

- Field with high importance: professional skills, the methodology of forestry work.
- Field with moderate importance: professional values, teamwork skills.
- Field with low importance: techniques of foresters, communicative skills, the field of ecology, forestry tools, fieldwork skills, disciplinary theoretical concepts, the field of economy, the social aspect and things connected to the context.

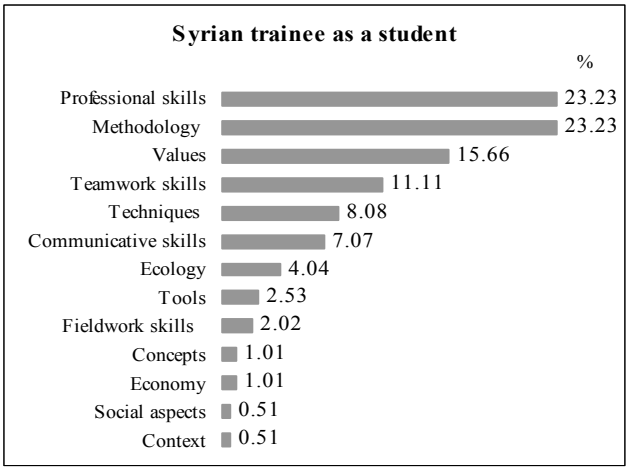

Figure (10) – Field of learning as perceived by Syrian trainees.

5- French trainees as students (Fs):

French trainees believed that they learned from Syrian trainees several things which could be mentioned according to the importance of the presence of the three levels in their discourses as follows, (Figure 11):

- Field with high importance: things connected to the context.
- Field with moderate importance: professional skills, fieldwork skills, disciplinary theorical concepts, the ecology, the social aspect and the methodology of forestry work.
- Field with low importance: professional values, techniques of foresters, the field of economy, communicative skills, teamwork skills and forestry tools.

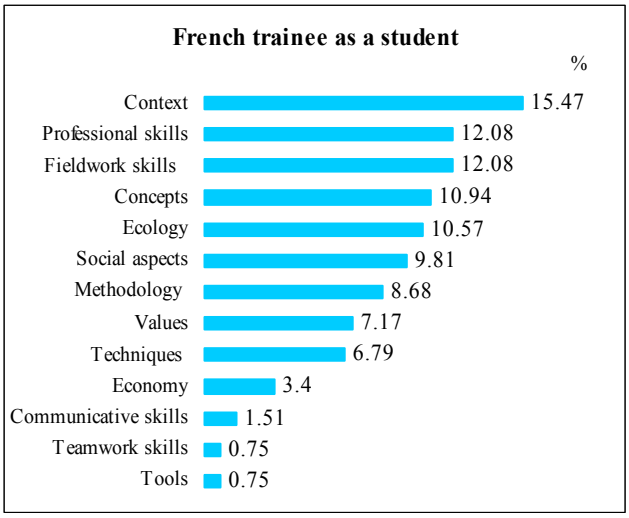

Figure (11) – Field of learning as perceived by French trainees.

6- All trainees as students (Fs and Ss):

As students, the discourse of Syrian and French trainees is notably different; figure (12) shows that the unique category they gave slightly the same level of importance is that of techniques of foresters.

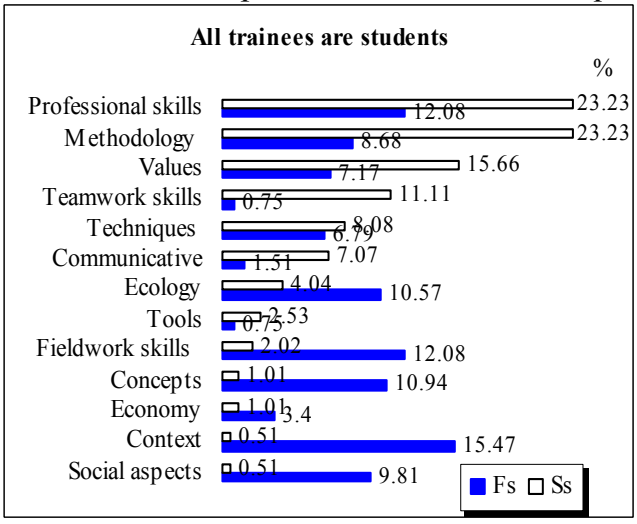

Figure (12) –The discourse of Syrian and French trainees as students.

