

القيم المهنية الحراجية وفق ممارسين للمهنة من مهندسين حراجيين سوريين وفرنسيين

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الملخص

تؤدي القيم المهنية إلى جانب المعارف والمهارات ذات الصلة دور الهوية بالنسبة الى منتسبي مهنة ما. فبالأخذ بالحسبان للسمة التنافسية لسوق العمل قد يعادل امتلاك القيم المهنية الحصول فرصة عمل أو أشياء أخرى. يعد هذا الأمر محرضاً للمؤسسات التعليمية لتكثيف جهودها بغرض تحسين مخرجاتها على الصعيد المهني. ضمن هذا السياق أوضحت مؤسسات التعليم الحراجية أيضاً مجبرة على البحث عن أفضل السبل لتزويد قطاع الحراج بالطواقم جيدة التأهيل وعالية المستوى من حيث التدريب، إلا أنّ التحدي في قطاع التعليم الحراجي متعدد الوجوه؛ فعلى المهندس الحراجي ليس فقط إرضاء متطلبات سوق العمل، وإنما أيضاً أن يكون قادراً على التعامل مع التحديات الطارئة وغير المتوقعة في الغابات والمحيط الحيوي؛ وهنا لا يمكن إدراج القيم المهنية الحراجية ضمن المناهج لأنها لاتزال مضمرة بالنسبة الى معظم الحراجيين. والحال هذه، يأتي هذا البحث كمحاولة لرسم خطوة باتجاه إيجاد ترجمة تعليمية للقيم المهنية الحراجية التي تعكسها الأفعال والسلوكيات المهنية لمجموعة من المهندسين الحراجيين العاملين فعلياً في هذا القطاع. المجتمع المستهدف في هذه الدراسة مؤلف من مهندسين حراجيين سوريين وفرنسيين سبق أن عملوا ضمن مشروع حراجي مشترك. وقد عرّفت عبر هذا البحث أربع عشرة قيمة مهنية حراجية، وقد صنفت أيضاً ضمن ثلاثة مستويات، فضلاً عن توصيف تعريفي بطابع الهوية لأنموذجين قيميين، كما تضمن هذا البحث استعراضاً للتطبيقات التربوية المحتملة لنتائجه.

الكلمات المفتاحية: علم الحراج؛ مهنة؛ قيم؛ عمل؛ تعليم؛ مناهج؛ مهندس حراجي؛ سوري؛ فرنسي.

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Forestry Professional Values (FPVs) as Perceived by In-Service Syrian & French Forest Engineers

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Abstract

Professional values play, along with related knowledge and skills, a labeling role for a given career' community members. Keeping in mind the real competitive nature of work market, having possession of professional values could mean among other things job-opportunities. This fact promotes educational institutions to enhance their efforts to improve their professional outputs. Within this context, forestry educational institutions are also forced to look for the best ways to provide forestry sector with well qualified and high level trained staffs. But the challenge in the educational forestry sector is multifaceted; forest engineer has not only to be able to satisfy work market' constraints but also to be able to deal with emergent and non-predictable defies in forests and natural milieus; Unfortunately, forestry professional value could not yet be integrated within curricula because they are still implicit for most foresters. Along with this framework, This paper tries to make a step towards the didactic translation of in-service forest engineers' acts and behaviors into standard forestry professional values (FPVs). The targeted population of this study composed of Syrian and French forest engineers who work in a common forestry project. Through this paper, fourteen FPVs have been identified and classified within three levels in addition to the schematization of two professional ethos identity models. The findings have included also probable educational assets.

Key words: Forestry; career; values; work; education; curricula; forest engineer; Syrian; French

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I. Introduction

The task of engineers in any society is to bring answers and to find solutions to different emerging related problems. Accordingly, it is not an exaggeration to say that no civilized society could continue prosperous life without professional skills. In fact, the career of engineer has represented for human societies and still represents not only a socio-economic need, but also a development factor in different fields: Agriculture, Industry, Urbanism and Landscape, etc. Taking into consideration of the increasing competitive character of the work market, not only in Syria but also all over the world, engineering institutions and faculties of engineering found themselves faced with big challenges. Motivated for coping with this kind of competition and for providing their societies with well qualified graduates, these faculties and institutions are forced to find the way to reshape and improve their educational systems; to develop new approaches to teaching and learning, to adopt new ideas and concepts, to update their curricula and teaching methods, and to build their own regular assessment process., otherwise they will be left behind. In this context, forestry sector in his turn and to be able to deal with emergent and non-predictable challenges in forests and natural milieus needs to be provided with well qualified and a high level trained staffs. Ragers (2004) considered that the building of a successful educational course progresses through the identification of the occupational profile (needs and expected attitude): "The aim of an educational programme is to train students/employees in order to develop sufficient knowledge, skills and the right attitude to be able to be successful in their job. To be sure that the programme is successful it is important to identify which needs exist and which attitude is expected. Therefore, it is important to make job profiles. These job profiles can be translated in terms of related job competences needed." Indeed, the needed qualification should provide the future engineers with more than simple technical skills; it should as well allow them to acquire the professional values related to their future careers. Unfortunately, these professional values - of most careers - have not been standardized within their occupation profiles yet; therefore, instructional designers are not able to pertinently consider them while building curricula.

II. Theoretical Framework

The impact of the worldwide natural challenges (climate change, energy crisis, Global food crisis, etc.) on forests and natural milieus are generally various and non-predictable. This fact enforces the career of forest engineer to be as flexible as the maximum possible. Understanding the mechanism of this flexibility requires not only an examination of forestry professional skills of the forest engineer but also his professional values which are intrinsically connected to the referential knowledge of this career. Here, it should be mentioned that the referential knowledge in forestry was and still considered by several researchers as a problematic question.

In 1955, Shirley had evoked several types of foresters' tenets; the sacredness and the goodness of human life, the limited natural resources, the natural laws to which plants, animals and man respond, and the education as a life-long task for every man.

In the same direction, the royal charter of the institute of chartered foresters in the United Kingdom¹ regulated not only the standards of entry and practice of forestry profession, but represented also a code of ethics for all members. This code of Ethics considered the professional values and ethics as rules for the professional conduct, practice, actions and judgments.

Through his work on the qualification of forest engineers, Cheikho (2002) had divided the referential knowledge in forestry engineering into three main parts; the first concerns the theoretical forestry knowledge, the second related to the social practice of the profession and the third part concerns professional values. Accordingly, forestry professional values (FPVs) could be identified as the characteristic principles, beliefs and attitudes of the career of forest engineers that guide job-related decisions and actions.

Through his critical review of forestry education, Brown (2003) has emphasized items such as professional conduct, professional knowledge. For him, professional education comes not only from academic forestry knowledge understanding but also from learning about how and when to apply this knowledge; he considers that the professional knowledge

1 - In F.I.C.For. (2004).

includes propositional knowledge (“knowing that”), process knowledge (“knowing how”), personal knowledge, and to end ethical principles or socialization into the professional approach, including gaining a sense of professional identity.

Cheikho (2007) has noticed that the career of engineer is not only deeply attached to social needs, but also reflects itself a real social need. In fact, the forest engineer plays at socio-economic level an important role especially in forestry zones. He is asked to prove professional skills to find solutions to rejoin different forestry problems. Consequently, the social practice of the career of forest engineer necessitates the demonstration of specific professional skills; these skills should reflect the professional qualification of an engineer.

In fact, the educational question concerning the career’ social practice was and still stimulating research efforts around the world. Providing job-related knowledge and skills through educational systems are not enough for certain researchers; Blok (2004) proposes supporting these systems with additional professional values. Other researchers tried dealing with this matter through making proposals concerning educational approaches. For instance, Raggars (2004) highlighted the importance of interdisciplinary approach for promoting cooperation and communication in forestry sector. “Students must be able to integrate knowledge and skills of different disciplines in the projects. One of the major advantages of this approach is that students are trained to cooperate and have good communication and information skills. This is very important for foresters nowadays.”

By the same token, Buiting (2004) focused on the importance of communicative skills. “It is clear that not only expert knowledge is demanded of managers. Communicative skills appear to play an increasingly important role and it remains to be seen whether the present forestry education seizes on this sufficiently.”

Within his report on the 6th European forum on educating the Urban Foresters findings, Davies (2004) has also concluded that skills for urban foresters should include a flexible attitude for ‘all’ forest workers, entrepreneurship, creativity, leadership, integrity of approach and open communications. “Besides professionalism in the field of recreation, more emphasis will be placed on skills such as a flexible attitude,

entrepreneurship, creativity, taking the initiative, integrity and good, open communication.”

Didactically speaking, Cheikho & Clément (2002) have mentioned that only the theoretical knowledge of forestry could explicitly be acquired through academic courses; according to them, neither the social practice of the profession nor professional values are predictable by curricula designers, and that's why they should be acquired through real practice and professionals fellowship.

To end with, in accordance with the proposition of Raggars (2004), which says that the identification of the job occupational could lead to the building of a successful educational course, the standardization of FPVs could make of the regular educational acquiring of these specific values a tangible matter.

III. Research Context and Procedures

III.1. Purpose and Objectives

Values, in addition to other related knowledge and skills, represent an essential constituent of any career. They play somewhat a label role for the community members of a given career. Accordingly, the quest for professional values of a specific career should certainly start through interrogating the related career community members, but the emergent difficulty in this case is about the pertinence and the neutrality of their responses. Actually, and keeping in mind that - in the real competitive work market - professional values could mean among other things job-opportunities, asking those people directly about their professional values is similar to the situation of asking a cook if he knows how cooking?!. In contrast, letting them feel themselves as adjudicators or evaluators vis-à-vis their career counterparts could make their responses more credible. This credibility could be also enhanced through avoiding direct questions concerning values and replacing them by others about obvious acts and behaviors which enable and facilitate the subtraction of pertinent answers related to the professional values. In effect, the adoption of this manner for values identification could provide instructional designers with a pertinent guideline for the reconsideration of professional values while building forestry curricula. Accordingly, the problematic question of this paper could be formulated as follows:

What FPVs could be identified through job-related acts and behaviors of in-service forest engineers?

In view of that, the research objectives were developed as follows:

- 1- What FPVs could be subtracted from job-related acts and behaviors of both Syrian and French forest engineers?
- 2- What FPVs could be subtracted from job-related acts and behaviors demonstrated by French forest engineers?
- 3- What FPVs could be subtracted from Syrians' job-related acts and behaviors as perceived by French engineers?
- 4- What FPVs could be subtracted from job-related acts and behaviors demonstrated by Syrian forest engineers?
- 5- What FPVs could be subtracted from French' job-related acts and behaviors as perceived by Syrian engineers?
- 6- What professional ethos identity could be attributed to each group of interviewed engineers?

