

## **Considerations about the diversity of the concepts of individual and collective professional competences**

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### **ABSTRACT**

Pluralizing definitions that result the same idea or concept does not help to discern the essence of such concept in its context or need. An example of such is that of professional competence in the work environment. This article proposes some considerations regarding this problem, elucidating the essential features of the concepts of professional competence, labor competence, individual and collective competences, the relationships between them and their imbrication in the labor market for the benefit of the employing companies. This is achieved through the use of methods such as analysis-synthesis and documentary study.

**Keywords:** Professional competence; Labor competence; Collective competence

### **Introduction**

When speaking about professional competencies, reference is made to the pretension of what is to be achieved when this is “mastered”: the satisfaction of the problem of the integration of knowledge, skills, attitudes and aptitudes as a valid, efficient and effective solution in the solution of professional problems. And this is true, but under the simplistic criterion of what a competency integrates, not what it itself manages.

That is why some authors, such as Bermúdez and Rodríguez (2020), give their opinion on what they consider to be the inconsistency of such a concept. For these authors, the concept of competence itself is not novel in terms of its structure and function and, methodologically, it is juxtaposed to other concepts used by the social sciences, such as ability, capacity, method, procedure, process, process, behavior, conduct, habit, integral performance, among others.

These authors consider that from the very semantics of the word competence, doubts begin regarding its definition and scope. Several meanings are usually associated with the concept of competence: jurisdiction, authority, professional capacity, competition, qualification, ability to do something, competence and sufficiency. Note the meanings jurisdiction, authority and competence. These do not refer to skills in the solution of specific professional problems, but to administrative elements.

Many authors approach the concept of competence from their theoretical precepts: if you are a psychologist, you may see them as psychological configurations; if you are a pedagogue, you may see them as constructs or configurations involving concepts from this sphere; if you are a businessman, you observe the concept from the prism of suitability for performing functions, etc. This leads to an unnecessary plurality of definitions of the same concept and, methodologically, makes them inconsistent.

It could be simplistically thought that if, in the labor framework, the concept of professional ability already exists, which is operationalized according to the context to which it refers, then it is neither correct nor necessary to insist on a new concept because of the simple fact of its frequent use. Note that it is a recent concept, coming from the work environment and accepted, without much consideration, in pedagogy, for example. But it is not really that simple. The concepts of ability and competence cannot and should not be equated, thinking simply of their structure.

But it is true that, there is currently an unjustified and methodologically unacceptable tendency to pluralize definitions that result in the same idea or concept. And precisely, the concept of professional competence is an example of this. The purpose of this article is to analyze and propose some considerations regarding this problem, elucidating the essential features of the concepts of professional competence, labor competence, individual and collective competences, the relations between them and their interweaving in the labor market for the benefit of the employing companies. This is achieved through the use of methods such as analysis-synthesis and documentary study.

## Development

### **Brief considerations on competencies and the need for this concept in the labor field**

These authors associate the diversity of criteria to the weakness of the concept in question. And it is simple to see that in all cases the concept of competence is destined to be mixed up with abstractions similar or identical to that of other concepts. This would not be “very bad” if these other concepts were well defined<sup>1</sup>, as logic demands. In fact, the definitions of these “constituent concepts” are not definitively clear and categorical either.

Therefore, it is impossible not to agree with Bermúdez and Rodríguez (2020), in their analysis and conclusions on the lack of rigor in the epistemic procedure of researchers in the social sciences when defining the concept of competence, Bermúdez and Rodríguez (2020). And they give these examples of definitions: “capabilities are identified with general and internal potentialities that do not imply metacognition or suitability, constituting the basis for the development of competencies (Salas, 2023), skills are considered elements of the competency and processes effectively developed from the capabilities, to achieve certain objectives and that have an important cognitive component (Beltrán, 2006), while skills are admitted as concrete actions to put each skill into action. Finally, competencies are limited to general complex processes of performance with suitability and ethics that articulate knowledge from the metacognitive process (Tobón, 2008).

In terms of suitability for work, a concept that integrates knowledge is needed. The important thing is not to get confused and integrate complex concepts and pretend to create one's own as invaluable or definitive. As an example, the following definition of competence highlighted by Vázquez (2014), which considers it as an articulated and dynamic set of knowledge, skills, attitudes and values that take an active part in the responsible and effective performance of daily activities within a given context.

