

Skills scanner: as a tool to reduce the skills deficit

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Abstract:

The topic of skills deficit or imbalance is one of the most important topics faced by organizations, in general, and by the department of human resources management, in particular, because this deficit is a situation in which the skills network of the organization is unstable as a result of the weakness of skills in a particular post, which can result from weakness in the level of skills owned by an individual, or as a result of incompatibility between the required skills and the acquired skills, which leads, at the end, to a low level of performance.

So, identifying and detecting the weaknesses in the skills network is very crucial and critical at the same time. Therefore, the idea of developing the skills scanner is set to help organizations to identify weaknesses and work to correct them, and identify strengths and work to maintain and develop them. This process is provided by the skills scanner through its basic tools which are the skills matrix, a matrix of Boston Consulting Group, developed and amended, the skills dimensions and the skills oscilloscope.

المُلخَص:

يعد موضوع العجز أو الاختلال المهاري من أهم المواضيع التي تواجهها المؤسسات بشكل عام وإدارة تسيير الموارد البشرية بشكل خاص كون أن هذا العجز يمثل الوضعية التي تكون فيها شبكة مهارات المؤسسة غير مستقرة نتيجة ضعف المهارات في منصب معين والذي يمكن أن ينتج عن ضعف في مستوى المهارات التي يملكها الفرد أو نتيجة عدم تطابق المهارات المطلوبة مع المهارات المحصلة مما يؤدي في النهاية إلى تدني مستوى الأداء.

لذلك تعد عملية تحديد والكشف على مواقع الضعف في الشبكة المهنية أمر جد حاسم و حرج في ذات الوقت وعليه تأتي فكرة تطوير سكاينير المهارات من منطلق مساعدة المؤسسات على تحديد مناطق الضعف والعمل على تصحيحها و تحديد مواطن القوة والعمل على الحفاظ عليها وتطويرها، إن هذه العملية يوفرها سكاينير المهارات من خلال أدواته الأساسية والتمثلة في مصفوفة المهارات وهي مصفوفة مجموعة بوسطن الاستشارية المطورة والمعدلة، أبعاد المهارات والراسم المهاري.

Introduction

The ongoing developments and radical changes in the environment have imposed on academics and professionals in the field of management to find appropriate management approaches to fit with the fluctuations imposed on organizations, but what is noted about the models and approaches adopted in the management process in our country and in many Arab countries is that they are imported models and approaches, which explains the failure affecting many national organizations a lot of times.

It should also be noted that many of researches in the field of management, in general, and in the management of human resources, in particular, neglect the basic concepts of the knowledge building, which are mainly based on the values systems, where we find many foreign studies prove that success is built from the inside; perhaps the best example of that is all Japanese works, including: kaizen in the production model of Toyota and the Japanese Le Ba in the knowledge management. In the same context, we find another field result which is the comparative study made by: Francois Geffroy and René Tijou on a group of European countries; the study confirmed that the national environment has a significant impact on the human resources management applications¹.

As a result, the professionals and researchers in the field of management in our country are obliged to work according to their values system, so they can find the best approaches for the management of the Algerian organizations and ensure their success.

In this context, this attempt comes to find a way to help the human resources management in the Algerian organizations, which is the skills scanner, a part of a management model based on the Algerian values system that will be taken up according to following key points:

- ✓ Determination of the concept of skills.
- ✓ Definition of the skills deficit or imbalance.
- ✓ Definition of the skills scanner.
- ✓ Explanation of the skills Scanner method of work.

1. Concept of skills:

1.1 Definition of skills:

G.Le Boterf defines skills as: "the ability of mobilizing, mixing and coordinating resources within a specific process in order to reach a certain result which is recognized and evaluable, as they can be

individual or collective".² This definition demonstrates that skills are a dynamic fact related to resources and identified aim in advance, i.e., they are a process starting from how to choose resources until ensuring the achievement of the aim. This means that the availability of theoretical knowledge, practical knowledge and behavioral knowledge is necessary. The nature of the final result is also ruled by a key element of skills: experience that is very important when studying skills components because it cannot be shifted from one organization to another.³ So, it appears as a focal point in the definition proposed by MEDEF: "the skills are a combination of theoretical knowledge, practical knowledge and experience of practice; professional situation is the framework or the environment which allows to note and recognize them, and the organization has to assess and develop them".⁴

The most important characteristic of experience is practice as accumulation of previous works constitutes experience which, in turn, contributes to the production and the achievement of current and future skills, through tests forming skills projects, after determining their current form. These shifts make the concept of skills more practical and circumstantial also.⁵