III.2. Procedures

The current research was a part of an existing data set from a prior study by Cheikho (2011) on the impact of a bi-national forestry project on experiences exchange. The targeted population of this study was all Syrian and French forest engineers involved within the Franco-Syrian forestry project entitled "Project of integrated management Agro-Sylvo-Pastoral" which was carried out in the northern forests of Syria in the region of Al-Ghâb. The project teamwork consists of twenty seven forest engineers; twelve Syrian and fifteen French. The teamwork' members have initiated and implemented together several forestry activities: achieving field ecological surveys, assessing natural resources in the studied zones, achieving socio-economic surveys, identifying forests' needs and functions, and proposing a new integrated management plan.

Data have been collected through semi-directive interviews where each member of the targeted population has been asked, as a talent demonstrator and as an evaluator, to describe acts and behaviors manifested by both Syrian and French engineers for the period of the implemented forestry project. Thus, each forest engineer was interviewed "either in Arabic or in French language". The objective of interview is to encourage each engineer producing a verbal account concerning professional acts and behaviors. For this objective, two main indirect open-ended questions were formulated:

- 1- What acts and behaviors you believe have demonstrated facing your counterparts?
- 2- What acts and behaviors you perceived as demonstrated by your counterparts?

The purpose of these open-ended questions is to permit to each interviewee to express the subject matter spontaneously and objectively. Through this technique, the written answers should imply some indicators on professional value without being stated outright. The compilation of verbal data has been submitted into content analysis process to find answers to this research questions. That is to say, the content analysis process will try to infer unspoken or implicit information from explicit statements. This procedure could permit the extrapolating of results with high level or reliability. The written answers' components were carefully classified by using a specific analytical table.

This table, which contains the discourses' elements as rows and the categorization system as columns, is designed to be open-ended to incorporate new probable categories. The analysis process aims to identify the professional values (as categories) in which each phrase could be classified under one or more categories along with the possible understandable meaning(s). Consequently, the analytical categories were identified little by little according to the presence of new meanings. Here is an example:

Phrase	Realism	Assiduousness	Complexity	Etc.
Protection des plantes après plantation		+					
Sur de sujets très variées			+				
.							
Etc.							

The inter-reliability of rater was established through carrying out two intervallic content analyses of the whole written interviews by the researcher himself, this repetitive work was necessary to insure the

consistency of analytical procedures. The next step of this analytical process is to quantify the obtained categories of professional values according to research questions. To rejoin the specific needs of this research, the treatment of quantification outputs was done by using the Excel software (Microsoft® Office product).

IV. Results

The qualitative and quantitative analysis of written answers has led to obtain a number of categories of speech. The next paragraphs contain an exhaustive description of results according to the research questions.

IV.1. FPVs of both Syrian and French forest engineers

Rejoining the first question of this research, a qualitative, and a quantitative analysis have been elaborated.

IV.1.1. Qualitative analysis outputs

The content analysis of the written interviews has led to the identification of fourteen FPVs: The realism, the cooperativeness, the open-mindedness, the self-trust, the adaptation, the organization, the seriousness, the precision, the patience, the complexity, the assiduousness, the practicality, the relativism, and the tolerance. The identified professional values in addition to some example of interviewees' speech could be mentioned and clarified as follows:

1. Realism: In opposition to idealism, this value denotes a tendency toward reasonable truth and pragmatism, or else the representation of actions as they actually are, without idealization or presentation in abstract form. The representative quotations of this value are as follows:

... et de prise en compte de la population locale indispensable également. // ... réaliser un inventaire de l'existant. // ... etc.

The value of realism is imposed by the forestry career subject. It appraises clearly in forestry career through inevitable surveys and inventories; without data collection no forestry work could be done.

2. Cooperativeness: Opposed to individualism, this value represents the trait of being cooperative or the willingness to cooperate. It could be materialized through the association of persons or efforts for common objective such as working in teams or groups. The representative quotations of this value are as follows:

... العمل ضمن الجماعة ... // العمل ضمن مجموعات أو فرق منظمة ... etc.

Considering the nature of forestry tasks, the value of cooperativeness seems to be very important.

3. Open-mindedness: in contrast to narrow-mindedness, this value represents the quality of having or showing receptiveness to new and different ideas or opinions of other partners or stakeholders. The representative quotations of this value are as follows:

... les coutumes locales. // ... connaître (en partie) la culture d'une population du Proche-Orient. // ... des habitudes et des modes de pensée nouveaux. // ... etc.

In fact, this value represents for forest engineers an important prerequisite aptitude for facing the cultural question they may find in a given foreign context in which they have to; live a new cultural environment and different lifestyles; meet locales populations; perceive new habits, new customs and routines.

4. Self-trust: This value refers to the confidence in oneself or one's own abilities. On account of this value, forest engineer should consider himself as an expert in his field and be satisfied of his work. The representative quotations of this value are as follows:

.../مقترحات الفرنسيين غير ملائمة... // إننا أجدد الناس في العالم في إدارة مواقعنا الحراجية ...

The value of self-trust is related to the personality of a given person; it is not limited to a specific career.

5. Adaptation: Terminologically, this value can denote changes in behavior of a person or group in response to new circumstances or unanticipated situation. The adaptation value could be materialized through the adjustment of one's own habits or work-plan arrangement according to presented conditions. The representative quotations of this value are as follows:

... etc. // التعامل مع الطبيعة والظروف القاهرة ... // إمكانية العمل ضمن الظروف والإمكانيات ...

The value of adaptation is deeply connected to the personality of a given person; it is not limited to a specific career.

