



## STUDY OF PERCEPTION OF PROFESSIONAL COMPETENCES IN TEACHERS IN RELATION TO THE REQUIREMENTS OF THE PROFESSION OF TEACHING PHYSICAL EDUCATION

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### Abstract:

The purpose of this study was to identify teachers' perceptions of competence and knowledge of pedagogical needs related to occupational skills based on professional experience and academic education. Participants were 85 secondary school teachers from several schools who responded to a questionnaire that included a first scale of competency perceptions and a second scale on the recognition of teaching needs. The comparison of teacher perceptions based on teaching experience and teachers experience was done by applying the one-way ANOVA and Tukey's multiple post hoc comparisons. Teachers' perceptions were influenced by their experience as less experienced teachers qualified at lower levels of competence and more teaching needs; Teachers with a higher education, whether in physical education or others, perceived themselves to be more competent than teachers without a higher education. Finally, the majority of teachers perceived themselves as competent, but nevertheless indicated that they had teaching needs, which brings important feedback to the teacher of the secondary trainer. This suggests that teachers are interested in increasing their

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knowledge and competence in a wide range of areas which should be considered in future Teachers education programs.

**Keywords:** perception, competence, professional competence, physical education

## 1. Introduction

Competence is defined in terms of “*knowing how to act and react*” and is not reduced to applying or carrying out rules, but goes beyond that which is stipulated (Le Boterf, 2001). The competent person knows how to choose, organize, and mobilize certain resources (knowledge, expertise, qualities, culture, documentary networks, expertise networks, etc.) in order to manage situations in professional practice (Le Boterf, 2002a).

Training for a Master in PE at the Physical and Sports Education Institute of Mostaganem, Algeria, has been carried out since 2004 through a program set up by a committee specializing in teaching motor skills in physical education.

Several study courses are taught at the Institute: Sports Coaching “ES”, Human Movement and Motor Skills “MHM”, Adapted Physical Activity “APA”, and Sports and Health “SH”. In our study, interest focused on MHM training, which equates to training formerly known as “EPS” or PE. This training gives students the possibility of entering the teaching profession and applying for a teaching post within the National Education system through a mark attributed following an interview and a review of their university file. The graduates are appointed as trainee teachers for a nominal three-year period. They must undertake a nine-month training program in the difficulties that may be encountered in practice as a prerequisite to applying for a permanent post (CAPEPS). This training is an obligatory stage required by the State Administration.

Mostaganem's education management also uses a form of nomenclature and a classification of teachers according to the number of years of teaching experience and also to pass an evaluation test before being authorized to move from one status to another. Several teachers' grades have been established: trainee, permanent teacher, principal teacher and coach. The coach is the highest grade and once attaining this level a teacher may apply for the position of inspector of the various subjects taught.

The new LMD system (Bachelor, Master, PhD.), was established at Mostaganem University over 10 years ago and training is available in Science and Techniques of Physical Activities for the teaching profession, replacing the earlier training program in Physical and Sports Education.

Few educational courses in Algeria are concerned with results of training and the quality and the competence of teachers. For this reason, several research studies have been carried out since 2011 to examine the issue.

Theoretical research on the issue of competence was carried out by Sebbane et al. (2013), with the aim of identifying competences in PE teaching while at the same time attempting to design a curriculum for competence specific to the profession in Algeria. The various recommendations resulting from this work have largely explored the professional competence required by an EP teacher based on the practical experience of the activity (located action) in order to obtain more precise results and more in line with current practice. In order to obtain greater objectivity, it was decided to interview the principal concerned in this field of education: experts, novices and inspectors, in order to obtain a better understanding of the practical competence and to establish a grid. Professional competence to meet the requirements of being able to teach PE under standard conditions.

## **2. Materials and Methods**

The method used to examine the professional competence required for the teaching of PE is both descriptive and quantitative. The research study used closed and open-ended questions.

### **2.1.1 Sample**

Eighty-five PE teachers contributed to the research. This number was provided by the Mostaganem education authorities as being all teachers working mixed-sex secondary schools in Mostaganem in 2014. The categories of teachers represented included those under training having little experience thought to the most experienced holding the title of teaching coach.

### **2.1.2 Procedures**

#### **A. The questionnaire**

The teachers of the PE completed a questionnaire on the notion of competence in PE teaching. The questionnaire included tabular forms with open and closed questions. The questions were designed to answer central question of identifying skills specific to practical teaching.

In order to test the objectivity and reliability of the research tool the first questionnaire established included several questions relating directly to the issue. The

questionnaire was then assessed by specialists from the profession who adjusted and amended the questions taking the observations of experts into account. To test its reliability, seven PE teachers chosen at random completed the questionnaire twice at a week's interval. The same results were obtained both times, leading to the conclusion that the research tool had an acceptable level of objectivity and reliability.