It is also noted in the previous two definitions that skills are recognized in the workplace; this perception remains true through the social point of view, i.e., through the existing relations between the social partners and bodies, which means that the collective and individual skills are not recognized only by professional environments, which throws an obstacle if we want to project this concept from the strategic point of view because the recognition in this case is related to the organization skills, and it is done by the end users. Consequently, the correlation is partially done with individual skills, so we find LE MEDEF offers another definition in this context: "skills are a translation of the selection of a particular policy, and the approach through skills is not only reduced to a model of the human resources management, but it engages also the organization to all their dimensions particularly those regulatory".⁶

Due to the importance of recognition in completing the concept of skills, we find that *la Siderurgis* defines them as: "that practical recognized knowledge".⁷

As shown in this presentation of definitions, giving a unified definition of skills is not easy or simple because they are significantly related to their owners; writers or researchers who are affected, in

turn, by the adopted philosophical framework and the basic intellectual processes. To complete the concept of skills, we add the following characteristics:

- ✓ Skills are a concept based on the individual and not on posts.⁹
- ✓ Skills are the product of the mixture: theoretical, practical and behavioral knowledge.¹⁰
- ✓ Skills are a source of authority.¹¹
- ✓ Skills are acquired.¹²
- ✓ Skills are not useful for the organization unless they are conscious.¹³
- ✓ Skills enable the individual to shift from a work status to another, which can only be achieved through two levels of skills, namely creativity and projection
- ✓ Skills should be subject to maintenance by providing the necessary conditions for their continuation.¹⁷
- ✓ Skills must be recognized by the others.¹⁸

1.2 Types of skills:

As noted above, skills are directly related to the individual, which makes many people turn to the division of skills to individual skills owned by the individual or collective owned by a group or by more than one individual within the organization, without specifying the group's nature. For organizational skills, G Le Boterf indicates that the value the skills capital of a certain organization is not only a product of a simple collection of individual skills, but through qualitative mixing, because this mixture is often difficult to transfer by competitors.²²

Skills are divided, regarding the organizational aspect, into three types, namely:²³ Technical skills, Behavioral skills, Intellectual skills.

Regarding the strategic aspect, we distinguish between two types of skills: basic skills and discriminatory skills:²⁴

- **Basic skills:** they are the internal skills through which the organization is characterized by applying them better than its competitors.²⁵ Skills are basic if the following characteristics are available:²⁶
 - If they significantly contribute to the product differentiation.
 - They have many applications.
 - They are difficult to be owned by competitors.

- They are generally related to the operations characterized by qualitative specificity.
- **Discriminatory skills:** they are related to the management attitudes, as they form a list of characteristics that allows distinguishing the most performing individuals.

2. Skills imbalance:

Skills are the most important permanent resources to make excellence for organizations, which makes us dealing with the management of those risks surrounding this important resource. Perhaps the most important of these risks is the skills imbalance.

- **The concept of skills imbalance:**

The skills imbalance expresses such a state of imbalance between the available skills of the individual and the skills requirements in a certain post, i.e., the gap separating the required level of skills from the level shown by the individual during the exercise of the required activities.

The researchers believe that the skills imbalance can be treated through what we call the chain of genetic skills ADN, where it was proposed a perception of a skills chain in the organization that is similar to the ADN chain at the organisms, in order to achieve one of the most important objectives of organizations in the light of the knowledge economy, namely cognitive homogeneity in the whole collective skills, which gives to the organization an advantage that is difficult to be owned by competitors, on the one hand, and ease of treating the skills imbalances on the other hand.

3. Scanner of skills:

The scanner of skills is one of the main components of the virtual skills model. So, we cannot deal with it without reference to define the concept of virtual skills model, even briefly.

3.1 Definition of virtual skills model

The virtual skills model can be defined as the system constituted of a set of different tools gathered in three groups: basal, basic and complementary elements, which are supported in a specific philosophical framework, and mainly operate to evaluate the skills, treat the skills imbalances, develop and preserve the skills.

3.2 Definition of the skills scanner:

The scanner is defined in the field of medicine as a device which allows diagnostic test, it is composed of tomographic system and a computer that reconfigures the data on the screen.²⁷ The medical

scanner device is mainly characterized from the previous technologic devices of examination and diagnosis by providing holistic diagnosis from different dimensions of the individual concerned by examination, a feature that formed the idea of the need to build the skills scanner. The skills scanner is a pivotal tool in the virtual skills model, and it is mainly used for skills assessment, so that it diagnoses their components, detects cognitive disorders, and gives also the appropriate modalities to address imbalances, based on a set of tools: skills matrix, skills dimensions skills oscilloscope and skills threshold.

Why the skills scanner?

We have based the skills scanner idea, in addition to the medical scanner properties, to a set of management approaches: germ theory, systemic approach, risks theory and gardening management approach which we will view them in the following elements:

a- Germ theory of management:²⁸

The researches carried out by Pasteur in 1865 were the starting point for the emergence of the germ theory of medicine; based on this theory, in 1920, the administration of the BELL TELEPHONE LABORATORIE gave to Walter Shewhart the following question: What should be done in order to raise the productivity and improve the quality of telephone equipments?