6. Organization: This value concerns the trait of anticipating the work-plan structure through which partners could systematically cooperate to conduct a specific task. Owing to this value, highly structured forestry work-plan could encompass not only firmness as for targeted objectives, but also flexibility in methods, commitments and schedule. The representative quotations of this value are as follows:

... etc. // العمل موزع على مجموعة كبيرة مقسمة إلى مجموعات صغيرة ... // تنظيم مراحل العمل ...

In forestry sector, the value of organization could be considered as a directive motor for arranging forestry work plans and then putting these plans into practice.

7. Seriousness: This value represents the quality of being sincerely and earnestly engaged in forestry work. Usually, those who assimilate the seriousness value should be committed and deeply interested or involved in their tasks. The representative quotations of this value are as follows:

... etc. // ومناقشة الأفكار بجدية ... // هذا فضلاً عن الجدية في العمل ...

The dangerous nature of forestry tasks enforces foresters to be committed; triviality is not acceptable within this context.

8. Precision: This value denotes the state or quality of being accurate in forestry measurements and calculation with little tolerance for error to recognize an excellent quality of work and reliable outputs. The representative quotations of this value are as follows:

... etc. // التركيز الدقيق على بعض القياسات ... // الدقة في التخطيط قبل العمل ...

The value of precision is imposed by the forestry career subject. Obtaining a high productivity of forestry projects supposes the preexistence of a high quality of forestry measurements, and this necessitates the real assimilation of this value.

9. Patience: This value symbolizes the capacity of enduring disagreeable situations, inconveniences, or difficulties without complaint. Usually, holders of this value have not only the trait of self-discipline, self-reliance, calmness, but also the ability to wait. The representative quotations of this value are as follows:

... Et combien nous avons besoin de patience. // ... Appréhender les difficultés d'être fonctionnaire. // ... etc. // التخطيط الجيد وإن احتاج وقتاً طويلاً ...

Forestry career activities are well-known by their long-term character; forestry staffs could not assume their professional responsibilities if they are not definitely aware of the importance of the value of patience to their career. Forest engineers meet actually different types of difficulty: long-term plans, official procedures, dealing with different type of stakeholders, etc.

10. Complexity: This value denotes the recognizing of the fact that forest milieu, as a system, results from extremely complicated and interdependent other smaller or larger systems. Accordingly, forestry

career conditions should be considered as complex as the treated subject matter. The representative quotations of this value are as follows:

... s'efforcer de bien regarder tous les éléments du milieu quand on fait des relevés. // ... envisager une zone forestière dans sa globalité économique, sociale et écologique. // ... etc.

The complexity could be touched everywhere in forestry sector. No pertinent decision could be made without taking into consideration of all integral elements of the forest system in addition to social needs, forest neighbors and stakeholders, and ecological needs of future generations.

11. Assiduousness: This value denotes the capability of being unceasing and persistent in forestry work-plan implementation, and the assiduous or the diligent forester is who work hard to carry out his task with perfection. The representative quotations of this value are as follows:

... Protection des plantes après plantation. // ... المتابعة في العمل // ... etc.

Due to the long-term character of different forestry activities such as the follow-up and protection of replanted forests after the achievement of plantation works. The value of assiduousness should be a prerequisite for forest engineers.

12. Practicality: This value denotes the fact that forestry career is a particular art; forestry professional skills are deeply attached to fieldwork practices and even praxis. Accordingly, those engaged in forestry profession should keep in mind with seriousness the priority of fieldwork. The representative quotations of this value are as follows:

... connaître les méthodes d'aménagement et les procédures de terrain. // ... tenir compte des besoins des populations (bois, pâturage, plantes...). // ... etc.

Considering the professional nature of forestry skills, this value is imposed by the fieldwork and teamwork needs; it could represent a key factor for the integration of any new method, procedure or tools within their professional practices.

13. Relativism: This value denotes the attitude of considering ideas such as truth, accuracy, beliefs, values and moral codes, etc., are not absolute but are relative to individuals, stakeholders or communities holding them. The representative quotations of this value are as follows:

... Une façon différente d'appréhender le milieu forestier. // ... ليس كل ما يُقترح أو يُخطط له يمكن أن يُنفذ ... etc.

For forest engineers, the value of relativism denotes the multidimensional character of any forest or any natural milieu. They understand that different stakeholders could have different meaning of a given forest, but this does not stop them working; they achieve their tasks taking into account this fact.

14. Tolerance: This value denotes the capacity of recognizing and considering with respect to the different ideas, opinions, beliefs or practices of other partners or stakeholders in forestry sector. The representative quotations of this value are as follows:

... etc. // إمكانية طرح الأفكار والمقترحات كلها ... // احترام آراء بعضهم بعضاً ...

Through their daily practices, forest engineers have to deal with their teammates, stakeholders, local communities and forests neighbors with their opinions and beliefs. They could not be able to manage this wide range of differences without a tolerance.

IV.1.2. Quantitative analysis outputs

The counting of the number of pronounced phrases related to FPVs and their percentages to the total analyzed corpus indicates that both Syrian and French engineers had highly focused on five values; the patience, the precision, the relativism, the complexity, and the realism (Figure 1). With reference to the nature of the career of forest engineer which implies intrinsically and imperatively these five values, the obtained result could be considered as largely logical. For the interviewed persons, the values of open-mindedness, cooperativeness, seriousness, organization, tolerance and that of practicality occupied the second position; in comparison with the first group of values, their percentages to the total analyzed corpus are evidently inferior. The third group of values contains three elements; adaptation, assiduousness, and self-trust; compared to the two preceding groups of values, their modest percentages of presence do not mean that they are irrelevant with reference to the career of forest engineer, but it reveals the transverse character of these values; in other words these values are not reserved to the career of forest engineer.

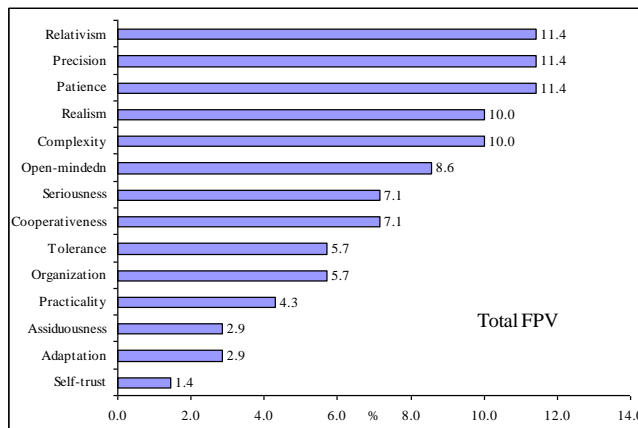


Figure (1): FPVs subtracted from job-related acts and behaviors of both Syrian and French forest engineers

According to their social functions, the presence percentages of the identified professional values within the analyzed corpus divulge didactically and three main levels of values (Figure 2):

Level A - Professional values related to the personality of forest engineer: This level includes the values of adaptation, assiduousness, and self-trust; these values have a trans-disciplinary character. In other words, they are not reserved to the career of forest engineer; they could be seen within other careers. In fact, it is so hard for any profession to be achievable without the presence of this basic level of values as a rooted structure in the mind of the related staff.

Level B - Professional values imposed by the fieldwork and teamwork needs: This level includes the values of open-mindedness, cooperativeness, seriousness, organization, tolerance and practicality. In addition to their in-group character, forestry practices are mostly implemented in the field (data collecting, seedling nursery works, afforestation, forest fire fighting, wood harvesting, forest management, etc.) and this enforce forest engineer to assimilate this level of professional values and to prove it in field as a combined structure through his daily practices.

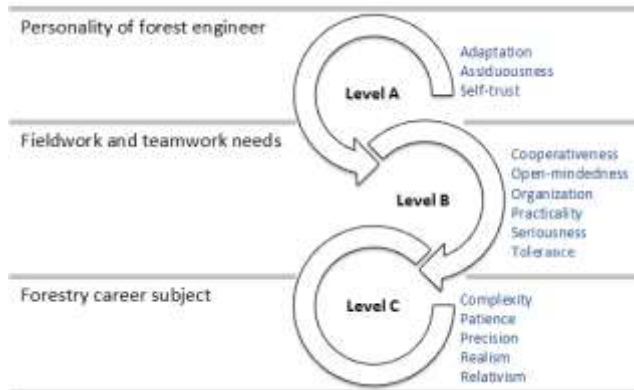


Figure (2) : The three levels of professional values.

Level C - Professional values imposed by the forestry career subject:

This level includes the values of patience, precision, relativism, complexity, and realism. In fact, the nature of forestry career implies intrinsically and imperatively these values. Forest engineers describe anecdotally their career as tough rough and ugly. Actually, staffs in forestry sector have not only to face multidimensional questions (environmental, ecological, socio-economic and even human) and to find applicable solutions, but also they have to endure different type of work condition difficulties (topographic, climatic, forest fire, different type of flora and fauna, etc.).

IV.2. FPVs as demonstrated by French forest engineer

Answering the second research question, the content analysis of pronounced phrases related to job-related acts and behaviors demonstrated by French forest engineers indicates that French engineers give a big importance to the professional values imposed by the forestry career subject (the above-mentioned level c) such as realism, relativism, complexity and patience; their percentages of presence to the total analyzed French corpus is about 73.3 %. The values of practicality and assiduousness (which represents the aforesaid level B and level A) came subsequently in the second and the third positions with 20 % and 6.7 % only (Figure 3).

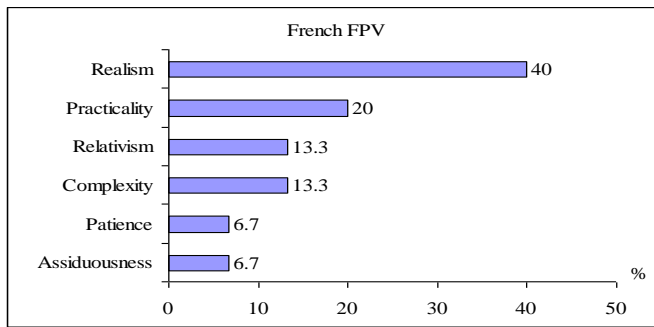


Figure (3): FPVs as demonstrated by French engineers.

As a result, French engineers believe that they are mainly porters of the FPVs imposed by the forestry career subject. For them, their forestry work is the tangible manifestation of these values.

IV.3. FPVs as perceived by French from Syrians acts

Answering the third research question, the content analysis of French perceptions related to Syrian demonstrated job-related acts and behaviors shows that French engineers think that Syrian forest engineers give a big importance to the professional values imposed by the forestry career subject such as relativism, complexity and patience; their percentages of presence to the total analyzed French corpus are more than 68 %. The value of open-mindedness which represents the level of values imposed by the fieldwork and teamwork needs comes in the second positions with about 31.6 % (Figure 4).