### B. Statistical Analysis

In this study attention focused on analyzing the replies of the PE teachers in relation to teaching PE in situ. Replies were coded in a computer data base and processed by *Sphinx v5* software. The *results* were analyzed using the comparison test of two percentages was used as well as the  $K^2$  test.

### 3. Results and Discussion

This part of the research study is devoted to analyzing and discussing the findings obtained from replies. It throws light on the main observations from the research and analyses them within the framework of National Education in Algeria.

**Table 1:** The grade distribution of PSE teachers

Number of teachers			
	Teacher under training	Permanent teachers	Permanent coach
N° of teachers	12	64	9
%	14.12	75.29	10.59

Table 1 indicates a greater number of teachers with a university degree and from Physical and Sports Education teacher training institutes, with the overall total of 85 for Mostaganem in 2014. These teachers had obtained the level of experience which enabled them to move on to a higher status. Only 12 were under training, 14.12% of the group; 64 were PE teachers in permanent posts, 75.29% of the group in this study. In addition, we identified nine PE teaching/coaches, 10.59% of the group.

These findings show that the Mostaganem education administration uses a form of nomenclature and teacher classification based on their number of years' experience in education and also on the evaluation test necessary for advancing from one status to another (e.g. from the status of principal teacher to that of teaching/coach). The results also show that most of these PE teachers hold a permanent post.

The evaluation test for holding a permanent post consists of establishing the standards for permanent post teachers responsible for the subject matter and teachers under training. The permanent teacher coordinates the subject matter with other

colleagues in the establishment, as well as the examinations and planning of the various tasks. Newly recruited teachers under training, with a three-year contract, have to wait in order to take the CAPEPS examination within 9 months following their nomination, knowing that passing this test for a permanent post is essential after receiving their end-of-studies diploma organized by the education administration (training department). This training is required by the State public service administration. Furthermore, during the study we observed that those teachers with the title of coach regularly work with subject matter inspectors, particularly in identifying and planning objectives for the training seminars organized regularly by the inspectors.

The status of coach can be obtained under certain conditions, which include the number of years spent teaching the subject as well as the result of the written test. The results also revealed that 72.41% of teachers have this type of professional experience in Mostaganem by comparison with experienced teachers having more than 10 years' experience in education. In the latter case, they comprise 25.28%.

Results vary between regions throughout the country. Research by A. Laroua (2011) shows that certain Provinces, such as Oran and Témouchent (in the west of the country) have older teachers with more than 10 years' experience in teaching PE. This difference in experience of pedagogical practice doubtless has an influence on the quality of teaching as well as on the level of competence attained by these "experts".

**Table 2:** Competence definitions for a PE teacher, according to the teachers themselves

How do you define the competence of a PSE teacher?			
Replies	R	% K <sup>2</sup> (cal)	K <sup>2</sup> (tab)
		21.42	18,31
The ability to obtain objectives with a minimum of energy.	1	1.15	
Great psychomotor and social abilities in individual and team disciplines.	2	2.30	
All the concepts and knowledge required for preparing a teaching session.	5	5.75	
The ability to prepare a PSE session in good conditions.	12	13.79	
The ability to find appropriate solutions for problems faced by a teacher during sports practice.	20	22.99	
Mastering TIC (information and communication technology).	11	12.64	
The ability to deal with pupils and to transmit information.	15	17.24	
The ability to carry out exercises and games correctly.	12	13.79	
A sound theoretical and practical knowledge.	2	2.30	
Cognitive, physical, and administrative competence	4	4.60	

Table 2 shows the range of replies from teachers on the definition of competence in PE. Twenty teachers, 22.99%, define specific PE competence as the ability to find appropriate solutions for problem

The situations faced by the teacher in a practical teaching situation. However, 15 teachers, or 17.25%, have a different view: they emphasize sound control over the class and the way of transmitting information as a major competence element. In addition, by combining two replies (TICE and knowledge of the activities), twenty-three teachers, 26.43%, define the competence specific to PE as the ability to carry out exercises correctly and sound knowledge of TICE (information and communication technology in teaching). The others gave quite varied and less significant responses.

A large group defined competence in PE as prior knowledge of the concepts which facilitate the preparation of a teaching session, as well as sound theoretical knowledge and specific practice regarding PE. The  $K^2$  test shows that the calculated  $K^2$  value ( $K^2_{cal}=21.42$ ) is greater than the  $K^2$  value of the Table ( $K^2_{Tab}=18.31$ ) where the degree of freedom of scope (N-1) is 10, and the level of significance is 0.05. This finding is a statistically significant increase, which explains the large difference in favors of the answer giving the greatest number of choices.

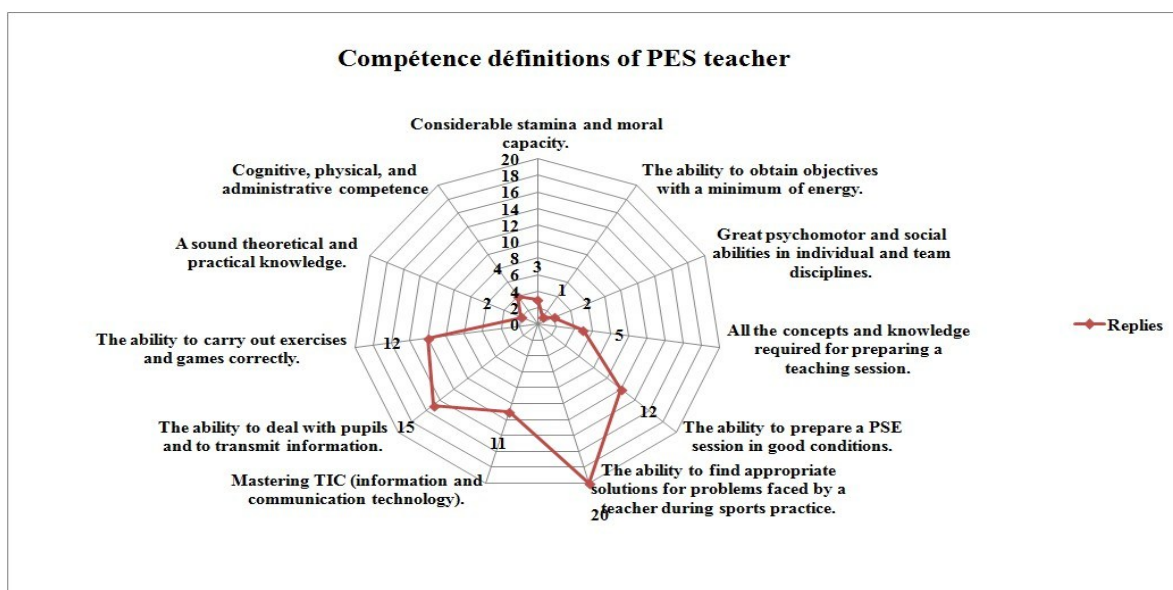
The findings show how various definitions of competence are formulated in PE. Each teacher suggested his own version where they defined competence specific to PSE drawn from their own professional experience. However, compared to the propositions generally found in the literature on the subject, their definitions are incomplete and do not take into account the basic elements that define competence in PE.

In fact, most of the teachers said that competence in PE is directly linked to the speed of assimilating environmental information in order to react to problem situations encountered during a PE session. Good class control and the quality of message transmission during the session, underscoring the value of professional gestures such as the use of guidance gestures during a session and including verbal and non-verbal communication.

Authors such as N. Chomsky (1973) and G. Le Boterf (1999), D. Delignières, C. Garsault (1993), and M. de Montmollin (1984), as well as O. Reboul (1980), have put forward many definitions for competence. Beyond the specificity of each of these definitions, certain points of agreement emerge. Competence or skill is a stable quality, acquired by apprenticeship, resulting in a set or group of elements in dynamic interaction. Knowledge is programmed, which supposes a power of action and/or understanding that can be applied to a category of actions relating to a common problem. In secondary school, skills *“constitute knowledge allowing for a reaction appropriate to a situation, or a group of situations presented by the teacher”*: they are cultural and methodological.

In every case, competence defines, in accordance with the regulations, the nature of the acquired knowledge: *“apprenticeship in PE leads to the acquisition of competence”* (grade six programs, 1996).

Based on these definitions, it may be supposed that competence is the possibility of acting voluntarily and effectively in a range of situations. The aim of the PE teacher is that the student acquires competence specific to PE; the teacher observes the motor behavior of the students and assists them in mobilizing their motor, cognitive, emotional, and social resources.



**Figure 1:** Definitions of the competence necessary for a PE teacher according to the teachers themselves

**Table 3: Specialized competence for a PE teacher**

Specialized competence required for a PSE teacher, according to the teachers themselves.				
Competences	R	%	K <sup>2</sup> (cal)	K <sup>2</sup> (tab)
Simple, short explanation of exercises.	8	9.20	27.04	26.30
Good positioning and use of the area allocated to pupils. Mastering TIC in education.	8	9.20		
Mastering the science associated to each discipline taught.	6	6.90		
A good relationship with colleagues and the administration. Ability to apply legislation.	8	9.20		
Ability to apply the approach by competence in PSE teaching.	10	11.49		
Good use of teaching material.	9	10.34		
The ability to teach efficiently.	7	8.05		
Sports activity continues in the establishment.	1	1.15		
Working methodically.	1	1.15		
Being exemplary at work.	3	3.45		
Sound mastery of teaching methods and styles.	1	1.15		
Experience in PSE teaching.	8	9.20		
Personally undertaking the physical activity.	2	2.30		
Having a correct view of the physical activity during practice.	1	1.15		
Being innovative at work.	1	1.15		

The findings in table N°3 show how teachers perceive the specific competence that a PE teacher should have. In fact, nineteen PE teachers, 21.83%, gave two answers which represent for them the key specialized competence in PE. This is the sound application of legislative texts supplied by the Algerian Minister of National Education.

In fact, teachers must abide by them, firstly since they are a guide to preparing classes, and secondly they provide the definition, objectives and purpose of PE. The legislation clearly details the competence that should be acquired by the pupil at each of the three levels taught at secondary school. Competence is evaluated at the end of each trimester (basic competence), each year (final competence), and at the end of the three years of study (definitive and final competence).



In these same legislative texts there are the apprenticeship objectives for each discipline taught (collective and individual) relative to each level of teaching, including the various evaluation stages. Class preparation is clearly explained, giving models of technical sheets. In principle, the PSE teacher may not change the competence and objectives as defined in the Ministry's official textbooks.

The second competence raised by the teachers was the ability to efficiently apply the approach by competence in PE teaching. An earlier study (Bensikaddour et al, 2013) shows that this was far from being the case for the group studied. Teachers under training have enormous difficulties in designing problem situations and in assisting pupils to find sound solutions (*ibid.*).

Furthermore, in this study show two replies have the same score. Eight PE teachers, 9.20% of the group, gave an answer considered pertinent in the literature on the subject. This is the competence relative to mastering PE methods and styles. The work of Bensikaddour (1995), Ataallah (2004), and Laroua (2009) match the findings of D. Banville (2004). They show that a great majority of teachers in Mostaganem Province, as in Western Algeria and Canada do not master all the various teaching methods available to them for a PE session. Described among others by Muska & Ashworth (1994), translated by Cothranet (1999), are eleven teaching methods; Practice, Command, Guided Discovery, Reciprocity, Divergent Production, Inclusion, Self-verification, Convergent Discovery, Individual Program, Self-teaching, and Pupil Initiative.

In the group taking part, a second group of 16 PE teachers, 18.40%, raised two types of competence specific to PSE: competence and professional gesture relative to teaching. They involve a simple short explanation of the exercises, and good positioning with good use of the area allocated to pupils.

The study by Laroua et al (2013) - whose purpose was to identify competence by using a grid for analyzing professional gestures - has three major aspects: verbal gestures, non-verbal gestures, and positioning in the field. Findings show that the competence described by teachers was used during sessions in verbal teaching practices while adding other gestures such as voice modulation.

Eight teachers, 9.20%, mentioned mastering TICE in teaching PE. This innovative finding, insofar as it was not cited in previous years, is today a teaching requirement. On the contrary, as TIC gradually invades all disciplines, a major change to references in professional competence is occurring with ever-increasing significance. Numerous research papers emphasize the complexity of analyzing the teaching changes resulting from the integration of TIC (Levin, Ammon, 1996; Mangenot, 2000). In the framework of

teacher training the complexity of such an analysis is amplified by the fact that it covers both training programs in junior and secondary schools, where teachers under training are appointed.

In fact, in spite of integrating TIC in teaching programs, teachers have difficulties adjusting. A recent study carried out in Mostaganem city shows that 65.21% of teachers, particularly teachers under training, do not understand TIC in education (Laroua et al, 2013). Furthermore, eight teachers, 9.20%, mention as competence a good relationship with colleagues and the administration. No reference is made of this competence in the literature. After having used the  $K^2$  test, the value of  $K^2$  calculated ( $K^2_{cal}=27.04$ ) is greater than the value of  $K^2$  in the tables ( $K^2_{Tab}=26.30$ ) where the degree of scope (N-1) is 16, and the degree of significance is 0.05.

This result indicates a significant statistical value in favors of the most often mentioned answer. Analysis of the findings shows that sound knowledge of legislation and legislative and administrative procedures is not mentioned. However, this competence theoretically enables the teachers to know their rights as well as their professional duties and responsibilities while referring to public function law N° 06-03 of 2006 and employment law. This is not surprising inasmuch as, during training in PE, students on the Master degree course in Human Movement and Motor Skills say the curriculum made insufficient provision for learning about legislation (Benchehida, 2014).

Analysis of the curriculum established for the Master degree in MHM confirms this finding. Without a doubt, this has a negative effect on teachers under training, in particular during their first months after being recruited. An assessment made by the trade union Cnapeste in Mostaganem city in 2012 confirmed that nearly 80% of new teachers recruited in the education sector do not fully understand legislative aspects and are unable to intervene on an administrative question and exercise their rights. This is particularly so when seeking a solution to a particular problem or unexpected circumstance in the establishment. The education administration in Mostaganem often organizes training sessions for newly recruited teachers on such subjects as psychology and educational methods as well as on legislation, but not to any depth. In fact, the most positive type of learning situation occurs when the teacher has a problem. Then the teacher must call on knowledge of legislation they acquired in training (Cnapeste, 2014).

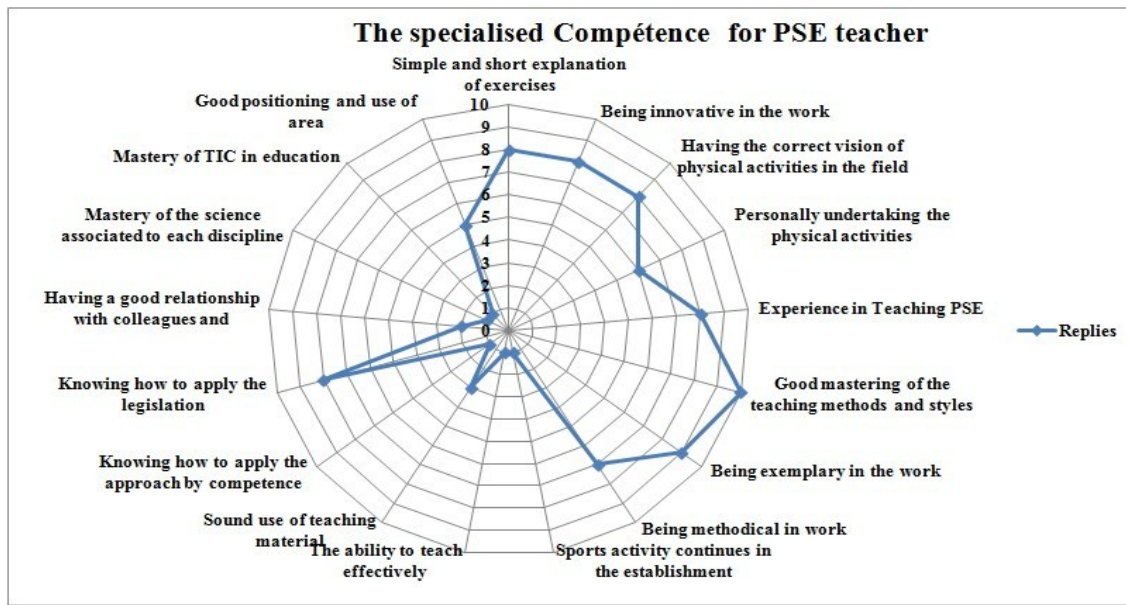


Figure 2: Specialized competence that a PE teacher should have according to the teachers themselves

#### 4. Conclusion

The findings of this study indicate that the notion of competence is still far from clearly defined. They show that 65% of the teachers taking part cannot provide an accurate definition of competence, whether general or specific in relation to the literature on the subject.

Concerning the competence that a PE teacher should have, several ideas have been formulated, such as “knowing how to apply the approach by competence in teaching PE”, and “knowing how to apply the official legislation”.

On the contrary, none of the teachers taking part cited a basic competence considered fundamental to the profession in general and included in the literature on the subject: “*sound understanding of legislation and administrative procedures*”. This has led teachers under training to encounter major difficulties in their establishments as has been identified in other research (Laroua et al. 2013). This issue was also explicitly stated by the PE inspector during an open-ended interview for research purposes.

Another finding concerns the training at the Mostaganem PE Institute. In terms of the programmers and the formal curriculum training does not take into account the imperatives encountered in the field by the professional PE teacher as stated by the teachers themselves.

Finally, from the findings of this study, discord is apparent regarding competence defined by different status PE teachers and the training programmers of the

Mostaganem PE Institute (programms studied in the form of a subject analysis of contents). The results of this study, listing 23 notions of professional competence necessary for PSE teaching do not comply with the formal training curriculum of the Mostaganem PE Institute.

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