Just as the case of Pasteur germs, the imbalance exists at all levels, touches everything and all the material and human organization components, and it cannot be seen with the naked eye, but using specialized tools. In this field Walter Shewhart was able to show how to observe the imbalance virus, control and reduce it. So, he may place against the medical Pasteuria the germ theory of management.

At the beginning of its emergence, this approach was limited to the production operations in factories, then it was demonstrated that the germ approach can include all of the management activities in order to reduce the imbalance and achieve the desired results.

b- Systemic approach:

the transfer of the concept of systemic approach from the vital environment to organizations by the researchers in the field of management was a quantum leap in the management researches field; if the organization is considered as a system or an organism composed of parts or elements interact with each other and affected by external factors derived from the environment affected ,in turn, by it, which

makes it obliged to adapt with sudden changes and to anticipate events in order to stay and continue.

Therefore, the systemic approach formed another support for the adoption of the skills scanner, because the organism is a complex composition that requires seeking the tools that enable it to identify the real causes of the dysfunctions that can affect the texture of any organization.

c. Gardening management:²⁹

The idea of the gardening management is one of the common concepts used in North America; it is adopted in the individual skills management.

This perception is based on that the gardener does not force plants to grow, which must be adopted by the organization's manager, as he cannot force the individuals to work with high skills. The gardening strategy seeks to find the appropriate environment for the success of plants growth and preservation, which must be available at the manager, since he has to create the appropriate environment in order to maximize the possibility of the individuals' ability to take initiatives, mobilize and mix resources.

Consequently, the systemic approach, the germ theory and the gardening management approach of management, in addition to the perception related to the basic skills chain have formed a basis in the establishment of the skills scanner,

3.3 Skills scanner's tools:

The skills scanner is composed, as we have already seen, of the following tools: skills matrix, skills dimensions and skills oscilloscope.

- **Skills matrix**

The matrix of Boston Consulting Group BCG as it is known is one of the most important strategic analysis tools known to researchers in the field of management in general. Perhaps, the basic logic that it relies on in determining the positioning of the strategic activities fields in the four boxes constituting it namely: dilemma box, stars, cash cow and dead weights, and the subsequent analysis according to each positioning and the decisions following each one, pushes us in addition to the importance acquired by the skills in the current situation of the environment as a permanent source of competitive advantages, on the one hand, and the basis of the management and the preparation of the strategy, on the other hand, to

try to adapt them and make them a tool to help decision-making in the human resources management, especially in the skills assessment and follow-up of their professional path.

- **Skills dimensions:**

The other basic tool constituting the basic elements of the skills scanner is skills dimensions which are defined as the three-dimensions graphic representation of skills: individual, collective or organizational; the first dimension represents the theoretical knowledge, the second one the practical knowledge and the third dimension the behavioral knowledge.

- **Skills oscilloscope**

The other component of the skills scanner is the skills oscilloscope; the idea of this tool has been adopted from two different disciplines namely: medical sciences and marketing as it will be explained in the following two points:

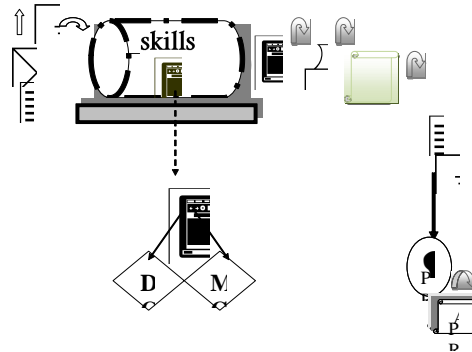
- Medical sciences: oscilloscope is one of the important devices used in determining the imbalance at one the most important organs in the human body, namely the heart; as the standard drawing is available, the obtained drawing after subjecting the individual to measurement can be compared with the standard drawing. Therefore, we can identify imbalances, and hence determine the size and seriousness of the disease. Perhaps the importance of skills in the organization makes us trying to project the working principle of this device on the skills study.

3.4 How does the skills scanner work?

We can summarize how the skills scanner works in the following figure:

Figure 02:

work methods of the skills scanner



whereas :

SM: symbolizes the skills matrix, HRP: human resources professional.
 SD: skills dimensions, HRPO: human resources professional's opinions.

As it is shown in the figure above, the work of the scanner requires to obtain the necessary information provided mainly by the assessment cards established on the basis of the skills references. Then, according to the desired need of assessment, the human resources managers use one or all of the tools to get, at the end, the required information by one of the scanner outputs and take the appropriate decisions.