Seen in this light, this definition is unchanged. One might then think that it is the definitive definition of the concept of competence. But note the following: something should not be

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<sup>1</sup> In mathematics, the very defined term is used to specify that a concept (a function, a property, a relationship, etc.), he/she is defined in a logically consistent way, using a group of basic axioms without ambiguity some.

defined on the basis of elements that by themselves should be well defined, in the sense described earlier in this article. Many epistemic and methodological gaps are observed in the expressions articulated and dynamic set, skills, attitudes and values, active part, responsible performance.

For these authors, competence is associated with performance, without identifying these concepts as one. The risk lies in trying to identify performance based on the solution of professional problems or the performance of the functions inherent to a position as competencies in the sense analyzed here. While it is true that it is a necessity for a given company to refine, with more or less detail, its professional problems. But this is not a sine qua non condition and, in accordance with social needs, such typical and contextual situations do not, in themselves, reflect the concept of competence. For example, the precise definition of the functions of a position or the requirements of a job position does not express the competencies per se for that position.

### **Generalities about the management, definition and approaches to the concept of professional competence**

The concept of competency management, according to Tejeda (2008), is understood as the process that allows the conceptualization of competencies, and the strategies for their formation, development and evaluation.

For example, for these authors, in the field of training professionals for education, competency management in any teaching discipline is characterized as a process that becomes a product of the structuring of its content. This, of course, favors the contextualization of the educational, instructional and developmental aspects by integrating the academic, labor, research and extensionist aspects in the complex teaching-learning process. This process expresses the relationships that are established between subjects, in an environment that favors the ascent of students to a performance characteristic of a competent teacher in the management of the teaching-learning process of the subject he/she directs.

Thus, managing competencies, as a requirement of a training center or an employing company, must go through the following prism: definition and authentication of the professional competencies inherent to the profession; characterization of the structure-function relationship of the professional competencies of the professional needed by the

company; establishment of an alternative for their development from the dynamics of the teaching-learning process; and establishment of an alternative for the evaluation of the performance of the professionals.

Although the concept of professional competency and its consummation as a requirement of the employing companies has been, at least, controversial, today it is a trend in many countries to establish its standards. Countries such as Canada, the United States, Spain, the United Kingdom, Australia, Germany, Chile, Mexico, Colombia, Peru and others have adopted competency-based training in their universities and have created organizations and centers dedicated to the study of competencies and work performance.

Cuba has joined these approaches since 2007, with the approval of the Cuban Standard for the Integrated Human Capital Management System, which considers the need to identify and design labor competencies, with the objective of an adequate improvement of labor performance. This, of course, would leave an indelible mark on the quality of many processes such as efficiency and effectiveness, increased productivity, satisfactory labor relations and satisfaction of the needs of the users for whom services are provided or material goods are acquired.

These authors refer to some considerations on this concept made by González and Hernández and analyze the one offered by Salas Perea referred to the competence in the scope of the Ministry of Health and a definition of their own, referred to the pedagogical professional competence in general and of the Mathematics teacher in particular.

- According to González and Hernández (2011), competence is a set of knowledge, skills, values, qualities and behaviors of the personality that are mobilized according to individual and social needs, allowing satisfactory performance in the exercise of the profession, taking into account that once acquired, they change and develop constantly and cannot be explained, demonstrated and evaluated independently of the context and its demands.
- For their part, Salas, Díaz and Pérez (2013), express that professional competence in health integrates the set of capabilities (knowledge, skills and abilities) developed through the educational processes (academic training and continuing education) and the work experience achieved, on the basis of the values and attitudes conformed; which are applied to the identification and solution of the daily problems faced in their work practice in a given area or health service.

- Beltrán (2021), expresses that competence is the psychological configuration of the professional, which integrates cognitive, metacognitive, motivational components and personality qualities, and it allows competent performance in the management of the educational process, and teaching-learning of the subject he teaches, in correspondence with the Model of the professional, from the management of the didactic and specific contents of this subject, with the use of communicative strategies within these processes, and the scientific positions he assumes, in a specific historical context.

