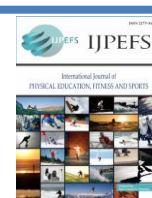




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## Competencies and training needs and its impact on determining the professional skills of Algerian elite coaches

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Belkadi Adel <sup>a,\*</sup>, Benchehida abdelkader <sup>a</sup>, Benbernou Otmane <sup>a</sup>,  
Sebbane Mohamed <sup>a</sup>,

<sup>a</sup>Institute of Physical Education and Sport -University of Mostaganem.

\*Corresponding Author Email: [adel.belkadi@univ-mosta.dz](mailto:adel.belkadi@univ-mosta.dz)

**Abstract:** The main purpose of this study is to develop an understanding of the trainers' perceptions of competency and training needs related to professional skills in accordance with professional experience and academic education. The sample included 76 judo trainers who answered a questionnaire that included a measure that focused on the perceptions of competency and another on training needs. An exploratory factor analysis was used with the maximum probability factor (Oblimin) to determine emerging factors. A comparison of the Coaches' concepts was made in the training experience and the academic background of the Coaches, where multiple comparisons were applied using ANOVA and Tukey. Three main areas of skills were done: skills related to annual planning; skills related to practice and competition; and personal education and training skills. Coaches' perceptions of their expertise were affected, with low-level trainers classifying themselves at lower levels of efficiency and more training needs; and higher-education Coaches in physical education were more efficient than mid-level trainers. Finally, most trainers consider them as efficient as they have indicated the training needs to be provided, which brings important feedback to the education of trainers. This suggests that trainers are an increasing their knowledge and competence in a wide range of areas that should be considered in future training of trainers programs, also to ensure the quality of education and training in the different level of physical and sports education institutes of the Algerian universities.

**Key Words:** Skills, training needs, professional skills, Coaches.



**Dr. BELKADI Adel** is a Senior Lecturer Class B in the Institute of Physical Education, also judo coach; I lead Research on sport Training Performance. I taught and conducted research on Coaches' professional skills. I served as Sports Director at the African IBSA, I have published few scientific articles, 1 book, co-authored 2 textbooks, and participated in scientific researches projects at the national, and international level.



**Pr. BENBERNOU Otmane** is currently Professor of Sport Sciences at the University of Mostaganem (Algeria), and I am currently interested in Handball training performance for high trained athletes and especially in the physical preparation, also I lead scientific project on coach training skills. My research is also interested in the design of new tools and software on the assessment of physical performances.



**Dr. BENCHEHIDA abdelkader** is a Senior Lecturer Class A in sports and physical activities. I taught human sciences applied in sports. My research is oriented towards the influence of human sciences on PSA; I am a Member of the IEPS Scientific Council, member of the APS optimization laboratory, (Algeria), Member of the Association of Francophone Football Researchers and the French Society of Sports Psychology (France).



**Pr. SEBBANE mohamed** is currently Professor of Sport Sciences at the University of Mostaganem (Algeria) and I am currently interested in visual training for expert and novice athletes and more particularly in the decision making process with laboratory tests (simulation), also in Eye tracking. My research is also interested in the design of the referential of professional competences among coaches and teachers of physical education and sports.

## 1. Introduction

The question required for the process of training professional skills, recommended attention of researchers in the field of sports training[1-4] In addition , some previous research has been criticized as limited to the studied performance of trainers because of their loss of the formative or educational factor, which can explain the behavior of the teacher between; Accordingly, about his interest in research to study the ideas of trainers and knowledge, and what it referred to him[5]. Although professionalism reflects the ability of trainers to apply their knowledge and beliefs, they are looking for more effective practice. Research on the formation of elite trainers increases attention to what trainers need to know and how to apply what they know[2, 6].

There are some confusing concepts of knowledge and competence although they have different meanings, interpretations and forms Diversity, which may be assumed by knowledge, which makes it more difficult to define knowledge, does not include the ability to apply it. [7,8]. Knowledge refers to the theory or conceptual or a set of principles in a particular area that is remembered or learned or reproduction framework, however, it will meet the need to meet the changing requirements of society by looking at the efficiency of knowledge in a specific application framework [7,9], Also it is interpreted as the efficiency of knowledge, skill, status, and self - confidence and values function [7,10].

Although professional skills allow trainers to apply theory in their practice [11] Skills become an important part of the training process and must be carefully understood in order to enhance the effectiveness of the training[12,13]. It has been found that the analysis of the functional and qualitative functions of the trainers' behavior and skills has been extended mainly to training, competition, and management [2,14-16] With regard to areas, The main tasks of trainers include: organizing, implementing and evaluating long and short term plans; to conduct and support players through practices and competitions, and coordinate assistance to trainers and other staff, for example, being responsible for human resources management.

Moreover, pose personal and social skills of trainers, representing the ability to communicate, learn and responsibility [16] , And the basis for their interaction with participants, assistant coaches and other athletes as driving the education of trainers programs, therefore, a wide range of trainers' skills are needed for trainers to perform their role effectively . The study of trainers' perceptions of competence and recognition of training needs provides an understanding of what trainers believe to be eligible and those that are aware of the need for further training, which in turn provide valuable information to improve the education of trainers. It has been studied perception of efficiency as an important aspect of teaching and training effectiveness [17], [5]cognitive social theory describes the concept of competence as a cognitive process in which individuals issue self-judgment about their ability to deal with certain environmental requirements .

Several studies have been developed on the perceived competence of trainers to improve the learning and performance of athletes [18]) In particular, [17], measured the self-efficacy of the training and found that the previous years of winning in the training, the perceived ability of the teams and parental support was a great predictor of self-efficacy and some Forms perceived ability of team and parental support were significant predictors of coaching self-efficacy[19].

The trainers' perception of skill and recognition of training needs may vary depending on the characteristics of the trainers, i.e professional experience and academic education. In fact, the professional experience of trainers is taken as an important source of knowledge and skill [20-22], In addition, the understanding of the academic training of trainers, particularly in physical education and sport, become appropriate if we consider that the academic field supports the behavior of trainers by providing them with knowledge in the mathematical sciences, for example in education [2,23]. The main purpose of this study is to develop an understanding of the trainers' awareness of skill and recognition of training needs related to professional skills. Employed specific research questions designed to

understand the terms of reference for the role that he sees trainers more shareholder of and importance in various areas of professional skill development, as trainers see that there are training needs that we will address through which link the perception of trainers skill and training needs of different personal experience and academic education[24].

## 2. Method and tools

The study included 76 trainers (57 men and 19 women) between the ages of 24 and 65 years ( $15.06 \pm 32.66$ ). The professional experience of trainers ranged from 1 to 25 years ( $15.06 \pm 32.66$ ) Taking into account that professionals have a stable period of development after 5 years of experience [25] Taking into account the base ten years to make experience [1], The trainers' experience was classified into three categories: low-trained trainers (up to 5 years of experience;  $n = 21$  ; Experienced midwives (5 to 10 years of experience;  $n = 17$ , highly experienced trainers (10 years and above experience;  $n = 19$ , And the impact of the academic background on the trainer's assessments were examined . Develop higher education in physical education and sport, Specialized content in relation to sports science [2,23], So coaches were also rated whether they have Degree or degree without higher education or other higher education. In this last group, trainers have been verified to have certificates from a wide range that are mostly not related to education. Thus, then = 43 Of trainers with primary and secondary education; (45.7 %) Number = 43) degree Degree; and other degrees of higher education. Three strategies were used to develop the questionnaire while respecting the requirements of the validity of the construction and the validity of the content.

First, the composition of the item and the design of the first version of the questionnaire were based on the basic theoretical framework and literature review [1,7,14–16]

Second: A group of three experts with a doctorate in physical education and experience in educating the trainers was evaluated. The initial set of questionnaire elements was also identified, representing the personalities of trainers associated

with the specific topics. Some items have been removed and others have been modified based on their advice.

Thirdly, the candidate version of the questionnaire was presented to a pilot study with a sub-sample of 30 trainers in order to test the clarity, accuracy, and relevance of the questionnaire to the study to be studied.

The final version of the questionnaire consists of a section dealing with the instructor's personal information, and two measures containing 23 questions each. One measure focuses on the trainer's understanding of efficiency and the other on deciding on training needs. The items on the Likert scale were answered from 1 to 5: uncontrolled; microcontroller slightly; Microcontroller, highly controlled For Of self - efficiency, and is not required, are required in a few, are required somewhat, required in large, it is required in high training needs. Data were obtained from the collection of coaches who attended the competitions and tournaments throughout the season and Internships 2018-2019. After ensuring confidentiality and anonymity, the trainers who volunteered were assigned to a quiet room where the questionnaire procedures were explained and informed consent was obtained. Participants had time to ask questions and the time to complete the questionnaire was not limited. Fill questionnaires ranged from fifteen to twenty minutes.

It has been applied to the analysis of exploratory factors associated by assessing the characteristics of the standard measurement and surveys of the questionnaire. In order to reduce the number of variables, the analysis was applied Oblimin, Because it allows the factors to be connected[26] Finally, the use of descriptive statistics frequencies and percentages, means and standard deviations for the account. In order to explore the perceptions of trainers in the work through their professional experience and academic education has been applied ANOVA In one direction using comparisons Tukey's post hoc Multiple.

**Table 1** represents the analysis of factors using the Oblimin equation, to analyze self-perceptions of trainers on professional skills.

Axes	Efficiency	Elements of self - perception of skills and items	Average responses	Level of significance	Alpha Krumbach	variance %
The first axis : Professional skills related to the annual planning and multiple planning	6	To controls and implementation of the multi-year plan	0,76	12.396	0.932	52.429
	3	To controls the implementation of multi-year preparatory planning, taking into account the team and individual needs	0,76			
	12	Controls multiple chart mode Years of national and international competition	0,75			
	9	Can assess the preparatory multi-annual plan	0,74			
	15	Can link competition with the chart of annual plan	0,71			
	5	control in Organization and implementation of the plan Annual	0,54			
	8	To make the evaluation and modification of the layout Annual, and adapted to unexpected situations	0,51			
	14	Can coordinate between competition and Annual Plan	0,51			
	2	Can implement the annual plan, Taking into consideration Group size and individual needs	0,35			
THE AXIS 2: SKILLS RELATED TO practice and competition guidance	13	Can guide the athlete during the competition, and consider the technical aspects Discipline	0,71	2.82	0.975	8.657
	10	Controls the preparation of athlete and team to compete	0,69			
	7	You can evaluate and adjust the quota and Adapted to unexpected situations	0,68			
	4	Be able to organize and direct quotas Training for various season sports.	0,65			
	1	To plan for training sessions Taking into account the individual needs	0,64			
	11	To set goals and adjusted to the team level.	0,62			
Axis 3 : Personal education and training	20	Be responsible and able to Identify ( social and psychological aspects ) , trying to modify behaviors	0,68	1.544	0.939	6.58
	22	He can solve problems in situations Critical.	0,65			
	21	Can connect ideas and identify Problems and solutions.	0,63			
	17	Can command organization, management The activities of athletes, assistant coaches and specialized athletes .	0,58			
	18	He is able to direct the trainers' configuration Beginners	0,58			
	19	He can configure and lead a group From Trainers .	0,55			
	16	He takes over the role of club president and manager Other trainers and sports specialist activities	0,52			
	23	Can access to sufficiency Self - configuration and learning, through the feedback and impact of reflexive Configurable	0,45			

### 3. Results

The exploratory research analysis produced solutions with 3 factors for each of the measures to be analyzed - perceptions of self-efficacy and training needs (Table 1). Its divisions showed good internal consistency, with alpha-Cronbach's 0.90 to me 0.96 since each worker presented intrinsic values higher than 1.0 and consisted of 6 to 9 elements, none were

excluded from the study. Also, factors include all 23 elements that comprise the questionnaire.

**Represents Table 2 A global matrix resulting from the combination analysis with the Uplimin test for the analysis of the training needs of trainers on professional skills.**

Axes	Skills N	Elements of training needs	Average responses	Level of significance	Alpha Krumbach	Contrast Ratio %
The first axis: Skills related to practice and competition orientation.	10	He can prepare the athlete and the team to compete	0,76	13.631	0.961	58,266
	13	He directs the athlete during the competition, and consider Technical aspects and discipline	0,74			
	7	Can evaluate and modify the practice session, and adapt it to unexpected situations	0,73			
	1	The practice session is planned taking into account the team and individual needs	0,69			
	23	To be self-sufficient in learning, through a reflective practice	0,69			
	11	He can organize a competition in the season, during which goals are set at the team level	0,65			
	4	Can regulate and direct quotas for competition .	0,56			
Axis 2: Skills related to annual and multi-year planning	6	Can organize and implement the multi-year plan	0,74	2.177	0.938	8,467
	9	Controls the evaluation of multi-year preparation planning	0,73			
	12	Can develop a multi-year competition plan .	0,66			
	15th	Is able to link competition with the multi-year plan	0,64			
	2	Implementing the annual plan, taking into account the team and individual needs .	0,50			
	8	Controls the assessment and modification of annual planning, and adapts them to unexpected situations .	0,48			
	5	He can organize and implement the annual plan	0,47			
14	Can coordinate the competition with the annual plan	0,37				
Axis 3 : Personal education and training	19	He can manage the education of other trainers .	0,72	1.539	0.905	6,519
	17	He leads the organization, and manages the activities of athletes, coaches and specialized athletes	0,70			
	18	Controls the instruction of junior trainers .	0,66			
	16	He will assume the role of Principal Director and manage other activities of trainers and specialized sports activities .	0,64			
	22	He can solve problems in new situations .	0,42			
	20	It has a vision to be effective (Social aspects), with an attempt to modify behavior	0,39			
	21	To communicate ideas, problems and solutions .	0,38			

The three axis of the self-efficacy scale can be explained by 69.35% of the total variance as shown in Table 1, which explains the first factor the largest amount of variance (67.66%). The perception of trainers for efficiency in annual and multi-year planning (axis 1) averaged 5.63; perceived skills for practice and orientation towards competition (axis 2) showed an average of 3.99; and finally, those on personal and trained learning capabilities (axis 3) Average: Where, the concept of trainers for the specialty ranged from "specialist" to "highly qualified".



Given the scale of training needs (Table 2), analysis of the groups of trainers formed by three factors explain 73.25% of the total variation. The results show that the trainers highlighted the training and guidance training needs (axis 1), averaging 3.48; the annual and multi-year planning skills (axis 2), the average 3.02 and the personal education and training skills (axis 3). With regard to training needs, on average, trainers described the powers represented by axis 1, 2 and 3 as “needed” to “much needed”.

Based on the factors that characterize the trainers' perception of competency and training needs related to professional skills, a comparative

professional experience and academic education has been completed; and given the professional experience (Table 3), we found significant differences in perceptions of trainers in all Axes.

The results revealed that highly experienced trainers consider themselves more efficient in annual and annual planning  $p = 0.001$  ; (F 2.321 = 6.77 , In practice and towards competition  $p = 0.016$ ) (F 2.325 = 4.208 Well, in personal educational skills and training (F 2.316 = 5.99 1; P = 0.004) Of low-skilled instructors.

**Table 3. A comparative analysis of the trainers' concepts of competency and educational needs related to professional skills considering professional experience**

<b>Professional Experience</b>	<b>mean</b>	<b>standard deviation</b>
<b>skills perceptions</b>		
Low experienced	3.446	0.727
Experienced medium	3.587	0.686
Highly experienced	3.757	0.670
<b>Terms of reference for annual and multi-year planning</b>		
Low experienced	3.889	0.616
Experienced medium	4.073	0.594
Highly experienced	4.091	0.590
<b>Skills related to practice and competition orientation</b>		
Low experienced	3.149	0.692
Experienced medium	3.695	0.708
Highly experienced	3.688	0.661
<b>Personal Skills and education training</b>		
<b>training needs</b>		
Low experienced	3.185	0.871
Experienced medium	2.859	0.871
Highly experienced	2.856	0.992
<b>Skills related to practice and competition orientation</b>		
Low experienced	3.180	0.851
Experienced medium	3.141	0.972
Highly experienced	2.869	0.924
<b>Terms of reference for annual and multi-year planning</b>		
Low experienced	3.133	0.905
Experienced medium	3.100	1.024
Highly experienced	2.919	0.954
<b>Personal skills and education training</b>		

Significant differences were found in the perception of trainers for their training needs (Table

3). As trainers believed people with low experience they need more training of trainers are highly experienced with regard to skills related guidance and competition; ( $F_{2,310} = 4.685$   $p = 0.012$ ), annual and multi-year planning ( $F_{2,324} = 4.489$ ;  $p = 0.01$ ) time Other, no differences were observed with a group of experienced intermediate trainers. Given the academic education of trainers (Table 4), many important differences in the trainers' perception of efficiency have been identified. In fact, with regard to the three factors - the skills related to the annual and multi-year planning ( $F_{2,324} = 11.086$   $p < 0.001$ ) practice and orientation towards competition ( $p < 0.001$ ), ( $F_{2,326} = 15.702$  and skills of personal education and training; ( $F_{2,318} = 12.958$   $p < 0.001$ ) both trained with PE degree and trained with other degree of higher education is seen themselves more efficient coaches with a higher degree raise the level of higher education. in contrast to these results, it appeared unique with respect to the training needs of the different (table 4) and Higher education groups: PE The group has recognized values that are lower than training needs in terms of guidance skills Competition from other trainers with degrees of higher education ( $F_{2, 318} = 12.958$ ;  $p = 0.001$ ).

#### 4. Discussion

An analysis of trainer's perceptions of efficiency and recognition of training needs resolved three similar factors, making clear skills relevant to annual and multi-year planning, skills related to practice and competition orientation, and skills for personal education and training. Thus, the trainers, in general, realized that they needed more vocational education in a wide range of areas, pointing to a diverse model of training needs.

However, the reason why the item "be self-sufficient in learning through reflective practice" has been entered into various factors from one scale to another is not easy to verify; while aware of the perceived concept of skill, the item referred to is loaded on The "Personal Educational Skills and Training" factor, in recognition of the size of the training needs that were loaded on the basis of "skills related to practice and guiding competition". The temporary interpretation of this apparent divergence

can be that the factors are not unconnected, and therefore, even if trainers consider that self-sufficiency in learning through reflective practice is a personal and critical skill, they also take primary importance for the practice and direction of competition, Trainers recognize that the shift to the world of reflective thinking is a need for training in skillful practice. As Irwin [21], from a study with six trained graduates in the field of training sciences, there is a reflection as an important element in the practice of training; moreover, there is a "gap" between academic experience and reflective practice of "the real world" For sports training graduates, the development of reflective practice within the sports coaches will appear crucial to enhance professional skills. An analysis of the results shows that the expert trainers evaluated skill 13 among the skills studied in the study [27]

The mandates for annual and multi-year planning have emerged as the strongest factor in the trainers' perception of the efficiency scale, which means that these skills may provide an excellent starting point for the study of the development of trainers' capacities. In fact, regardless of training experience or academic education, in terms of annual and multi-year planning, trainers indicated that they considered themselves highly qualified. However, trainers realized that training is still needed in these areas. [2] acknowledged that setting a seasonal or annual plan is a key goal of the university education program. The trainers of the study emphasized long-term plans, considering future and strategic plans as an essential part of their professional skill. [28]. In turn, the research devoted little attention to planning aspects, ie long-term plans. Both [15] point to the importance of the concept of initiative plans, rather than simply responding to different situations in training and competition, and stressed that coaches are proactively planning through long and short training preparation and their athletes in unexpected situations that may occur. In fact, the development of the strategic plan greatly helps to clarify the micro and macro plans and make sure that all the specific action plans are "on the same text" he said. This focus in the strategic planning process is itself a very important step in training planning

In addition, in this study, a plan was developed to prepare and guide competitive experiences and exercise courses in the same factor, which reveals the daily work of trainers and basic skills of the profession. This worker, whose skills are related to practice and guide competition, has emerged as needing further training (in dire need), although they consider themselves highly competent. [2] Emphasizes communication skills and the implementation of training tasks, providing support and managing athletes during competition.

In addition, the trainers interviewed by [1] identified the skills of providing feedback and skills acquisition as the key words of pedagogy to trainers; they used them to explain how to build a practice session and modify information into changing practice and competition environments continuously.

A wide range of skills related to social issues, sport management and training education, called skills for personal education and training, have emerged as the third factor in terms of skill and recognition of training needs. Although the awareness of the trainers led to qualification, this factor was also classified as needed, just like others. These results seem to be a sign of the pursuit of permanent trainers to gain skill and curiosity to learn more in a wide range of areas. [29] reported the interest of trainers in learning more about communication with parents and athletes, because communication is an essential part of training [1,22,29] The success of trainers and the social situation depends on their ability to make all athletes (athletes, parents, managers, etc.) trust their skills. Accordingly, trainers in this study recognize that effective communication skills are necessary for success and to link this skill to leadership and good teaching practices. [15] Highlights the importance of the coach's ethical values and social and cultural sensitivity as this fact is particularly important given the large amount of time trainers spend with athletes and the power they exert on the minds of athletes. Social interactions are at the center of the training process, where "trainers are social beings working in a social environment" [3,6] but note that social dynamics that establish relationships among all

athletes are not yet sufficiently understood Thus, it is said that the activities of trainers should be examined and explained as such, for example through the use of cognitive research, to improve training programs.

In terms of academic education, the study shows that trainers with high degrees. Or others consider themselves more efficient than trainers without higher education. The academic environment, even if it is not specific to sport, promotes the development of core skills, for example, related to communication, leadership, evaluation or finding solutions to problems that support the behaviors of trainers. [2,23] highlighted that sport education has the advantage of supporting the behavior of trainers with theoretical knowledge of mathematical sciences, and no differences in perceptions have been found between trainers and higher education graduates. The absence of further differences between these groups may, to a certain extent, be due to the fact that the "other higher education degree" encompasses a wide range of academic areas, mainly in non-teaching areas. Higher education, however [30], allows for a higher cultural level that can positively affect the trainers' awareness of their knowledge and skill in training. In the future it will be necessary to investigate the impact of the trainers of higher education graduates in the training courses [28], namely the use of qualitative methods as interviewers to understand why these differences are not verified. Although it was related to the needs of training needs, a difference was found between trainers with higher education certificates and others [28]. This is linked to the efficiency of guidance and competition, and suggests that trainers without sport education strongly recognize the need to develop core skills based on the daily work of trainers. Further studies are recommended, beyond these results, to try to understand how the perceptions of professionalism and training needs were influenced by the interaction of many of the characteristics of the coach.

## 5. Conclusion

The trainers' perceptions of skill and recognition of training needs have resulted in three



main areas: skills related to annual and multi-year planning, capacity for practice, competition orientation and, finally, personal and trained learning skills. Trainers indicated to have training needs, which brought important feedback to the training education. These results indicate that trainers are interested in learning and in increasing their knowledge and skill in a wide range of areas. The importance of research on the concepts of trainers and educational needs is attributed to improved training. This research also argues that there is a need to identify, develop and evaluate training skills at all levels of training. We recommend that training programs begin to assess training needs of trainers in order to move towards more individualized training, for training requirements. Moreover, the self-efficacy perception of trainers has shown that highly educated trainers perceive themselves as more efficient than trainers without higher education. Although academic training in physical education should be a different factor from the perception of trainers, only minor differences were found between trainers in physical education and other training courses. Since "other higher education fields" are not often related to teaching, there is a more context-sensitive study that takes into account the nature and quality of the courses, especially the use of qualitative methods, in order to better understand these results.

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