4.5 Skills scanner outputs

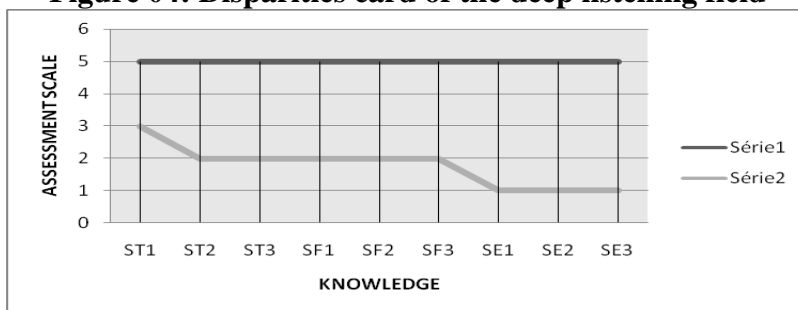
The skills scanner outputs are the final documents offered by each tool constituting it; the skills matrix gives us a document in the form of a matrix which is able to identify the sites of individuals on the matrix boxes: dilemma, stars, dead weights or cash cow, while the document provided by the skills oscilloscope consists in the drawing that shows the differences in skills. This is illustrated in the following figures:

Figure 03:



This figure shows that the concerned individual exists within the dilemma box, which means that the human resources manager’s initial decisions are related to the following perception: the concerned individual is suffering from weakness in skills against the post he holds. Thereof, the next procedure is to determine the skills level by defining the level of knowledge constituting them, which is possible using the comparison card resulting from the skills oscilloscope:

Figure 04: Disparities card of the deep listening field



It is clear that the concerned individual is suffering from weakness in knowledge about deep listening which it is taken as an example in this case; the organization is then required to follow training actions to support the individual and turn him into the star box or search the possibility of shifting him into another post or remove him to the dead weights box, which means his dismissal.

Based on the previous data, it is shown that the possibilities offered by the skills scanner allow to reduce the skills deficit of the organization by the accurate identification of the cognitive imbalance of all the skills, which helps to take the corrective remedial actions to what is existing or precautionary actions to what is coming by the continuing follow-up of the skills level.

Regarding the other document made by the human resources manager; it is the professional map which is based on the results of the previous outputs.

- **Professional map**

Before dealing with the concept and the form of the professional map, we think that we must define the concept of professionalism.

- **The concept of professionalism**

Professionalism for G. le Boterf appears at a high level of skills control and very high requirements level.³⁰ Reaching this level requires the availability of some properties in the professional whose

the most important:³¹

- The ability to mobilize knowledge, capabilities and different behaviors in multiple situations.
 - The ability to formulate experiences that he lived in the form of models.
 - The ability to mobilize human, material and financial resources to address problems.
 - The ability to understand weak signs resulting from a certain situation.
- In the performance of his duties, the professional has two types of means:³²
- Personal means, namely theoretical and practical knowledge, ...
 - External means, i.e., equipments, machines, information ...

Perhaps, we conclude to that professionalism is: surfing in complexity as confirmed by G. Le Boterf. The developments related to management on the basis of individualism, the evolution of complexity and uncertainty, the evolution of the concept of skills and the development of the internet generations are all factors that have led to the need to think not only in programming engineering, but also to engineering surfing; this new type of thinking relies on the professional path, which can be established in the same method as the path related to the maritime or air path, but we emphasize that it regards here to similarity.³³ The aviation plan is, for the pilot, a commitment contract on a path between the pilot and the civil aviation services of the air areas he wishes to cross, and it contains the information, the speed level guidance, the fuel reserve and the distance that must be respected.³⁴ While professional surfing is those training stations negotiated between the human resources managers and individuals, as we should point out that these stations can be mandatory or optional.

- **Professional map plan**

The richness of the professional path is linked to the references level placed at the disposal of the professional, as care must be taken to work so that the path transit is a crossing of opportunities network, because the path, in the end, is only the method that enables individuals to develop and accumulate experiences.³⁵

- **Professional map's components**

- Professional Objective.
- Positioning budgets.

- Negotiated route plan.
- Route book.
- The form oriented to the skills environment.

Among the most important stages in the professional path, we find the starting stage, because all the other stages are built on the starting method in which it is determined: current skills estimations for the individual and the potential differences with the used map.³⁶

Conclusion:

Through the previous presentation, we can conclude to the importance of the skills scanner to reduce the skills deficit or imbalance in the organization which is allowed by the tools constituting it, especially the skills matrix, which represents a mirror of the reality of the skills possessed by the organization and the comparison card resulting from the skills oscilloscope.

The skills scanner enables us to accurately identify weaknesses and propose the corrective path through the professional map. The reliance on the results provided by the skills scanner to improve the skills positions and rebuild the order of the skills framework based on the skills genetic chain adopted by the organization enables, in the short term, the skills installation and retaining, the reduction of the individuals leaving and working to earn their loyalty through increasing the faith rates.

Margins

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³⁶*Idem.*