From the two initial definitions, some essences can be observed:

- a) In the competencies, the knowledge, procedures, attitudes and values that allow the professional to know, know how to do, know how to be and know how to be in order to know how to act in the solution of problems of the profession are systemically adjusted.
- b) The competences are managed in relation to the activity, through a performance.
- c) Competencies express their evolution dynamically; they are acquired through experience and include the capacity for training, development, improvement and adaptability.
- d) As it is associated with performance, it is evaluated by means of work performance obtained on the basis of agreed criteria.

With respect to the third definition proposed, without wishing to claim that it should be considered methodologically exquisite, the following essential features can be understood:

- It takes into consideration the existence and manifestation of a direct correspondence between competence, mode of action and the professional functions included in the Professional Model, and manifested as a measure of performance.
- Professional competence is a complex psychological configuration as it includes in its structure intellectual and motivational components that are integrated at different levels of functional development in the regulation of the subject's professional performance.
- Competence is defined on the basis of four components: cognitive, metacognitive, and motivational and personality qualities.

- The definition recognizes its external aspect: competent performance based on the social model, as well as its concrete historical character.

### **An example of professional competency management in teacher training**

The training of teachers (competent professionals) does not escape the need to satisfy the employer (the Ministry of Education in the first place). This satisfaction is aimed at their initial training in the training center (University, for example). It is precisely the training company that is in charge of promoting and solving two fundamental tasks: managing the development of the competencies of the professional it receives (the teacher) and his or her evaluation based on its standards.

The following are some considerations of this process in the training of education professionals. Specifically, in the competence of the mathematics teacher at the intermediate level, for example, the knowledge that is appropriated by the subject in the initial training from the disciplines of the curriculum is articulated. These are mobilized in an integrated and contextualized way in practice, and are evidenced in their performance in the management of the teaching-learning process of Mathematics.

Once the concept of competence has been defined, the task of how to determine them, in order to authenticate them in the discipline of Didactics of Mathematics, corresponds.

There are multiple methodological criteria to determine professional competencies. The most representative, according to Tejeda (2008), are: behavioral, constructivist and functional analysis. The analysis made in this article is not conclusive to pretend to modify the existing curricular model, but to adapt the results of this research to it, so these authors ascribe to the third criterion: the functional one, which - as its name indicates - is based on considering the teacher's work functions in specific spheres of action.

It should be noted that the basis of functional analysis is the identification, by means of breakdown or disaggregation, and the logical ordering of the professional functions that stand as demands on the professional's mode of action.

In the E curriculum for pedagogical careers, the teacher's functions are well delimited. These functions reveal the mathematics teacher's mode of action in directing the educational process at the intermediate level. They govern the content of the disciplines of the curriculum, and their fulfillment defines the student's performance.

In order to understand this situation, this example in the training of the Mathematics teacher is useful. In the program of the discipline Didactics of Mathematics of the Ministry of Higher Education, one of its objectives is stated as follows:

To direct the teaching-learning process of Mathematics, in function of the formation of students, using the resources provided by the discipline regarding planning and evaluation, methods for the realization of didactic functions and typical situations of the teaching of Mathematics, in the fulfillment of their professional functions, in order to enhance the developmental characteristics of learning of their learners... (MES, 2016, p. 4)

It is now necessary to carry out this direction, from the definition and characterization of professional competencies in this discipline. From the systemic, professional competence cannot be conceived as the simple combination of the elements of the content. The link with the personality of students in the process of professional training must also be considered, so that its systemic conception results from the relationship between both aspects: the personality and the content of professional training.

Finally, the mathematics teacher at the intermediate level must first have a deep knowledge of mathematical science and its methods, be capable - in addition - of complementing the scientific information received in the career and of updating himself/herself based on the contexts where he/she works and on the changes that develop in the system. Secondly, he/she must transmit this mathematical knowledge to the new generations, achieved through the efficient management of the teaching-learning process of Mathematics, from scientific positions.

Calzada (2006) characterizes the **Competence for the direction of the educational process**, as the didactic expression of the profession, which is constituted by knowledge of different natures that give the process a professional character, to the extent that the student applies them in the solution to professional problems such as those described in the previous methodological procedure.

This characterization is considered the basis for the definition of the guiding professional competence of the discipline Didactics of Mathematics. For this purpose, it is considered that the object of study of this discipline is the particularization of the educational process in the teaching-learning process of Mathematics. Therefore, the guiding competence of



the discipline, according to these considerations, according to these authors is the **competence for the direction of the teaching-learning process of mathematics at the intermediate level.**

In consideration with this presupposition, these authors assert that this competence in the discipline Didactics of Mathematics is the psychological configuration of the education professional, integrating a mode of professional performance that enhances, along with the cognitive, metacognitive and motivational the qualities of the professional's personality, manifested in his competent performance.

The position of the authors of this work is that the professional competences identified by them as part of the competence management process, with which the discipline of Didactics of Mathematics is more committed curricularly, which are also integrated in **the competence for the management of the teaching-learning process of Mathematics**, are: **competence for the management of mathematical and didactic contents, competence for communication in the management of the teaching-learning process of Mathematics, and competence for research in the teaching-learning process of Mathematics.**

These competences have equal hierarchical level, and are subordinated to that of direction of the teaching-learning process of Mathematics, in their internal relations. They are characterized as follows:

1. **Competence for the management of mathematical and didactic contents:** those who possess it are subjects who possess mathematical knowledge and of their didactics and can manage their weaknesses.
2. **Competence for research in the teaching-learning process of Mathematics:** those who possess it can provide solutions - from science - to the problems they face inside and outside the teaching-learning process of Mathematics.
3. **Competence for communication in the management of the teaching-learning process of Mathematics:** those who possess the competence are subjects with an efficient performance in the management of the teaching-learning process of Mathematics, from its essence.

This implies that their performance in communicative contexts involves both the elements that allow a pertinent execution from the cognitive-instrumental point of view (their

knowledge, skills, etc.), as well as those that refer to the motivational-affective sphere, such as their needs and motives, their purposes and expectations.

Working then for the other competences in the discipline of Didactics of Mathematics, means addressing elements of the two basic areas of the personality that - to no extent - are dissociated in the professional performance and in the personality of the professional: the affective-valuative sphere, of dynamic and inductive character, and the cognitive-instrumental sphere, of executory character.

To contribute from the discipline of Didactics of Mathematics to the development of professional competences, presupposes a direction of the teaching-learning process, which favors analysis, reflection, generalization, the ability to orient oneself in advance in the activity, to be able to control and regulate its results, all these aspects characterizing a developmental teaching. Although they are psychological configurations, the mathematics teacher's competencies begin to be formed in the didactic processes to which he/she is subjected in his/her initial training, and they go through the competency units, structured, in turn, by their content: knowledge.

### **About work competencies and professional competencies**

Among the approaches to competencies are: occupational competencies and professional competencies. Their essential difference would be in the scenarios where they are formed and developed, thus, the former defined from the world of work and the latter from the educational field, although there are authors who refer to both indistinctly.

The disagreement in these approaches would be in the following: while in the conception from the world of work, competence is a “capacity” that can only be deployed in a concrete situation of work performance, which has its rules, scenarios, procedures, instruments and consequences; while from the point of view of university training, the concept would be in correspondence with the same basic idea, but its demonstration is deployed in situations of educational evaluation, where it is verified how the students advance in the construction of the modes of professional performance.

This being so, it would then be necessary to recognize that the educational system would be responsible for the constitution of knowledge, its validation and the development of skills, while the labor system would be in charge of using them, combining them with experience and continuous training, the development of professional competencies and

their certification. This is far from reality, according to these authors, since it is in the university, from the initial training, and even before that, that the competencies of future professionals begin to be formed, and are developed through work practice in labor scenarios.

For these authors, delimiting the concept to one tendency or another (labor or professional) would simply create an unnecessary, unjustified and methodologically unsustainable plurality. Take, for example, the initial training, and even the postgraduate training of any professional. Making the university responsible for the management of professional competencies in the sense described in this article is fair.

The University or the training center is responsible for managing the professional's knowledge once the functions of the profession are known, for managing the knowledge appropriate to these functions, for training the skills to meet the demands of the employing companies and even for validating these skills on the basis of the University (training center)-Company agreements in the so-called work practice. It should be noted that the origin of professional competencies is precisely training, learning, experience in the workplace (provided by work experience), and life experience.

But business management must be responsible for managing the development of these competencies. It is enough to remember that competence is measured in performance, in work scenarios. This is one of the reasons for the existence of professional training: the recently graduated professional joins the work force, the conditions are guaranteed to manage the competencies already developed in the training center, and the latter is obliged to demonstrate these competencies.

This being so, these authors consider that it makes little sense to elucidate whether an alternative concept to that of professional competence, such as that of labor competence, is needed. Now, the important thing would be to elucidate when these professional competences acquired by the professional become part of the competences of a labor group and form the so-called collective professional competences or simply collective competences or group competences.

### **About collective competences**

Some individual competencies, which these authors agree to call generic because of the generality of their approach and the possibility of being associated with any professional, regardless of his or her profession, could be the following:

1. Openness to learning.

This competence allows the professional in knowledge management: assimilation of knowledge coming from the training process, from the environment and, at the same time, learning from his/her own work experiences.

2. Openness to cooperation.

This competence helps the professional in information management: elucidating information, retrieving information, processing information and sharing information and knowledge acquired individually.

3. Openness to reflection.

Among other elements, this competence enables the professional to differentiate between what knowledge can be useful to him/her, as an individual, and what can be useful to the team, in order to generate a process of continuous improvement.

In short, the professional competencies acquired by a professional as an individual are inevitably associated with performance, and this is his or her measuring stick. It is the responsibility of the company to create its own standards of standardization and certification or to assume those imposed by higher bodies. Employers must therefore promote, from the planning and understanding of these standards, how to manage collective competencies, which is obviously not the sum of individual professional competencies.

To this end, these company standards must describe behaviors associated with performances common to various occupations and branches of productive activity of the company or institution.

In this way, the meaning and scope of collective competencies is derived from numerous factors, including, among others:

- The context where these competencies were acquired (training center) and where they are applied (employing company).

- The training profiles associated with the professional functions of both employees and employers.
- The level of complexity and plurality of the professional problems to be solved by the professional.
- The scientific-technical, economic and social development acquired or adjusted to individual and company needs.
- Schemes (norms, interests, values, opportunities) of political, economic and social participation.

Thus, collective competences go beyond individual competences and differ from them. It is precisely the collective competencies that allow the individual competencies to manifest themselves in the most advantageous way for the whole team. Group competencies are developed precisely by working as a group and by bringing out individual professional competencies together. These collective competencies are grouped on the basis of their function in the team:

- those related to interests, motives and objectives of the company,
- the executing ones, which enable the performance of professional tasks,
- those that increase resources and facilitate their use,
- those related to optimal integration among members.

It is up to the work group and its management in the employing company to promote three essential elements for the development of collective competences from the promotion of individual competences to optimize the whole process: cooperation, which contributes to the direction of individual competences towards the team's objective; operability, linked to the capacity of the group to articulate individual competences in a process of transformation of its productive reality; and knowledge transfer, which ensures that knowledge flows and can be adapted, assimilated or created.

Authors such as Michaux (2021), consider that the concepts of individual, collective, competence of the professional and collective competence (in this case referring to the competence for work in the company), are combined and allow discussing the existence of a collective capacity within the employing company, which promotes the coordination of help, collective solution of problems and integration of theoretical and practical knowledge that would be linked to the labor collective.

This stems from the understanding that the concept of collective competence is an integral one. This concept brings together multiple cognitive and social (cooperative) phenomena, which would help the ability to act and react collectively Silva and Ruas (2019). The use in itself of the term collective competence, allows to privilege the productive potential of the company, and to highlight the respective contribution to the organization's ability to manage collective performance.

## **Conclusions**

Methodologically, it is incorrect to associate different definitions to the same concept, such as those analyzed in this paper, in an attempt to achieve the completeness of the concept. This would result in an irresponsible and unnecessary plurality that would in no way contribute to the theory.

It is incorrect to think that the sum of individual competencies does not lead to the formation, development and consummation of collective competencies in the company. Collective competencies allow a group of people (work team) to reach a joint understanding of the problems that concern them (overcoming differences and conflicts between the parties involved), so that they can participate actively, in a coordinated and efficient manner in their solution.