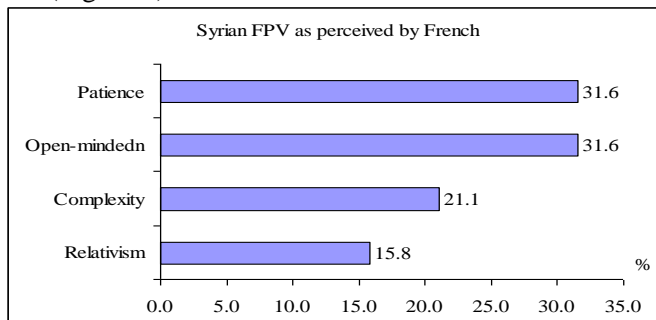


Figure (4) : Syrian FPVs as perceived by French engineers.

Accordingly, French engineers think that Syrian colleagues are mainly porters of the FPVs imposed by the forestry career subject.

IV.4. FPVs as demonstrated by Syrian forest engineer

Answering the fourth research question, the content analysis of pronounced phrases related to job-related acts and behaviors demonstrated by Syrian forest engineers shows that Syrian engineers give a particular importance to the value of relativism (Figure 5). The other two values, they think have proved, are the adaptation and the self-trust (the above-mentioned level A). Their percentages of presence to the total analyzed Syrian corpus are about 20 % for each one.

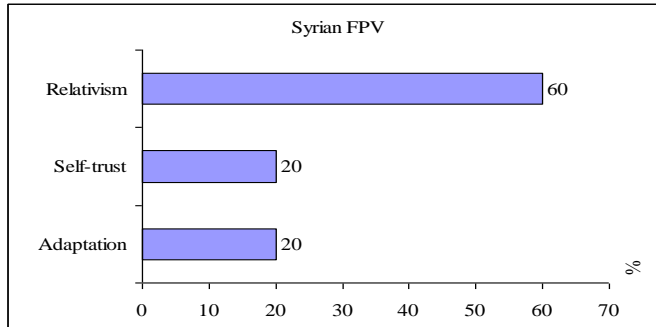


Figure (5): FPVs as demonstrated by Syrian engineers.

Accordingly, Syrian engineers believe that they are mainly porters of the value of relativism.

IV.5. FPVs as perceived by Syrians from French acts

Answering the fifth research question, the content analysis of Syrian perceptions related to French demonstrated job-related acts and behaviors shows that Syrian engineers think that French forest engineers give a big importance to the professional values imposed by the fieldwork and teamwork needs such as seriousness, cooperativeness, tolerance, and organization; their percentages of presence to the total analyzed French corpus are about 58 % (Figure 6).

The value of precision, realism, patience, and complexity which represents the level of values imposed by the forestry career subject comes in the second positions with about 35.4 %. The values of assiduousness and adaptation come in the last position with 6.4 % of presence to the total analyzed Syrian corpus.

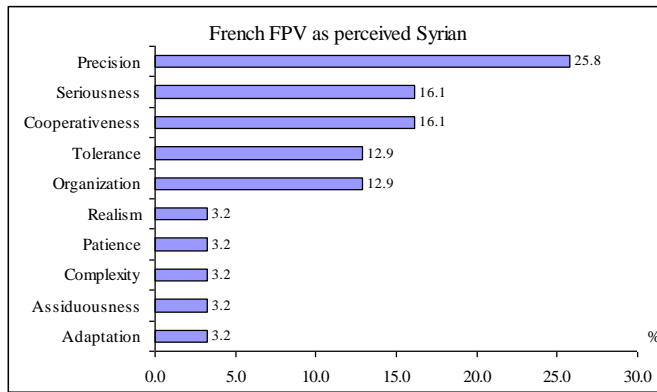


Figure (6): French FPVs as perceived by Syrian engineers.

Accordingly, Syrian engineers think that French colleagues are mainly porters of the FPVs imposed by the fieldwork and teamwork needs.

IV.6. Professional ethos identity of both groups

Through the sixth research question, this paper tries to produce an illustrated model of each interviewed group of engineers through their perceived FPVs. The illustrated model, which could be considered as a professional ethos identity of each group of engineers, could be very useful to understand ethical resemblance and difference between Syrian and French forestry schools; this could be crucial for rethinking future educational implementations in forestry sector.

To attain this target, a classification process has been done through adopting the aforesaid three levels of values (level A, level B, and level C) as directive standards. The obtained illustrated model of each group has been produced through assembling the FPVs' quantitative data of each group within single redistribution; the FPVs announced as demonstrated by the members of each group were regrouped to those perceived of them by their counterparts.

The figure (7) indicates that the redistribution of FPVs of Both French and Syrian group of engineers according to the announced directive standards (level A, level B, and level C) revealed two distinguished models; each model represents a professional ethos identity. The resemblance between Syrian and French professional ethos identities belongs to the fact that the three levels of professional values are

represented within both Syrian and French models; the differences are manifestly owing to representation rates of these levels.

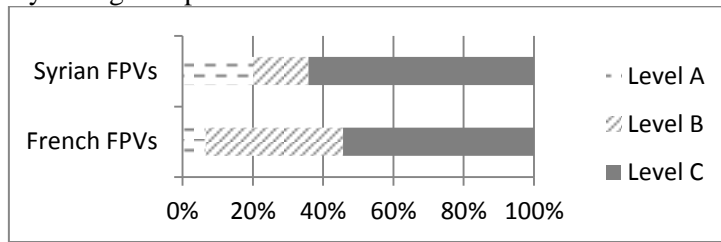


Figure (7): The proposed levels of FPVs.

Compared to French, the Syrian professional ethos identity is obviously characterized by a higher rate of the professional values imposed by the forestry career subject (patience, precision, relativism, complexity and realism) and a higher rate of the professional values related to the personality of forest engineer (adaptation, assiduousness, and self-trust). In contrast, the French ethos identity involves a higher rate of the professional values imposed by the fieldwork and teamwork needs (open-mindedness, cooperativeness, seriousness, organization, tolerance and practicality).

In fact, the dissimilarity between the two models could be perfectly elucidated through the representation of analyzed data on the following three-centered titled axes (Figure 8); each axis represents one of the three main directive standards (level A, level B, and level C). Through this type of data representation each professional ethos identity model could be seen as a separate triangular surface with reference to the three directive standards.

The visible schematic of both models (Figure 8) shows that Syrian forest engineers are more attached to forestry career subject vis-à-vis their French counterparts. They have a tendency to be more individualists compared to their counterparts; Syrian professional ethos identity model has a high rate of the professional values related to the personality of forest engineer, and this reflects their weakness with reference to the talent of in-group working.

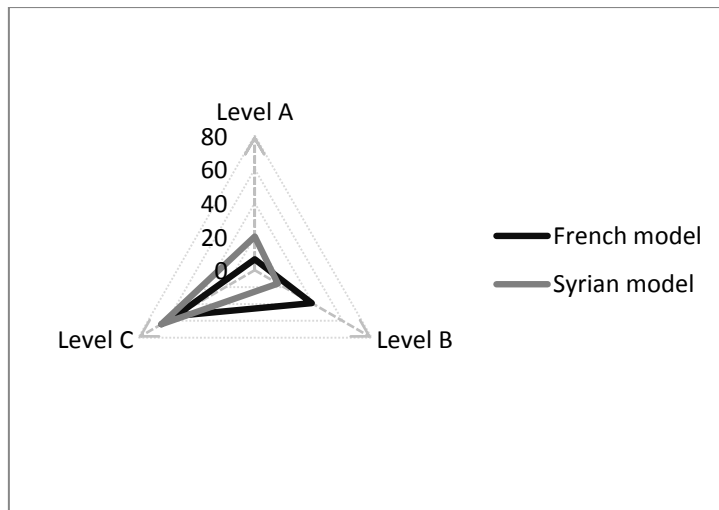


Figure (8): Professional ethos identity models.

In conclusion, the Syrian professional ethos identity model is seen to be at vocational level having the tendency to be technically more radical; this could make of Syrian engineers practices more academic. This fact represents a real invitation for the rethinking of the present and the future Syrian forestry system of education and training. On the other hand, French Forest engineers, and due to the usual vocational impact, are normally attached to forestry career subject. Compared to their Syrian counterparts, they seem to be more talented to apply the in-group style of work; French professional ethos identity model has a higher rate of the professional values imposed by the fieldwork and teamwork needs while those related to the personality of forest engineer are present with lower rate.

To conclude, the French professional ethos identity model seems to be at vocational level more moderate; and this makes of French engineers practices more practical.

IV.7. Educational implications

This research does not pretend covering the entire FPVs; the standardization of FPVs needs to widen research to include other forestry schools. Anyhow, the findings of this research are not deprived of probable educational assets; they could be fruitfully transferred and

implemented within the real forestry educational field. These educational assets could be condensed within three tips:

First plausible asset: At institutional level, the Syrian professional ethos identity translates some weakness within forestry educational institutions concerning two main aspects: The first concerns teaching methods of practical subjects particularly the In-group training exercise, and the second concerns the engagement level of other socio-economic sectors within the training process of future forest engineers. And this could certainly have an impact on the quality of graduates' professional skills. To be more precise, this weakness could be due to several reasons;

- 1- The tendency of using individual exercises in teaching-learning process more than the in-groups work style.
- 2- The non-engagement within real forestry activities.
- 3- The educational plan does not consider the importance of cultural fronting with other partners or stakeholders.

As a final point, forestry instructional designers are not only invited to renovate the occupational profile of the career of forest engineer, through the integration of FPVs as a directive component, but they are also asked to take FPVs into consideration while building forestry curricula; these could improve graduates' competences to fit competitive character of the work market.

Second plausible asset: The two identified professional ethos identity models could be didactically used as a schematic reference to discern identities of other forestry schools.

Third plausible asset: The identification of FPVs and their classification within levels could facilitate the planning of profession entry and teaching-learning processes; plausible uses and acquisition requirements of the identified FPVs in addition to appropriate tangible methods could be outlined as follows:

Value	Uses and/or acquisition requirements	Tangible methods
Adaptation Assiduousness Self-trust	Prerequisite values for forestry career' entry (recruitmentcriteria).)	Psychological recruitment interview, personal history, and tests.
Open-mindedness	Cultural fronting with partners or forestry stakeholders.	Forestry camping, work trips and oversees training.
Cooperativeness	Rejecting individual exercises and duties to promote those done through the in-groups work style.	In-groups training projects.
Seriousness	Responsible implication within real forestry activities.	Choosing training projects through inter- sectorial cooperation.
Organization	Pedagogic use of real forestry work-plans procedures.	The anticipating and putting into practice of forestry work-plans.
Tolerance	In-group training exercise and stakeholders' conflict resolution.	Rejecting trainees' preselected bands and imposing circulating group membership style.
Practicality	Socio-economic engagement of educational institution.	Experts' valuation of fieldwork practices outputs.
Patience	Anticipating simulated professional situations with difficulties. Anticipating self-discipline training.	Forestry camping and long-termed forestry duty.
Precision	Real contracting for realizing various forests measurements.	Forest measurements and surveys achievement and reporting.
Relativism	Inter-sectorial and Intercultural educative cooperation agreements.	Work trips In a foreign country and reporting practices.
Complexity	Interdisciplinary and multidisciplinary educative approaches.	Training projects with a common objective for several subject matters.
Realism	Linking forestry educational bodies to other socio-economic sectors through mutual benefits.	Attaching training process to real socio-economic projects. Experts' review of solutions viability.

IV.8. Implication and discussion

The importance of the problematic question of this paper emerges from the fact that several researchers such as Riggers 2004, Buiting 2004, Blok 2004, Brown 2003, and others have spoken about forestry professional values; for instance, within his report on the 6th European forum on educating the Urban Foresters findings, Davies (2004) has talked about the importance of flexible attitude for urban foresters towards open communications; in the same way, Riggers (2004) highlighted the importance of interdisciplinary approach for promoting cooperation and communication in forestry sector; by the same token, Buiting (2004) focused on the importance of communicative skills; similarly, Blok (2004) proposes supporting these educational systems with additional professional values. The findings of this research assure the rationality of the deduction attained by Cheikho (2002) concerning the referential knowledge in forestry engineering in which he mentioned the professional values as an essential part besides the theoretical forestry knowledge and the social practice of forestry profession. Further, Cheikho & Clément (2002) have mentioned that professional values are not predictable by curricula designers; they should be acquired through real practices and professional fellowships. Indeed, the identification of fourteen FPVs by this study through a real practice of forest engineers validates their statement. Moreover, Taking steps towards the standardization of FPVs through the classification of identified values within several levels (Figures 2, 7, 8) rejoins the proposition of Riggers (2004) concerning the identification of the job occupational which could lead to the building of a successful educational course. Moreover, the proposition of Shirley (1955) concerning the existing of several types of foresters' tenets supports a finding of this study that each group of Syrian and French engineers have their own belief concerning their particular job-related acts and behaviors and those of their counterparts (Figures 3, 4, 5, 6). The call made by Brown (2003) for the integration of new terms such as professional conduct, professional knowledge, professional approach, and professional identity within the review of forestry education supports not only the proposition of the term of professional ethos identity but legitimates also the identification of two professional ethos identities (Figure 8); the Syrian model and the French one. Further, the fact that these two models which, and despite they symbolize the

same career, represent socially and culturally two different contexts assure the notice of Cheikho (2007) concerning the deep attachment of the career of forest engineer to social needs. The outputs of this research at vocational level indicates that Syrian forest engineers have a tendency to be more academic and more individualists, and have as well some weakness with reference to the talent of in-group working; this finding is totally coherent with the term of natural-scientist “forest” proposed by Cheikho (2013) to designate the concept of “forest” as perceived through analyzing Italian and Syrian forestry curricula. In the same way, the outputs of this research indicate that French Forest engineers seem to be more talented to apply with practical tendency the in-group style of work; this finding is coherent with the term of semi-socio-economist “forest” which was also proposed by Cheikho (2013) to designate the concept of “forest” as perceived through analyzing forestry curricula of Bosnia & Herzegovina, the U.K., and France.

V. Main findings and Conclusions

Fourteen FPVs have been identified: The realism, the cooperativeness, the open-mindedness, the self-trust, the adaptation, the organization, the seriousness, the precision, the patience, the complexity, the assiduousness, the practicality, the relativism, and the tolerance. Didactically, these professional values could be classified according to their natures within three main levels:

- 1- Level A: Professional values related to the personality of forest engineer; these values have a trans-disciplinary character.
- 2- Level B: Professional values imposed by the fieldwork and teamwork needs; these values are often proved as a combined structure within forestry daily practices.
- 3- Level C: Professional values imposed by the forestry career subject; these values are intrinsically imposed to stand up to unavoidable multidimensional questions.

The content analysis of the described job-related acts and behaviors indicates that: French engineers believe that they are mainly porters of the FPVs imposed by the forestry career subject; their forestry work according to them is the tangible manifestation of these values. They think as well that Syrian forest engineers give a big importance to the professional values imposed by the forestry career subject.

Syrian engineers believe that they are mainly porters of the value of relativism. For them, French forest engineers give a big importance to the professional values imposed by the fieldwork and teamwork needs.

Comparatively, these findings have endorsed the identification of two professional ethos identity models:

- 1- The Syrian professional ethos identity is characterized by a higher rate of the professional values imposed by the forestry career subject and a higher rate of the professional values related to the personality of forest engineer.
- 2- In contrast, the French ethos identity, which is also characterized by a high rate of the professional values imposed by the forestry career subject, involves a higher rate of the professional values imposed by the fieldwork and teamwork needs.

At vocational level, the Syrian professional ethos identity model has a tendency to be more radical in comparison with the French one which seems to be more moderate. The visible schematic of both models shows that Syrian forest engineers have a tendency to be, compared to their counterparts, more academic and more individualists; this makes of Syrian engineers' practices more academic than practical and reflects their weakness with reference to the talent of in-group working. On the other hand, French Forest engineers seem to be more talented to apply the in-group style of work; this makes of French engineers' practices more practical.

As forestry educational outlook, FPVs represent directive components for both the renovation of forest engineer' occupational profile and the reviewing of forestry curricula. Furthermore The identified FPVs could facilitate several educational processes such as profession entry procedures and teaching-learning planning.

As a final point, This research does not pretend the exhaustive encompassing of entire FPVs; the standardization of FPVs needs to widen research to include other forestry schools. In contrast, the two identified professional ethos identity models could be didactically used as a schematic reference to discern identities of other forestry schools.

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