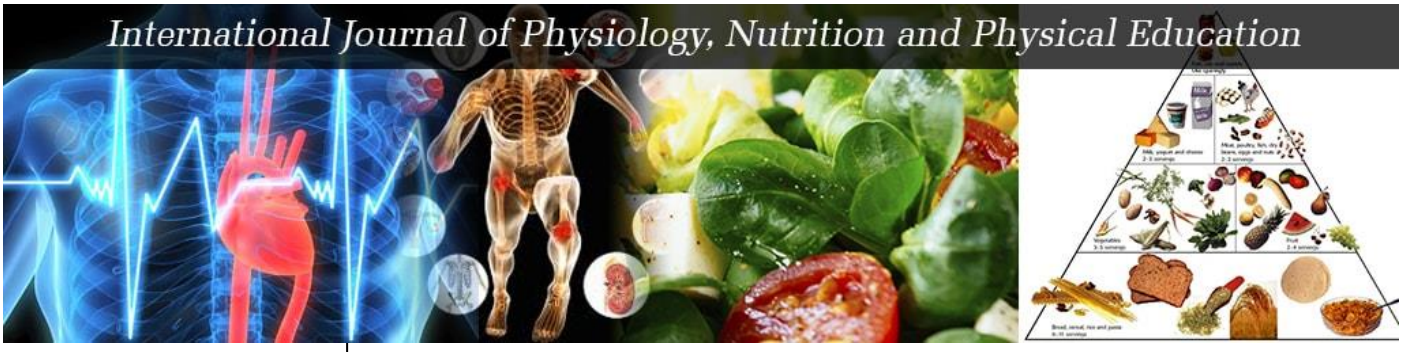

ISSN: 2456-0057
IJPNPE 2020; 5(1): 235-241

www.journalofsports.com
Received: 24-11-2019
Accepted: 29-12-2019

Mabassa David Sylvain
Laboratory of Didactics of Physical Education, Higher Institute of Physical Education, Marien Ngouabi University, Brazzaville, Congo

Lembe Gorgon
Laboratory of Didactics of Physical Education, Higher Institute of Physical Education, Marien Ngouabi University, Brazzaville, Congo

Entsiro François
Laboratory of Didactics of Physical Education, Higher Institute of Physical Education, Marien Ngouabi University, Brazzaville, Congo

Fernandes Balou Gabin
Laboratory of Didactics of Physical Education, Higher Institute of Physical Education, Marien Ngouabi University, Brazzaville, Congo

Itoua Okemba Jean
Laboratory of Physical and Adapted Activities, Higher Institute of Physical Education, Marien Ngouabi University, Brazzaville, Congo

Corresponding Author:
Mabassa David Sylvain
Laboratory of Didactics of Physical Education, Higher Institute of Physical Education, Marien Ngouabi University, Brazzaville, Congo

Comparative study of the personal knowledge of physical education teachers on gymnastics teaching

Mabassa David Sylvain, Lembe Gorgon, Entsiro François, Fernandes Balou Gabin and Itoua Okemba Jean

Abstract
This article that we present to you about the activation of the knowledge mobilized by the teachers of PSE during a cycle of teaching of the gymnastics was intended to account for the influence of the professional experience and the expertise. The theory of joint action in didactics, served as a conceptual framework for research in a transpositional perspective by comparing the knowledge mobilized during the didactic interactions of male teachers with those of teachers in the classes of Lycée. The use of pedagogical administrative documents, stimulated reminders with both categories of teachers, followed by observations of each of these teachers' lessons, showed that : female teachers use rules, without taking into account interactions Focusing on overall classroom management, while male teachers will infer choices and make decisions based on context, they formulate equivalent strategies from the same divergent difficulties having thoughts in action, so they take more into account the interests of each student. In view of the above, male teachers in the teaching of physical activity and sport manage to generate more learning than female teachers and the teaching experience is not enough to fill this handicap.

Keywords: Personal knowledge, professional experience, expertise, teaching-learning, gymnastics, physical education

Introduction
Physical Education (PE) is an educational practice that relies on educational sciences to optimize its didactic practice (Bourgeois, 2007) [4]. Gymnastics a physical and sporting activity with an aesthetic aim, consisting in producing body forms intended to be seen and judged for their difficulty and control. However, the motor development of students is insufficient to allow them to achieve body shapes in an aesthetic manner (Chamoux, 2012) [8]. For these students, gymnastic activities consist rather in acquiring motor skills by becoming familiar with the gymnastics elements taught and, by extension, in overcoming the social obstacles they may encounter in their future life, all in connection with the relationship to know of the teacher.

The school is a place for the implementation of body techniques, both in physical education (PE), as in other school subjects and areas of life graphic arts, visual arts, music or dance (Casanova, 2010) [7]. To teach, to teach, to practice, the teacher is confronted with very varied motor skills.

The teaching/learning of gymnastics, features or reveals the activation of different types of knowledge on the part of the teacher. Among many others, we can retain the theoretical knowledge and action (Barbier, 1996) [3], the knowledge of experience and those acquired through training (Tardif *et al.*, 1991) [13], pedagogical knowledge and those on the taught way. Thus, to speak of the comparative analysis of the knowledge mobilized by the teachers in context amounts to being part of a larger project which is part of the updating of the practical epistemology of the teachers as a determinant of "didactic" (Sensevy, 2007) [25]. In this context, our analytical work is located at the crossroads of the Theory of Joint Action in Didactics (TACD) and/or the anthropological theory of didactics (Chevallard, 1997) [9].

For us, it is a matter of examining, for a descriptive purpose, the teaching of PE by trying to bring out differences and/or similarities according to the relation to the knowledge of the the teacher.

Through the different parameters by which he modulates his teaching, the teacher brings out values related to the knowledge he mobilizes at the moment "t" of the regulations of learning.

Our research questions are to analyze in ternary action (teacher - students - knowledge):

- Why in the teaching of the elements of the five gymnastic families, the knowledge mobilized by the male teachers and by the female teachers are different?
- Which regulatory situations do the teachers of the two statutes develop differently?
- Why is the handling of pedagogical documents different from male teachers to female teachers in the evolution of the didactic relationship?
- In harmony with our research questions, we have formulated the following hypotheses:
- In the teaching of the elements of the five gymnastic families, the knowledge mobilized by male teachers and female teachers of the same qualification is different because the way of transmitting this knowledge is linked to their personal experiences, to the knowledge registers mobilized and to the gente;
- