



## Research Article

# The Role of the Professional Seniority of Tunisian PE Teachers on Regularities of Didactic Intervention: An Experimental Investigation

Mounira Ben Chaifa<sup>1</sup>, Ghazi Racil<sup>2\*</sup>, Mohamed A. Guembri<sup>3</sup>, Luca Russo<sup>4</sup>

<sup>1</sup>Department of didactics, Higher Institute of Education and Continuing Education, Tunisia

<sup>2</sup>Research Laboratory (LR23JS01) "Sport Performance, Health & Society", Higher Institute of Sport and Physical Education of Ksar Said, University of Manouba, Tunis 1000, Tunisia

<sup>3</sup> Research Unit: Physical Activity, Sport and Health, UR18JS01, National Observatory of Sport, Tunis 1003, Tunisia

<sup>4</sup>Department of Human Sciences, Università Telematica degli Studi IUL, 50122 Florence, Italy

**\*Corresponding author:** Ghazi Racil, Research Laboratory (LR23JS01) "Sport Performance, Health & Society", Higher Institute of Sport and Physical Education of Ksar Said, University of Manouba, Tunis 1000, Tunisia

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### Abstract

The nature of teaching practice is intricate and diverse. In their daily work, physical education (PE) teachers employ a range of skills to effectively accomplish their dual pedagogical and didactic mission. Ensuring coordination and complementarities among these professional skills becomes a necessity. In this study, our objective was to explore the impact of PE teachers' professional experience on their teaching practice. To achieve this, we collaborated with 30 participants, comprising 20 Physical Education teachers – 10 with extensive experience and 10 beginners – along with 10 trainee students. To gather data, we recorded gymnastics sessions and conducted self-confrontation interviews with the participants.

Our findings reveal that teaching practice primarily revolves around making thoughtful and intelligent choices in implementing regular educational interventions. Moreover, we observed that the level of professional experience significantly influences these choices. Teaching practice is the set of several regularities of educational intervention. To the regularities of pedagogical and didactic intervention are added the regularities of emotional and proxemics intervention of the Physical Education teacher. Coordination and complementarity between the different components of teaching practice is a necessity for the success of the teaching profession. We seek in this study to clarify the influence of the professional seniority of Physical Education teachers on the quantity and quality of the regularities of intervention brought into play in the field. We collaborated with 30 participants, including 20 Physical Education teachers, 10 experienced and 10 beginners, and 10 trainee students. We filmed gymnastics sessions and we carried out self-confrontation interviews with the participants. We measured the teacher/student interpersonal distance. We looked for the discrepancy between the projected and the realized. Our results show that the teaching practice is nothing but a qualitative and intelligent choice of educational intervention regularities. Professional seniority affects this choice.

**Keywords:** Teacher practice, Regularities of intervention, Professional seniority, Physical Education

## Introduction

The context and purpose of physical education (PE) teaching can be considered unique because it takes place in very different locations such as sport fields, gyms, classrooms, swimming pools and other places. Moreover, the content taught is situated within a specific context, connected to various fields of knowledge including psychology, sociology, physiology, and more. Additionally, these contents are influenced by social practices that serve as points of reference [1].

According to [2], the objective of PE teaching is to bring about targeted transformations in students, for which the PE teacher prepares environments conducive to learning. The effective preparation of spatiotemporal and material setups lies at the core of their professional activity [3]. Emphasize the significance of temporal and spatial organization as a foundation for lessons. The dynamics of social interactions within the classroom are influenced by the physical layout. The architectural configuration, spatial arrangement of students, and presence of objects can shape the nature of activities conducted in the class. Increasingly, classroom management is recognized as a central aspect of a teacher's effectiveness [4]. Class management competence is a complex and multidimensional activity [5,6] asserts that classroom management strongly influences academic success by optimizing learning time and ensuring the smooth functioning of educational activities [7]. Suggests that adopting professional routines and identifying their characteristics are essential for teachers seeking a reflective approach to class management. Once established and successful, these routines enable teachers to focus their attention on constructing knowledge with their students. In their work, [8] as well as [9] argue that improvisation is a form of "creative action" and advocate for training in improvisation or adaptive approaches to deal with unexpected situations, as proposed by [10]. These authors contend that teachers should prioritize adaptability, adjustment, and evaluation during professional action, while addressing the essential aspects of teaching situations, rather than solely relying on comprehensive planning. The role of a PE teacher encompasses both didactic and pedagogical objectives [11-15]. It involves building knowledge and skills among students, as well as managing and organizing the class. Coordination and complementarity between these two objectives are essential [15]. In addition to pedagogical and didactic management, interpersonal proxemics management during practical sessions [16] and the display of the PE teacher's emotions [17] are also important considerations. The PE teacher's body becomes a means of conveying information during interactions with students. Effective communication, both verbal and non-verbal, is crucial for facilitating student learning

[18,19] highlights that, apart from improving students' motor skills through physical contact, PE teachers also influence the students' development based on complex spatiotemporal configurations that influence interpersonal categorizations. The perception of distance in the teaching environment involves not only Euclidean distance but also factors like body orientation and gaze orientation, which collectively contribute to the notion of didactic distance [20,21].

The educational environment, characterized by interpersonal interactions, fosters the emergence and development of emotions [22,23]. Emotions are integral to teaching practice [24], influencing learning processes and interpersonal relationships [22-25] regard emotions as the hidden facet of the didactic triangle, acknowledging that both positive and negative emotions respectively facilitate or hinder learning [22] and impact the development of interpersonal relationships [23]. Several authors [22-30] affirm that teachers' emotions influence students' outcomes [31]. Emphasizes the importance of authentic presence in teaching, where the cognitive, affective, and bodily aspects of the teacher are articulated and practically manifested to oneself and others [29]. Confirms that effective management of teachers' and students' emotions promotes a positive learning climate, captures students' attention, fosters their engagement, manages their behaviour, and enhances their understanding of the subject matter. Numerous studies [32-38] have explored the emotional dynamics of teachers in the field of physical education, underscoring the pervasive and dynamic nature of emotions and their role in shaping teachers' daily professional actions [37]. Confirm that PE lessons provide a favourable environment for the emergence, development, and exchange of positive and negative emotions between teachers and students. Physical engagement in PE classes often heightens emotions, making them an important consideration during teaching sessions.

According to the framework presented regarding the professional role of PE teachers, it is reasonable to hypothesize that the level of professional experience can serve as a differentiating factor in teaching quality. Hence, the objective of this study is to examine the impact of professional experience on the teaching practices of Tunisian PE teachers during gymnastics sessions. The research aims to elucidate the disparities in teaching practices among experienced teachers, beginners, and trainee students.

## Material & Methods

### Participants

A total of 30 participants were recruited for the experiment. Ten experienced teachers (5 men and 5 women whose teaching experience ranged between 12 and 30 years; mean experience 21 years  $\pm$  9 years) constituted the first research group (ET - experienced teachers). Ten newly appointed teachers (5 men and 5 women whose seniority ranged between 3 and 5 years; mean

experience 4 years $\pm$  1 year) constituted the second research group (BT - beginner teachers). Ten student trainees (5 men and 5 women) in the initial phase of their training to become teachers constituted the third research group (ST -student trainees). ST participants were at the end of their academic training, in the third year of a fundamental license in physical education and they participate at a pedagogical internship within secondary establishments with a rate of two practical sessions per week. Participation in the research was voluntary, and all participants were provided with prior information regarding the research framework and conditions.

### Study procedures

To achieve the research objective, two investigative techniques were employed: 1) video recording of PE sessions and 2) self-confrontation interviews [39].

Video recording of PE sessions was conducted, with each teacher being recorded during two sessions. The sessions were filmed during the second term of the school year. The Tunisian education system divides the school year into three trimesters. The second trimester is during the months of January, February and March. The average duration of each session was 55 minutes. The teachers' interactions were captured on video in situ using three digital cameras. One camera (Go Pro 4, 1080 x 60), was attached to the teacher's head, allowing for unrestricted movement and capturing all verbal communications and targeted angles. A second camera (CISCO Flip video, 1280 x 720), operated by the researcher, followed the teacher's movements from a respectful distance, capturing wide shots of all the teacher's interactions with the students. The third camera(Canon Digital IXUS 100 IS, 1280 x720), mounted on tripods in a corner of the gymnasium, provided wide framing shots, ensuring continuous visibility of the teacher and all the students.

Self-confrontation interviews were conducted immediately after the practical session to document the teacher's pre-reflective experience [40]. A laptop computer and a video projector were utilized to view the recorded lesson. A tape recorder was used to audio record the post-lesson interviews. The playback of the videotape could be paused, advanced, or rewound at any time, as requested by the teacher or the researcher. The teacher was engaged in a semi-structured dialogue, prompted by open-ended questions based on the video, to explain their actions, thoughts, considerations, perceptions, and feelings during the session [41], without seeking justifications, the teacher expresses himself freely and he justifies himself by explaining his gestures his emotions his placement and movement without asking him.

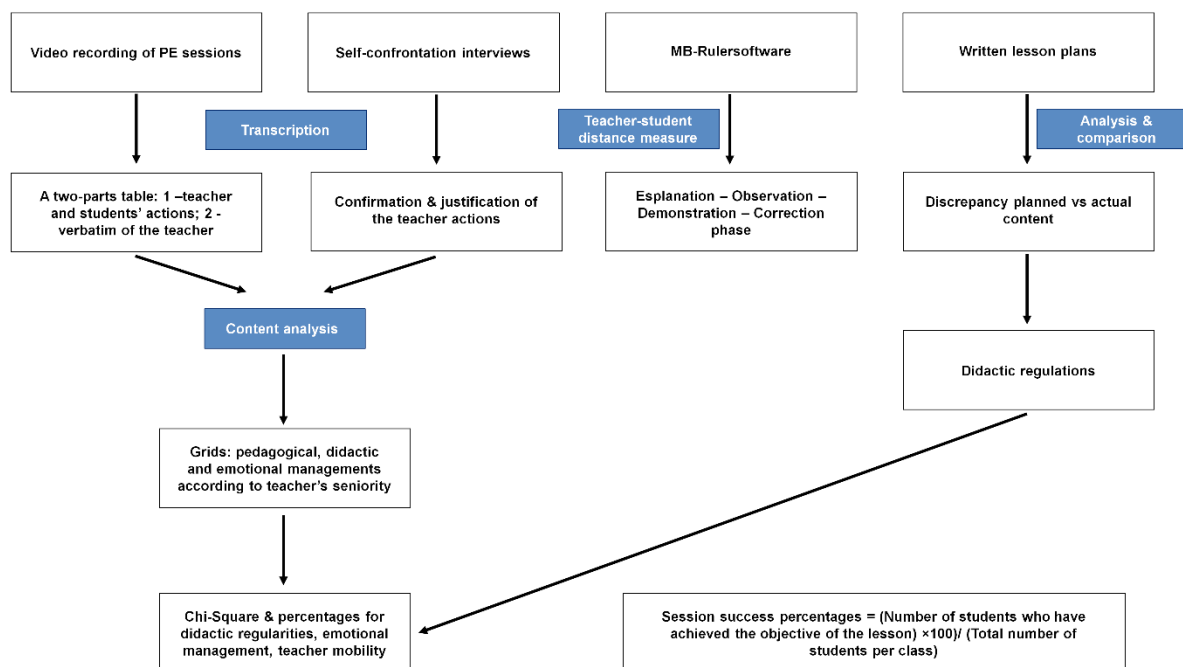
### Data collection and statistical analysis

The self-confrontation interviews were transcribed. The practical sessions were transcribed in a two-part table, with the first part focusing on the actions of the teacher and students, and the second part containing the verbatim of the teacher. Next, the written lesson plans were analysed, and a comparison was made between their content and the actual teaching content implemented in the field. Finally, the Mb ruler pro-5.1, software developed by Markus Bader, which is a tool for measuring distances on video and images, was used to measure the interpersonal distance according to the different placements of the teacher in relation to the student during four separated moments of intervention: 1) explanation, 2) demonstration, 3) correction, 4) observation.

In a second step, we submitted the verbatim of the recordings as well as the answers of the self-confrontation interviews to the technique of content analysis in the form of grids. We calculate the times when teachers, for example, have changed the grouping of students or they have moved equipment. The grids contained the pedagogical, didactic, and emotional managements according to the seniority of the teacher. Pedagogical management refers to: handing of pedagogical material, student training, and breach of the social contract, student motivation and security measures. Didactic managements refer to: presentation and explanation of stains, didactic regulation, technical didactic regulation, breach on didactic contract, demonstration, handing didactic material. Simulated emotional management refers to: postures, gestures, mimics, voice prosody, and dry language.

In the last step, we submitted the collected data to statistical processing using the SPSS software where we applied the square K test and we also used the calculation of the percentages for well-determined data, as well as the calculation of the average for the interpersonal distances. We also calculated the success rates of the sessions (session success percentages) with the following formula (rule of three):  $\text{Session success rate} = (\text{Number of students who have achieved the objective of the lesson}) \times 100 / (\text{Total number of students per class})$ . A successful student is a student who has fulfilled the success criteria of the reference situation, which directly relates to the objective of the practical session. The teacher is responsible for evaluating the success of the student since he set the criteria for success.

A detailed framework of the procedures and data collection is shown in (Figure 1).



**Figure 1:** Detail of the procedures and data collection. Please change the term regularity by the expression components of pedagogical, didactic and emotional management in figure 1.

## Results

The data analysis allowed to present the results dividing in 4 main areas: I. Pedagogical and didactic management; II. Management of mobility and travel according to professional seniority; III. Management of simulated emotions according to professional seniority during gymnastics sessions; IV. Success rate of the sessions according to the professional seniority of the PE teacher. Specifically, the first and the second areas were constituted by I.1. Pedagogical and I.2. Didactic management according to the professional seniority of the PE teacher and by II.1. Didactic distance according to professional seniority and II.2. Mobility of the PE teacher according to professional seniority, respectively.

### Pedagogical and didactic management

#### Pedagogical management according to the professional seniority of the PE teacher

We have eliminated the term regularities and replaced it with the term management components

The regularities of interventions are considered the acts and tasks that the PE teacher does on a regular and unavoidable

basis several times in each session for pedagogical and didactic management. The pedagogical management is made up of: 1) handing of pedagogical material; 2) student training; 3) breach of the social contract; 4) student motivation; 5) security measures.

Pedagogical management	P-value
Handing of pedagogical material	.41
Student training	.68
Breach of the social contract	.48
Student motivation	.193
Security measures	.34

**Table 1:** Pedagogical management vs professional seniority

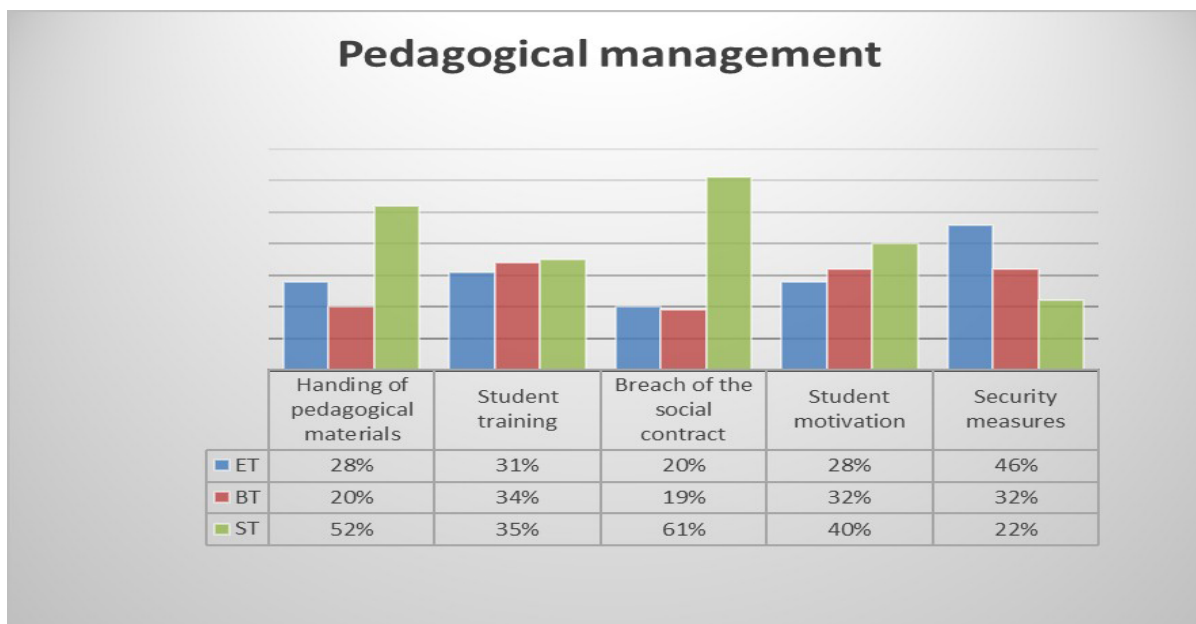
**Interpretations:** according to Table 1, there are no significant differences between the pedagogical management and the professional seniority of the practitioner. All teachers, including trainee students, use the same components of pedagogical management.

To better explain the influence of professional seniority on pedagogical management, we have calculated the average and the standard deviation

Research group	ET		BT		ST	
Pedagogical management	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
Handling of pedagogical material	14,3	8,63	14,9	9,13	27	13,87
Student training	26	9,72	32,2	11,67	26,8	10,00
Breach of the social contract	17	11,62	27,7	40,71	38,9	34,64
Student motivation	36,6	18,32	39,2	17,20	53,8	29,88
Security measures	13	8,91	10,7	5,96	6,2	5,25

**Table 2:** Average and standard deviation of pedagogical management vs professional seniority

To better explain the influence of professional seniority on the pedagogical management, we have subjected the latter to percentages. The results are schematized by the following (figure 2).



**Figure 2:** Pedagogical management according to the professional seniority of the PE teacher

According to figure 2, the trainee student manipulates and moves the teaching material more, which shows poor management of space. It also changes the groupings and arrangements of the students a little more. These changes take time to the detriment of learning time, which directly reduces the student's motor engagement time. He motivates learners more, therefore, he seeks to improve his relationship with the student and encourages him to work. On the other hand, it makes the workplace and the student less secure and it is a weak point to be reinforced to avoid accidents during practice, especially when gymnastics is the activity taught. The trainee student is concerned about the safety of the student, just, under the influence of the recommendations of the educational supervisors. It should also be mentioned that the trainee student is the most confronted with the breach of the social contract, which reveals problems of class control and authority. Thus, the trainee student does not manage to control the students, as a solution, he seeks to change the placement of the teaching materials and that of the student. He seeks to improve and manage his relationship with the student well by motivating him and acting on the work environment. The trainee student takes more time and provides more effort during the pedagogical management.

On the other hand, the experienced teacher and the beginner teacher provide less effort for the same components of pedagogical management except for the security measures which remain a priority during a practical session. The beginner teacher prefers to put the materials in parallel with the warm-up of the students so as not to waste time and to be able to continue the learning content.

The experienced teacher is more strategist. He sets rules of life from the start of the school year. For the sessions, he plans in advance the organization of the teaching materials and the distribution of the grouping of the pupils so once on site he does not take enough time for the teaching management.

TRAINEE STUDENT	BEGINNER TEACHER	EXPERIENCED TEACHER
The first sessions are the most difficult. At the beginning, you can't help but take time to manage the class. If the teacher in each situation changes the material and the arrangement of the students, he will be disturbed and the students too. So each time he will waste time and he will not be able to complete the scheduled content.	As the students work I place the material and the workshops are prepared so I do not find any problem with the time. If you waste a lot of time managing the class and organizing it, you may not be able to execute the situations and give them the time they need.	For class management, it is necessary to give more time at the beginning of the year, to establish rules of life thereafter, it is done gradually, it is necessary to choose the organization of the material and the arrangement of the pupils before the session. More you manage to manage the class properly in addition to the time deprived automatically.

**Table 3:** Testimonies of participants in the course of self-confrontation interviews and viewing of videotapes for the pedagogical management of practical sessions

### Didactic management according to the professional seniority of the PE teacher

The didactic management is made up of: 1)presentation and explanation of stains; 2)didactic regulation; 3)technical didactic regulation; 4)breach on didactic contract; 5)demonstration; 6)handing didactic material

We submitted our results to the square K test, table 3 summarizes the results obtained

Didactic management	P- value
Presentation and explanation of stains	.13
Didactic regulation	.00
Technical didactic regulation	.19
Breach on didactic contract	.27
Demonstration	.15
Handing didactic material	.22

**Table 4:** Didactic management vs professional seniority

**Interpretations:** according to Table 4, there are no significant differences between the didactic management and the professional seniority of the practitioner except at the level of didactic regulation. All teachers, including trainee students, use the same components of didactic management. While for the didactic regulation is used differently between the participants.

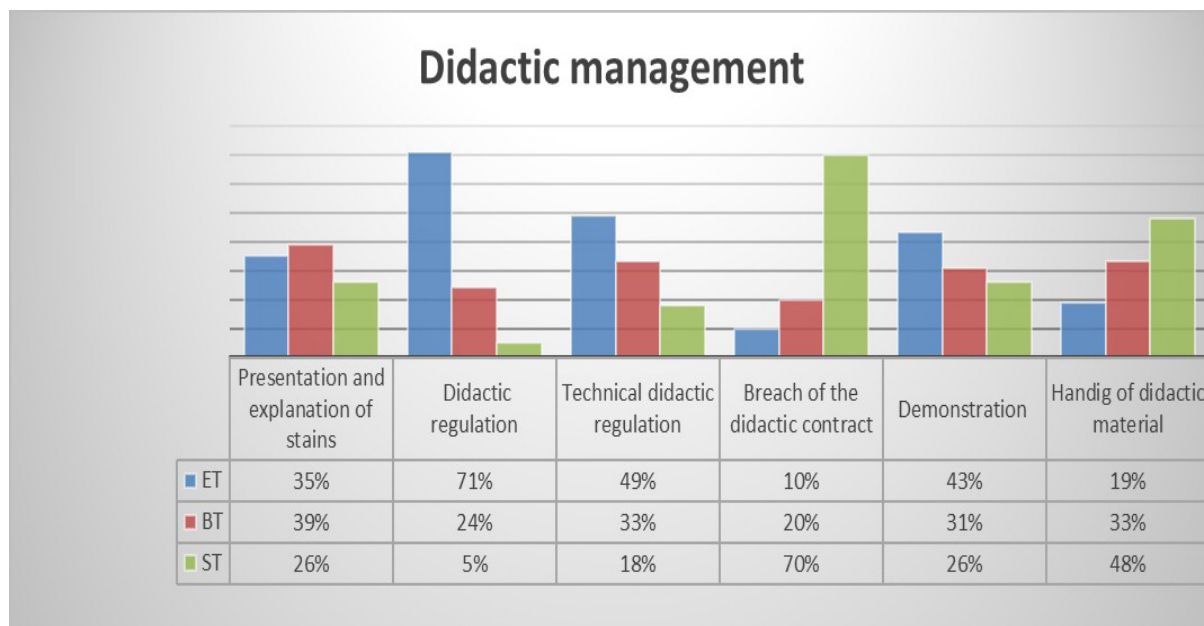
To better explain the influence of professional seniority on the didactic management, we have calculated the average and the standard deviation.

Research group	ET		BT		ST	
Didactic management	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
Presentation and explanation of stains	309,00	130,21	332,60	123,02	236,10	73,64
Didactic regulation	4,40	3,47	1,60	1,71	0,30	0,67

Technical didactic regulation	332,00	159,55	239,50	97,83	112,00	41,93
Breach on didactic contract	18,40	7,40	26,80	12,66	121,30	56,24
Demonstration	85,70	24,33	73,00	30,06	63,10	19,21
Handing didactic material	0,80	0,92	1,33	1,00	2,00	0,00

**Table 5:** Average and standard deviation of didactic management vs professional seniority

To better explain the influence of professional seniority on the didactic management, we have subjected the latter to percentages. The results are schematized by the following (Figure 3).



**Figure 3:** Didactic management according to professional seniority

According to figure 3, the trainee student does not present and explain the tasks enough, he rarely regulates didactically and corrects little technically and he does not invest too much in the demonstration of technical gestures which can be explained either by an inability to reproduce the technical gesture or by ignorance of the importance of the demonstration of the gesture and its impact on the student during the act of teaching. Automatically thereafter, he is confronted with the breach of the didactic contract in an abundant way. This problem can be caused mainly by two reasons, either by a lack of theoretical preparation which induces a non-lucid presentation of the learning content, or that it presents a learning content not adapted to the levels of the students. So, the trainee student, for lack of experience and good planning, does not yet manage to pass on the information properly to the student, he does not explain precisely the task to be learned, he almost does not improvise in along the way and he does not make enough technical didactic adjustments, he limits himself to what

he has already planned. He believes that he has taken everything into consideration during the theoretical preparation of the lesson and he has identified all the details of the learning situation and he does not adapt to the reality of teaching practice.

On the other hand, he is often helped by didactic material (media sheet, overhead projector) as a support for explaining the learning content. This does not replace the physical intervention and the verbal and non-verbal communication of the actor during the teaching practice. On the didactic level, the efforts of the student trainee are misdirected and not measured out, he gets stuck by becoming more and more attached to his initial theoretical planning and he is confronted with an embarrassing and uncomfortable situation. Loss of the speaker's energy without improving the student's performance.

On the other hand, the experienced teacher brings more technical regulations and didactic adjustments. He physically

demonstrates more technical gestures during educational interventions for the explanation and correction of stains. The experienced teacher plays more on the quality than on the quantity of intervention.

It should also be noted that the percentages of the components of didactic management, of the beginner teacher, swing to approach, sometimes, those of the experienced teacher, sometimes, of the trainee student and even exceed them by time. The beginner teacher is halfway there.

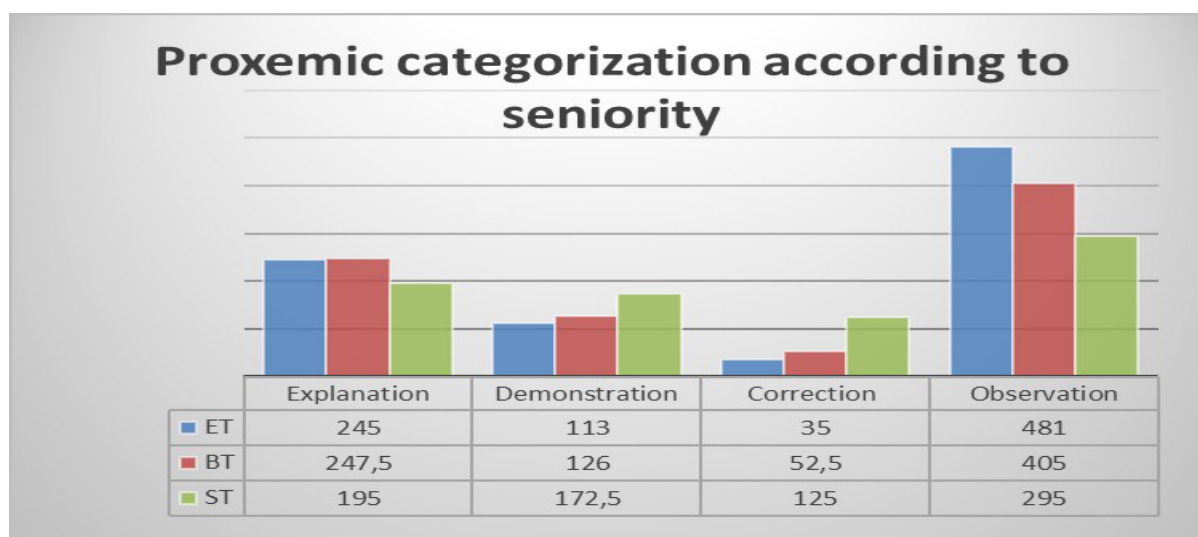
TRAINEE STUDENT	BEGINNER TEACHER	EXPERIENCED TEACHER
I worked with groups of levels I planned everything. the sheet is prepared on bases, the level of the class, the number, situations adapted to the physical and cognitive levels of the pupils, as long as the content of the sheet is adapted with the capacities of the pupils I content to apply it, uh, there the students don't take the initiative to try the boys are undisciplined and the girls are too weak physically.	We must integrate the spirit of the sequence. the student is not graded on a single element but the whole sequence. For the creative side, I let them choose the technical elements and the connecting elements, their order, of course by executing correctly. a time for the review of the sequence and they go one by one to perform the sequence and see the integration of the wheel in this sequence.	Only ten repetitions left, it's time for the reminder, to integrate the element of the session into the sequence. I work on the memorization of the sequence. Since my first years of the career, I felt, when leading the session, we focus more on the technique of gestures and when we passed the test, the student gets stuck or is the sequence? If not, I find it very difficult and the students do not coordinate the movements and remain weak, so from the start you have to link everything

**Table 6:** Testimonies of participants in the course of self-confrontation interviews and viewing of videotapes for the didactic management of gymnastics sessions.

#### Management of mobility and travel according to professional seniority

##### Didactic distance according to professional seniority

The average distances observed during the gymnastics sessions to the detriment of the seniority of the teacher are schematized by the following (figure 4).



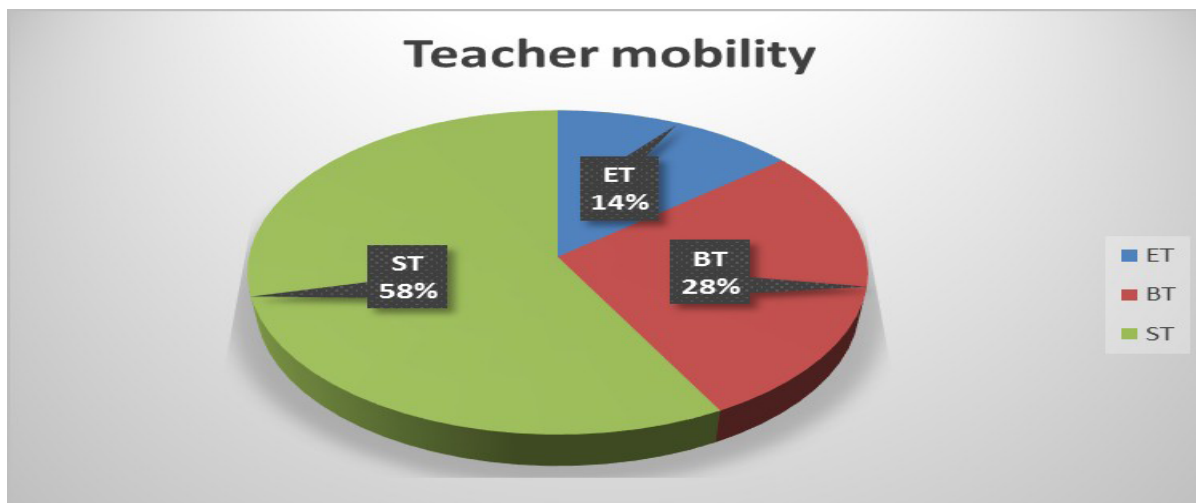
**Figure 4:** Proxemics' categorization according to professional seniority during gymnastics sessions

According to figure 4, teachers and student trainees use the same proxemics 'categorizations during practical sessions. The participants in this experiment stand at a great distance from their pupils when observing the progress of the work (on average 394cm). This distance decreases during the explanation (on average by 229cm) and the demonstration (on average by 137cm) to allow the students to listen well and see the teacher well. This distance decreases further during correction (on average 71cm), for experienced teachers this distance narrows until they have the opportunity to correct the student through physical contact and touch. On the other hand, the trainee students correct more from afar than the participating teachers in our study, which is not approved in PE, while they

demonstrate more from afar than the other teachers, something that remains an adviser for the visibility of the technical gesture for all the class. When explaining the spots, the participants in our experiment explain from a distance with a difference of half a meter for the student trainees. It should also be noted that the experienced teacher exceeds the average values while the trainee student is far from reaching these averages. On the other hand, the beginner teacher remains the closest to the average measures.

#### **Mobility of the PE teacher according to professional seniority**

The mobility of the participants in this study, during the gymnastics sessions, was subjected to the percentages the results are schematized by the following (figure 5)



**Figure 5:** PE teacher mobility according to professional seniority during gymnastics sessions

According to figure 5, the trainee student is more than twice mobile than the beginner teacher and more than four times than the experienced teacher. The trainee student explains his mobility for two reasons, on the one hand, to dissipate and relieve his negative emotional charge, on the other hand, to influence the students through his physical presence. While the mobility of the beginner teacher is twice the mobility of the experienced teacher. The beginner teacher gives a lot of importance to the safety of the student and he anticipates so as not to have accidents.

On the other hand, the experienced teacher limits his movements to let the student act, he makes him responsible, he moves away without losing sight of the whole class and without neglecting safety during the practical session. Once again, the trainee student dissipates his energy by tiring physical effort to control himself and influence the students.

TRAINEE STUDENT	BEGINNER TEACHER	EXPERIENCED TEACHER
The students perform the exercises each in their workshop and I turn around to check, I want to check them all or at least I try. Sometimes I am disturbed and I feel that I have to move, sometimes I move just to make the students believe that I have mastered everything that is happening and that tires me; they are motivated to see me everywhere.	I circulate from one workshop to another always their safety first, I am careful when moving between groups and I put myself closer to the workshop where there is more risk or where the students have not yet managed to learn so for my case this workshop where I placed a carpet against the wall, for the others they can put themselves on their hands and s help each other without problems but I keep them under the eye, for this workshop there is risk and my presence encourages the student to work without fear.	The work by workshop is not easy but it helps in the learning of different levels of students, I pay attention to my placement, I put myself aside to see everyone, but you should not give back to the students, it's by experience that I learned all that, I make corrections even from a distance, I leave a margin of freedom to the students so that they discover, try. I watch their progress from afar, but I approach in case of risk, the student must return home safe and sound

**Table 7:** Testimonies of participants in the course of the self-confrontation interview for the management of mobility and movement during gymnastics sessions.

### Management of simulated emotions according to professional seniority during gymnastics sessions

We submitted the simulated emotional reactions of the participants in our study to the square k test the results are schematized by the following table

Simulated emotional	P-value
Postures	.279
Gestures	.139
Mimics	.156
Voice prosody	.237
Dry language	.115

**Table 8:** Simulated emotional reactions professional seniority

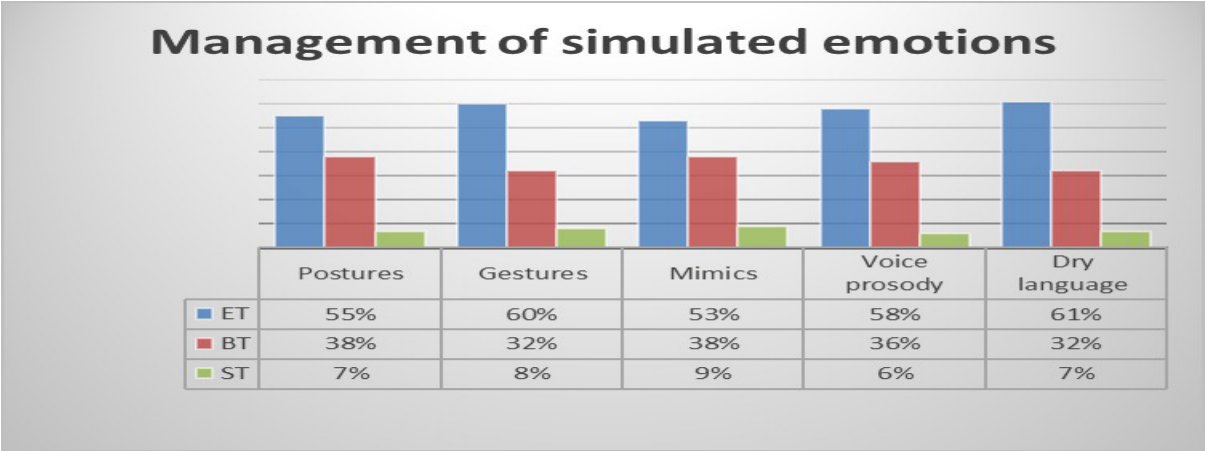
**Interpretations:** According to Table 8, there are no significant differences between the simulated emotional attitudes of the teachers participating in our study, including the trainee students, during their teaching practice and the teacher's experience. So, all teachers mobilize their emotions in the classroom to influence student performance.

To better explain the influence of professional seniority on the simulated emotional management, we have calculated the average and the standard deviation

Research group	ET		BT		ST	
Simulated emotional	Average	Standard deviation	Average	Standard deviation	Average	Standard deviation
Postures	38,40	11,15	26,70	9,99	5,10	1,20
Gestures	46,10	13,43	24,40	11,79	6,20	2,74
Mimics	36,20	11,22	26,40	11,73	6,40	2,63
Voice prosody	58,40	17,42	35,70	16,77	6,20	2,44
Dry language	40,50	12,25	20,80	99,6	4,70	2,41

**Table 9:** Average and standard deviation of simulated emotional vs professional seniority

The simulated emotional expressions, by teachers and student trainees, to mark their positions in relation to their students during the gymnastics sessions, were subjected to the percentages. The results are schematized by the following (figure 6).



**Figure 6:** Management of simulated emotions by teachers and student trainees during gymnastics sessions

According to figure 6, participants in this study mobilize their emotions during teaching practice, but at different percentages. The experienced teacher exploits the simulated emotions more during the course of his intervention followed by the beginner teacher. All teachers mobilize emotions to renew didactic and social contracts and achieve success on the motor and relational levels. Emotions are harnessed to foster a positive lesson dynamic. This staging of the teacher’s emotions touches and influences the students. The experienced teacher set up more scenarios using oral, bodily and facial expressions to influence the student.

The beginner teacher puts on scenes to influence the student and sends his position to the whole class. He learned how to play with his emotions to have a climate conducive to learning. The beginner teacher follows in the footsteps of the experienced teacher.

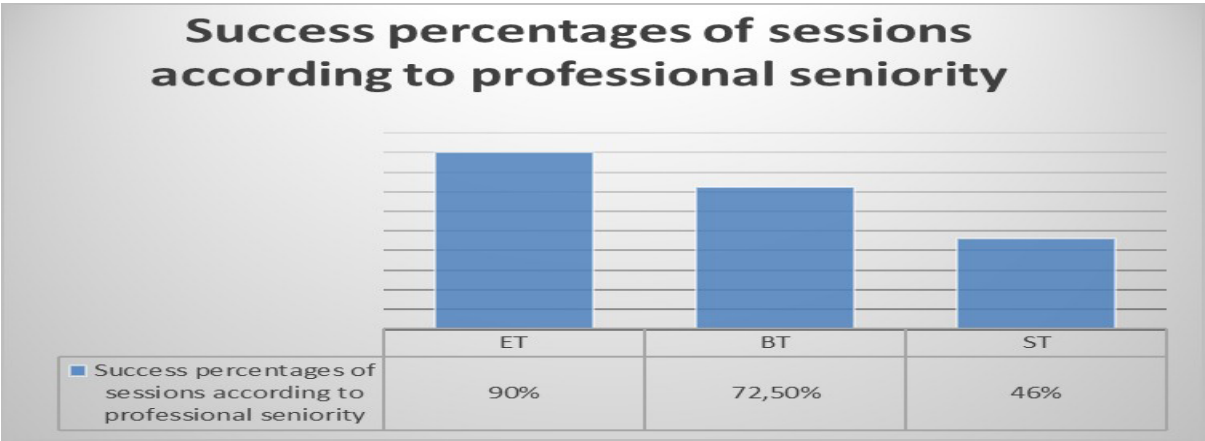
On the other hand, the trainee student scores the lowest percentages for the exploitation of simulated emotions during PE sessions. The trainee student does not yet know how to play with his emotions. He uses, most of the time, real emotions by putting more energy and he is morally exhausted.

TRAINEE STUDENT	BEGINNER TEACHER	EXPERIENCED TEACHER
When I encourage the student who has worked well, I feel more motivated and when a student hangs around, I change my attitude with him, he resumes work, it's a way of encouraging students, I'm spontaneous, I express from what I see, I express my own emotions.	there, for this girl who left the workshop, without permission, to go to the locker room, really I wasn't angry with her but it's just so that it doesn't happen again and it's a signal for the others, a kind of cinema, you see, but just to mark the point.	This student fails to roll forward,  I tried to influence and intimidate him at the same time I encouraged him too, sometimes I pretend that I am satisfied, other times I show him that I am angry, without me being it really, and that's it. There are a few disruptive elements in this class, every time I call for order and organization most of the time I pretend to be angry, I often remind them of my age I play on this side to let them calm down and get to work believe me it works.

**Table 10:** Testimonies of participants in the course of self-confrontation interviews and viewing of videotapes for the management of simulated emotions of gymnastics sessions:

**Success rate of the sessions according to the professional seniority of the PE teacher**

We have calculated the percentages of success of the recorded gymnastics sessions, the results are schematized by the following histogram:



**Figure7:** Average success rate for achieving the operational objective to the detriment of the professional seniority of the PE teacher

According figure 7 we notice that the experienced teacher marks the greatest average of success in achieving the operational objective followed by the beginner teacher while the trainee student marks the lowest average.

Teachers succeed in their session by leading students to achieve the operational objective of the session. The beginner teacher focuses more on the content to be taught and on what he can modify to make his session successful. While the experienced teacher remains focused on the student’s ability to succeed. On the other hand, the trainee student remains stuck to his initial planning and refuses to adapt to the reality of the class, therefore the operational objective of the session will not be achieved.

TRAINEE STUDENT	BEGINNER TEACHER	EXPERIENCED TEACHER
The idea is to follow the educational sheet to the letter because we have a program that we did following a competition session. I do not know what went wrong and where exactly except that the students do not reach I do not understand and it annoys me after all this effort.	In gymnastics it is not as easy as that. There are students who are even afraid to try so if half the class succeeds I would be satisfied but of course I try to do better, we work with human beings so we cannot predict everything about their reactions. Fortunately, we have the chance to modify the learning content and help the student to succeed even through motivation.	I will always be up to the individual and collective qualities of the students, I work according to their availability, I invest myself selectively, I do what is necessary when it is necessary. Just detect the problem and I intervene quickly. From experience I know well the abilities of the students. I know if a student will succeed or not so I don't waste time.

**Table 11:** Testimonials from participants in the course of the self-confrontation interview and the viewing of videotapes for the success of achieving the operational objective to the detriment of professional seniority

Discussion

During the recorded gymnastics sessions, all the participants in this study used the same regularities of intervention but at different percentages. In practice, participants, according to their different degrees of professional seniority, show different gaps between their original theoretical planning and the content actually taught. Our results show consistency with the previous work of several researchers who have worked on this concept. According to our study, the trainee student brings less didactic regulations and technical adjustments. The beginner teacher changes almost a quarter of his original plan. While the experienced teacher almost makes changes on three quarters of the theoretical plan along the way.

According to [42], the trainee student focuses on his planning and hands over the failure to the student. Whereas, the beginner teacher is ready for changes to face the reality of the classroom. On the other hand, the experienced teacher makes changes and makes modifications without hesitation. He uses solutions from an experiential repertoire that he has been able to develop over the years of work [8, 9].view improvisation as a form of “creative action” and argue for training in improvisation or, as [10] refers to it, training in dealing with the unexpected. According to these authors, it is crucial to learn how to manage unforeseen circumstances, adapt to the reality of professional situations, and focus on essential aspects of teaching situations rather than solely relying on meticulous planning. The ability to adapt, adjust, reflect,

and concentrate on essential aspects during professional action is paramount.

Yildirim (2003) showed that personal professional experience is one of the main factors influencing planning. Despite all the preparations for the pre-active phase of teaching, [10] doubts the possibility of reducing the unexpected by planning in the face of a job where we deal with human beings and he places the unexpected in the very structure of the teaching profession. Several authors [43-51], demonstrate that the teacher must adapt to the reality of the class and leads changes and makes adjustments to the initially planned activity according to unforeseen events occurring in class.

For our study and following his attachment to the written plan, the trainee student is the most confronted with breaches of didactic and social contracts while Waling (2009) demonstrates that the lack of planning flexibility presents the main dilemma for teachers facing unforeseen events [52]. Consider that planning is “thinking about the future” so planning does not necessarily mean that everything will work as planned [53]. the lesson plan can serve to limit the uncertainty of classroom interaction and at the same time reduces the anxiety of the beginner teacher and lowers his mental load. On the other hand, its authors affirm that the planning, often, “obsessed”, the student trainees, to the point, that they forget to follow the activity of the pupils. For our study, the trainee student sticks to his initial planning and does not make adjustments during the educational act on the pretext that the plan is well developed. It thus neglects the aspects inherent to the situation that arise in situ. Subsequently, the learners are faced with a didactic obstacle. The trainee student in this case, either he does not spot the obstacle, or he detects it and he fails to remedy it and help the student to overcome the obstacle. In both cases, the trainee student feels at an impasse, which increases anxiety [53]. Explain that the planning gap allows the trainee or novice teacher to focus their attention on the essential aspects of teaching situations. These remarks are, moreover, congruent with those of [54], who considers that the plan allows the beginner to devote himself more to his class and to manage certain unforeseen events. Practically, the lesson plan obsesses the beginner which blurs the real function of the plan as being, aiding action and transforming it into a constraint that hinders the latter [55]. Dealt with the discrepancy between planning and teacher activity in the classroom. In light of this divergence, the author has identified a typology of information processing profiles. If there is little or no planning/reality discrepancy.

For our study the case of the trainee student with a discrepancy of (5%). Teachers use the lesson plan, as well as the teaching routines they have built themselves, they are indeed “plan-centered teachers”. In the event that there is a large discrepancy between planning and reality in the classroom. For our study the

case of the beginner teacher with a divergence of (24%). Teachers thus make more decisions during their interactions with their students and they process more data coming from the students, these are “reality-centered teachers”.

Finally, when the difference is obvious from the planning/reality discrepancy. For our study the case of the experienced teacher with a discrepancy of (71%). Teachers are led to postpone their decisions, or shorten their lesson, these are “problem-focused teachers”. Several researchers [53,54] consolidate the important role played by routines in the planning activity of experienced teachers. In addition, several authors [8,9,50,56] defend the idea that the unexpected poses problems for new teachers since they do not have an experiential repertoire to face, whereas [57,58] conceive, contrary to the classical conception, improvisation as a “constant creation of oneself” and that one does not necessarily have to be seasoned to improvise but rather “improvise to become and remain an expert” [58]. To these remarks joins our results concerning the beginner teacher who uses the regularities of didactic and pedagogical intervention at percentages which tend towards those of the experienced teacher and sometimes exceeds them. The same percentages that deviate from the student trainee percentages. Thus, the beginner teacher goes through a transitional stage which brings him closer to professional seniority.

Our results are consolidated by the words of [50], who argues in favour of decisions during the active phase, which have only to lead, to preserve, to abandon or to modify the arrangement of certain plans. Consequently, several authors [8,9] consider improvisation to be “a creative action” [59]. The difficulties of the teaching mission lie in the teaching-learning relationship and that the teacher must attach importance to this relationship to make the students succeed and make them more autonomous in their learning. To succeed in this relationship, it is necessary to go through effective pedagogical management and good teaching planning that meets the needs of students, thus linking pedagogical management, didactic management and student success. These results are consistent with the results of the present research. The trainee student manipulates the material and the arrangement of the students a lot. It presents and explains little of the tasks to be learned. He demonstrates little physical motor tasks. It makes workplaces and students less secure. As a result, it has the lowest success rate for practical sessions (46%).

conclude following their work on students [60], at the end of the training process, that the latter lend importance to the relational denials of the teaching action (the satisfaction of the students’ needs) at the detriment of the purely didactic dimensions (related to the knowledge taught) or to the management of the class. Its authors confirm that graduating students give priority to the “zone” where pedagogical and didactic management overlap. Therefore, they observed that students neglect certain

essential elements of classroom management and the management of the content taught. Our results go in this direction where the trainee student often uses the didactic material and motivates the student a lot. He seeks to improve and manage his relationship with the student well by motivating him and acting on the work environment [6]. States that academic success is mainly influenced by classroom management and that the latter's efficiency makes it possible to optimize the time devoted to learning and ensuring the smooth running of educational activities. According to this author, after the difficulties encountered, at the beginning of his course, in class management, beginners experience considerable transformations on the professional level marked by a change in the representations, that the teachers, of the pupils and the act of teaching, thus making it possible to acquire new knowledge and adjusting teaching practices.

Consider classroom management to be an essential skill at the start of a career in establishing one's professional identity [61]. They give an important place to class management to the point where if the teacher does not master this skill it will be difficult for him to acquire the other skills used to teach [59]. Affirm that pedagogical management is not based only on the disciplinary side of the students, but, rather, it begins with a good planning of the content to be taught, developed above all, according to the real needs of the learners [62]. confirms that the construction of the work environment and the choice of an adequate pedagogy to induce the content of knowledge as well as the didactic and pedagogical regulations, in situ, remain the main factors of a practice teacher in action. For [15] only professional experience could allow teachers to require the skill to skilfully reconcile the two aspects of the educational mission, class management compatible with the transmission of disciplinary knowledge. These results corroborate with the results of the present research where experienced teachers marked a success rate of their practical sessions (90%). Practically in physical education, for several authors [37,38], it is by continuous adjustments of their professional gestures: postures, gestures, placement, movement and a particular interpersonal proximity, that teachers exploit a wide range of emotions and diffuse, in particular, through these non-verbal behaviours what they expect from students and they obtain various effects on the latter. These results are in congruence with those of our study where the trainee student is too mobile during his teaching practice, a sign of great anxiety and moral instability. He uses his own emotions and he simulates them little during the practical sessions. The trainee student puts more physical effort and moral energy into play. On the other hand, [37] demonstrate a stabilization of the dynamics of the emotional experiences of experienced teachers during their exercise of the profession, arguing that the latter detect cues allowing them to anticipate a potential agitation or a disturbance which will divert the lesson course or the general atmosphere. These remarks are

in congruence with those of [63], who confirms that over time, teachers implicitly weave strategies to face any delicate situation and gradually acquire means of acting to cope. For [37] teachers stage their emotions in order to have an impact on the students, it is a kind of "theatricalization" of emotions, over time they learn to camouflage and to put scenes that express emotions that do not correspond to what is actually felt [38].

In our case, the experienced teacher is not very mobile and plays well with his simulated emotions to communicate his position to the student [64]. He saves his energy while managing his emotions and movements well. The use of emotions to have an impact on students for educational purposes allows several authors [37,38] to consider emotions as pedagogical artefacts for educational purposes [37]. Affirm that the teacher, at a certain moment, must show a "form of empathy" in order to reveal the concerns, expectations, individual and collective interests of the learners [65]. These authors explain that in order to be able to keep the aims of his gestures to himself, the teacher deserves years of experience and a permanent refinement of his gestures [66].

## Conclusions

Practically, the participants in this study used the same regularities of intervention but with different percentages. We notice that the experienced teacher marks the highest success rate of the session followed by the novice teacher while the trainee student marks the lowest rate. The trainee student intern sticks to his initial planning and does not adapt to the reality of the class. He manipulates the teaching material and the dispositions of the pupils a lot. These changes take time to the detriment of the student's learning time. He finds himself confronted with the ruptures of social contracts, which reveals problems of control and authority. He seeks to improve and manage his relationship with the student well by motivating him and acting on the work environment. The trainee student does not present and explain the tasks enough, he rarely regulates didactically and corrects little technically and he does not invest too much in the demonstration of technical gestures. Automatically thereafter, he is confronted with the ruptures of the didactic contracts in an abundant way.

On the other hand, the experienced teacher and the beginner teacher provide less effort in the pedagogical management courses for the same regularities of intervention. So on the didactic level, the experienced teacher brings more technical regulations and didactic adjustments. He physically demonstrates more technical gestures during educational interventions. The experienced teacher plays more on the quality than on the quantity of intervention. From a placement and displacement point of view, teachers use the same proxemics categorizations (the four moments of the teacher's placement) during the practical sessions. The trainee student is too mobile during his educational intervention.

From another point of view, to dissipate and relieve his negative emotional charge, on the other hand, to influence the students through his physical presence. While the beginner teacher explains his mobility by the importance given to the safety of the student. On the other hand, the experienced teacher limits his movements to let the student act and empower him, he moves away without losing sight of the whole class and without neglecting safety during the practical session. It should also be noted that the percentages of the regularities of intervention, of the beginner teacher, tend to approach those of the experienced teacher or even exceed them sometimes. The latter is in a transitional stage. On the affective level, all the participants mobilize emotions to renew the didactic and social contracts and achieve success on the motor and relational levels, but at different percentages. The trainee student uses, most of the time, real emotions putting, thus, more energy and he exhausts himself morally. Both the experienced teacher and the beginner teacher set up many of the scenarios using oral, body and facial expressions to influence the student. Emotions are harnessed to foster a positive lesson dynamic. This staging of the teacher's emotions touches and influences the students. The trainee student takes more time and provides more effort in the course of pedagogical and didactic management. The efforts of the student trainee are misdirected and poorly measured, he gets stuck by sticking to his initial theoretical planning and he is confronted with an uncomfortable situation. Loss of the speaker's energy without improving the student's performance. The trainee student uses, most of the time, his real emotions and he is too mobile during the session, thus putting more energy and physical effort. He puts too much physical effort into dissipating an emotional charge so he is doubly exploited. Despite the physical effort and the energy used during his professional practice, the trainee student has the lowest success rate of the practical session. Thus, professional seniority affects teaching practice. The latter is nothing but a qualitative choice of the regularities of educational intervention.

**Conflicts of interest** -The authors declare that they have no conflicts of interest to declare.

## References

- Martinand JL. (1981). Reference social practices and technical skills. About an initiation project to mechanical manufacturing techniques in class. In A. Giordan (Ed.), *Dissemination and appropriation of scientific knowledge: teaching and popularization*. Proceedings of the Third International Days on Science Education, 149-154. Paris: Paris 7 university.
- Saury J, Ria I, Séve C, Gal-PetitFaux N. (2006). Action or situated cognition: scientific issues and interests for teaching in PSE. *PSE*, 321:5-11.
- Brun M, Gal-PetitFaux N. (2006) A particular educational format according to the theoretical light of the action situated. *PSE review*, 317:40-44.
- Martineau S, Gauthier C, Desbiens JF. (1999). Classroom management at the heart of the teacher effect. *Journal of Educational Sciences*, 25:467-496.
- Legoult F (1999). Classroom management during an introductory teaching internship and the emergence of a virtual community focused on problem solving. *Journal of Educational Sciences*, 25:593-613.
- Chouinard R. (1999) Beginning teachers and classroom management practices. *Journal of Educational Sciences*, 25: 497-514.
- Lacourse F. (2012) From routine analysis to classroom management and professionalization. *Phoresis review*, 1:19-32.
- Pelletier JP, Jutras F. (2008). The components of improvisation training active in the management of unforeseen events in the high school classroom. *McGill's Journal of Educational Sciences*, 43 :187-212.
- Visioli J, Petiot O. (2015). Dynamics of improvisation in the activity of a teacher in PE class: what relationship with emotions and specialization in the APSA taught. *eJRIEPS*, 36:35-70.
- Pernoud P. (1999). Management of the unexpected, analysis of the action and construction of skills. *Continuing Education*, 140:123-144.
- Doyle W. (1986). Classroom organization and management. In M. C. Wittrock (Ed.), *Handbook of research on teaching*, 392-431. New York: Mac Milan.
- Leinhardt G. (1990). Capturing craft Knowledge in teaching. *Educational researcher*, 19:18-25.
- Shulman LS. (1986a). Paradigms and research programs in the study of teaching. In M. c. Wittrok (Ed.), *Handbook of research on teaching*, 3-36. New York: Mac Millan.
- Shulman LS. (1986b). Those who understand: knowledge grow in teaching. *Educational Researcher*, 15: 4-14.
- Gal-Petitfaux N, Vors O. (2008) Socialization and transmission of knowledge in physical education class: a possible synergy at the cost of a conciliatory educational authority. *Building social ties at school*, 36:118-139.
- Ben Chaifa M, Naceur A, Elloumi M. (2018a) Body proximity in PSE sessions in Arabic-Muslim countries: cas of Tunisia. *Advances in Physical Education*, 8:84-97.
- Ben Chaifa M, Naceur A, Elloumi M. (2018b) Simulated emotions of PSE teachers. *Journal of Physical Education Research*, 5:07-17.
- Genevois G. (1992). Etho-psychology of communications and pedagogy. *French Journal of Pedagogy: RFP*, 100:81-103.
- Burel N. (2014b) The anchoring of emotional skills in the living body: studies with teachers of Physical Education and Sports. *Research and Education*, 12:89- 103.
- Sensevy G, Forest D, Barbu S. (2005). Proxemic analysis of a mathematics lesson: an exploratory study. *education science journal*, 31:659-686.
- Forest D. (2006) Proxemic analysis of didactic interactions. *Education hubs*, 1:73-94.
- Cuisinier F, Pons F. (2011) Emotions and cognition in the classroom. *Hal. open archives-France*, 1-13.
- Rusu CE. (2013). The role of emotional skills in the teacher-student relationship. Paper presented at the AREF Congress, news on research in education and training, Montpellier.

24. Hargreaves A. (2000). Mixed emotions: teachers' perceptions of their interactions with students. *Teaching and Teacher Education*, 16:811-826.
25. Gendron B. (2004) Why emotional capital matters in education and labour? Toward and optimal exploitation of human capital and knowledge management. *les cahiers de la Maison des Sciences Economiques, serie rouge Paris. Université Panthéon-Sorbonne*, 113:1-37.
26. Gendron B. (2007). The emotional skills of ethical leadership of the teacher: an essential emotional capital for a dynamic of success and civic and professional socialization. Paper presented at the Skills and socialization, Montpellier.
27. Gendron B. (2008). Emotional skills as professional skills of the teacher, the figure of leadership in pedagogy. Paper presented at the 5th symposium questions of pedagogy in higher education, Brest. France
28. Hargreaves A. (2001). Beyond Intrinsic Reinforcements: Teachers' Emotional Relationships with Their Students. *Education and Francophonie*, 29:175-199.
29. Letor C. (2006). Recognition of emotional skills as professional skills: the case of teachers Analysis of social representations of pedagogical actors. *Education and Training Research Papers*, 53:1-36.
30. Puozzo I. (2013). Pedagogy of creativity: from emotion to learning. 33.
31. Chevallier-Gaté C. (2014) The place of emotions in learning Towards the pleasure of learning.
32. Boizumault MB, Cogérino G. (2010). Touch in PE: categorization, beliefs of teachers and perceptions of students. Paper presented at the Education and Training Research News (AREF), University of Geneva.
33. Boizumault MB, Cogérino, G. (2012) The physical presentation of the PE teacher: non-verbal communications in the service of teacher effectiveness. In *Steps*, 98:67-79.
34. Ria L, Chaliés S. (2003). Emotional dynamics and activity the case of beginning teachers. *research and training for education professions*, 42:7-19.
35. Ria L, Durand, M. (2001). The concerns and emotional tone of beginning teachers during their first classroom experiences. *Educational science records*, 5:111-123.
36. Ria L, Saury J, Séve C, Durand M. (2001). The Dilemmas of Beginning Teachers: Studies in Early Physical Education Classroom Experiences. *Science and motor skills*, 42 :47-58.
37. Visioli J, Ria L. (2007). The emotions of expert teachers as pedagogical artefacts? Paper presented at the Analysis of PSE practices, significant experiences and professional gestures, Clermont-Ferrand.
38. Visioli J, Ria L, Trohel J. (2011). Corps theatricality in the activity of PE teachers during their interactions with students: contribution of a joint analysis of the course of action and a proxemic analysis. Paper presented at the The teaching work in the 21st century crossed perspectives: didactics and professional didactic, Lyons.
39. VanCranach M, Kalbermatten U, Indermuhle K, Gugler, B. (1982). Goal directed action. London: Academic Press Inc.
40. Theureau J. (1992). The course of action: semiological analysis. Berne: Peter Lang.
41. Vermersch P. (1994). Explanation interview. Paris: ESF.
42. Ben Chaifa M, Naceur AM, Elloumi M. (2022b). Representations and Realization of Written Planning of PSE Teachers in Tunisia *International Journal of Social Science Studies*, 10:63-70.
43. Altet M. (1994). La formation professionnelle des enseignants. *Recherche & formation Année*, 17: 155-158.
44. Altet M. (2002). A research approach on teaching practice / plural analysis. *French review of pedagogy*, 138: 85-93.
45. Dessus, P. (2002) Les effets de la planification sur l'activité de l'enseignant en classe In P. Bressoux (Ed.), *Les stratégies de l'enseignant en situation d'interaction*, 19-33.
46. Dessus P, Schneider DK. (2006) Scénarisation de l'enseignement et contraintes de la situation. Paper presented at the scénariser l'enseignement et l'apprentissage: une nouvelle compétence pour le praticien, Lyon.
47. Riff J, Durand M. (1993). Planification et décision chez les enseignants bilan à partir des études en EPS, analyses et perspectives. *Revue française de pédagogie*, 103:81-107.
48. Tochon FV. (1989). Aquoi pensent les enseignants quand ils planifient leurs cours? *Revue française de pédagogie*, 86 :23-33.
49. Tochon, FV. (1993a). The expert teacher. 69-89. Paris: Nathan. Paris: Nathan.
50. Tochon FV. (1993b). The "improvisational" functioning of the expert teacher. *Journal of Educational Sciences*, 193, 437-461.
51. Vinatier I, Altet m. (2008). Analyze and understand teaching practice, Rennes: PUR, 192:134-135.
52. Musial M, Pradère F, Tricot A. (2012). Comment planifier mon enseignement. In M. Musial, F. Pradère & A. Tricot (Eds.), *Comment concevoir un enseignement?* Bruxelles: Deboeck.
53. Perrin N, Ria L. (2008). Qu'est ce qu'une bonne planification pour enseignant (... en formation)?
54. Dessus P. (1995) Effets de l'expérience et de la matière dans l'utilisation de routines pour la planification de séquences d'enseignement. *Cahiers Recherche et Education*, 2:499-526.
55. Morine-Dersheimer G. (1978). Planning in classroom reality an in-depth look. *Educational Research Quarterly*, 3:83-99.
56. Alain, J. (2015). Facing the unexpected: training, improvisation or DIY? *Educational notebooks*, 477.
57. Azéma G, Leblanc S. (2011). Improvisation, paradoxical object and essential praxis of the teacher's ordinary work. Paper presented at the Teaching work in the 21st century: intersecting perspectives: didactics and professional didactics, UFM of the Montpellier academy.
58. Azéma G, Leblanc S. (2013). Improvisation in teaching, a check with or without funds. Paper presented at the current affairs research in Education and Training, Montpellier.
59. Léveillé, CJ, Dufour F. (1999). The challenges of classroom management in high school. *Journal of Educational Sciences*, 253:515-532.
60. Lanaris C, Beaudoin M. (2011). The link between didactics and classroom management in teacher training: challenges for teaching practice. Paper presented at the INRP Teaching work in the twenty-first

- century, crossed perspectives: didactics and professional didactics, Lyon.
61. Nault T, Fijalkow J. (1999). Introduction. classroom management: from yesterday to tomorrow. *Journal of Educational Sciences*, 25: 451-466.
62. Ben Chaifa M, Naceur A. (2022a) Impact of the professional seniority of the Tunisian teacher on the representations of the dynamics of gymnastics sessions and its concretization. *Journal of Sports and Physical Education*, 9:15-24.
63. Burel N. (2014a) From didactic gesture to eudemonic pleasure. The touch of the Physical Education and Sports teacher, a communication of living bodies. ResearchGate, 1-7.
64. Lenoir Y. (2009). Educational intervention, a theoretical construct for analyzing teaching practices. *New Education Research Notebook*, 12: 9-29.
65. Lenoir Y, Larose F, Deaudelin C, Kalubi JC, Roy GR. (2002). Educational intervention: conceptual clarifications and social issues. For a reconceptualization of intervention practices in teaching and teacher training. 4:1-32.
66. Lessard A, Schmidt S. (2011). Literature review on classroom management. University of Sherbrooke Quebec.