Statistically, the calculated correlation coefficient (r) is smaller than the tabulated (r) value[3]; the tabulated (r) value at a significance level (p = 0.05) for 11 degrees of freedom (df = n-2) is 0.553; whereas, the calculated correlation coefficient is -0.01. So the correlation between

[3] - Ibid.

the discourse of Syrian and French trainees "as students" is not significant; i.e. ***it could be reasonable to say that the Syrian trainees' learning outcomes caused by French trainees are different from what French trainees have learned from their Syrian counterparts. This result confirms once more that the experiences exchange through this BnFTP is considered by trainees as a kind of the teaching-learning process.***

7- Syrians as teachers and Frenchs as students (St and Fs):

The comparison of quantified discourse of Syrians as teachers and the French discourses as students indicates that Syrian and French discourses have some resemblance: both discourses emphasized the importance of the field of learning related to the context and disciplinary concepts and social aspect; both gave as well a moderate importance to the techniques of foresters; and finally they gave low importance to the field of economy, communicative skills and tools, (Figure 13).

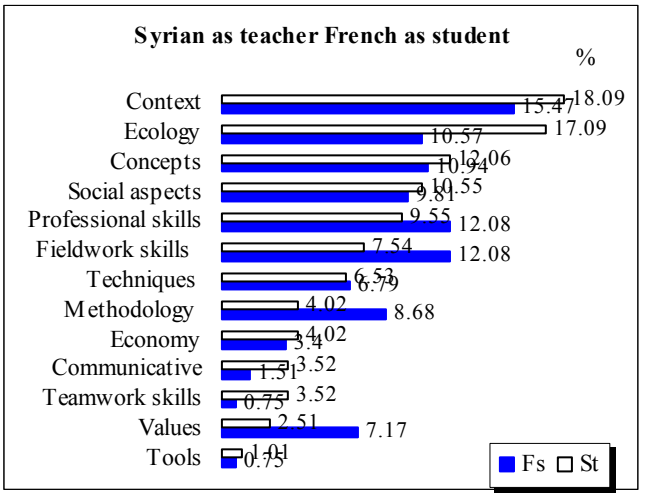

Figure (13) –The discourse of Syrians as teachers and Frenchs as students.

Statistically, the calculated correlation coefficient (r) exceeds the tabulated (r) values[4]; the tabulated (r) values at both the significance levels ($p = 0.05$ and $p = 0.01$) for 11 degrees of freedom (df = n-2) are correspondingly 0.553 and 0.684; whereas, the calculated correlation coefficient is 0.80. There is less than a 1% probability of getting a value as high as this by chance alone. So the correlation between the discourse of Syrians as teachers and the French discourse as students is statistically significant; i.e. ***it could be reasonable to say that Syrian and French have agreed on the fields of teaching as perceived by***

[4] - Ibid.

Syrians as native trainees. This result confirms the existence of an implicit process of the teaching-learning interaction between Syrian and French trainees.

8- French as teachers and Syrian as students (Ft and Ss):

The comparison of the quantified discourses of French as teachers and the Syrian discourses as students indicates that Syrian and French discourses have some similarity: both discourses emphasized the importance of methodology of forestry work and professional skills; both gave as well a moderate importance to the techniques of foresters; and they gave low importance to the field of ecology, forestry tools and the field of economy, (Figure 14).

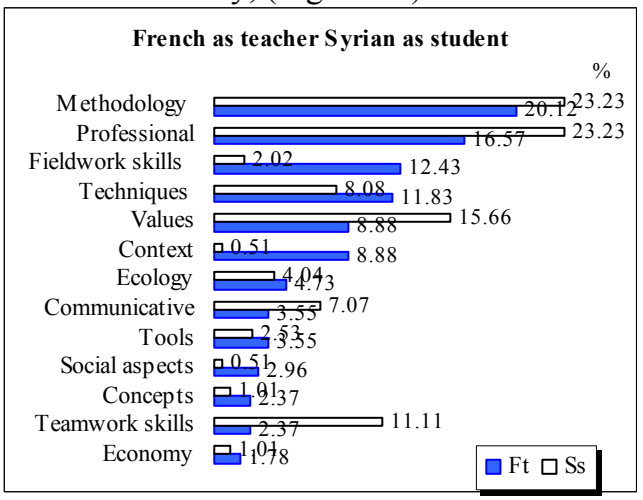

Figure (14) –The discourse of French as teachers and Syrian as students.

Statistically, the calculated correlation coefficient (r) exceeds the tabulated (r) values[5]; the tabulated (r) values at both the significance levels (p = 0.05 and p = 0.01) for 11 degrees of freedom (df = n-2) are correspondingly 0.553 and 0.684; whereas, the calculated correlation coefficient is 0.72. There is less than a 1% probability of getting a value as high as this by chance alone. So the correlation between the discourse of Syrians as students and the French discourse as teachers is statistically significant; i.e. ***it could be reasonable to say that Syrian and French have agreed on the fields of learning perceived by Syrians as native trainees. This result also confirms the existence of an implicit process of the teaching-learning interaction between Syrians and Frenchs trainees.***

[5] - Ibid.

The factors correspondence analysis outputs of Syrian and French discourses (Figure 15) shows a big correspondence concerning the type of discourse. It shows two main combinations of trainees' discourses; the first combination contains the two categories St and FS, and the second combination contains the remaining two categories FT and SS.

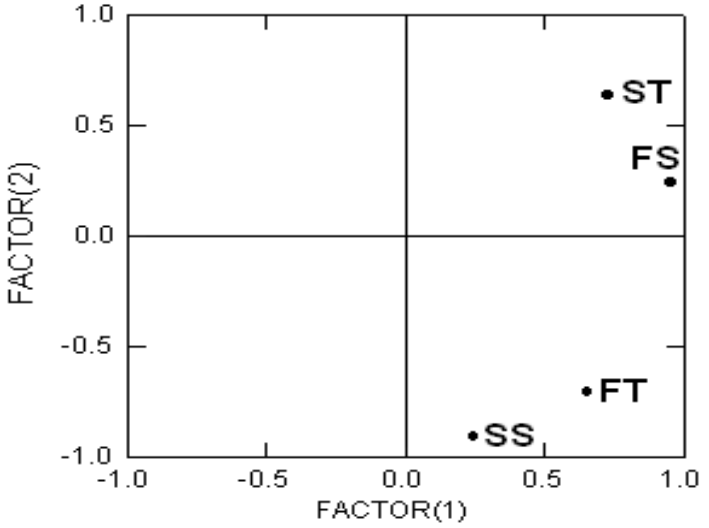

Figure (15) –The factors correspondence analysis outputs of trainees' categories.

This situation ensures the above-mentioned results; it confirms the existence of an implicit process of teaching-learning that happens between Syrian and French trainees and vice versa. This situation was also ensured throughout a hierarchical clustering of the matrix of data, (Figure 16).

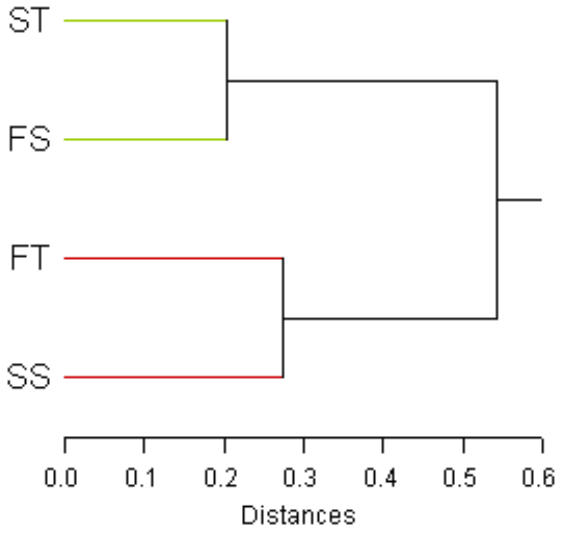

Figure (16) –The hierarchical clustering of the matrix of data.

5- Conclusion:

The findings of this research confirm the multidimensional educational character of the BnFTP (Bi-national Forestry Training Project). In addition to what they traditionally receive in classroom, the BnFTP offers to trainees a large amount of real-life knowledge and skills. These types of knowledge and skills - which are not easily acquired inside the classroom - are attached to several fields of learning such as techniques of forester, fieldwork skills, context, social aspect, professional skills, values, teamwork skills, etc.

Through this feature, the BnFTP represents potential dimensions of learning in view of the fact that it provides trainees multidisciplinary experiences by combining several fields of learning simultaneously. This result confirms what was mentioned by (Cheikho, 2001) concerning the real-life educational exercise.

Syrian trainees' acquired experiences were mainly enhanced at the level of professional skills and methodology of forestry work; whereas, the experience acquired by French trainees enclose, beside to the professional skills and methodology of forestry work, the project context and fieldwork skills.

The observed differences between Syrian and French perception concerning the field of learning confirm a situation of real experiences exchange between them.

Statistically, the analysis of correlation coefficient indicate that the experiences exchange was for the benefit of French trainees; i.e. it could be reasonable to say that Syrian trainees have taught to their French counterparts more than what they have learned from them.

The experiential effect of Syrian on French trainees was mainly concentrated on the field of learning related to the context, disciplinary concepts and the social aspect. Whereas the experiential effect of French on Syrian trainees was mostly concentrated on the field of learning in relation to the methodology of forestry work, professional skills, and moderately the techniques of foresters. This result indicates an implicit process of teaching-learning interaction between Syrian trainees as teachers and French trainees as students.

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«وصل هذا البحث إلى المجلة بتاريخ 2009/2/5، وصدرت الموافقة على نشره بتاريخ 2009/6/7»

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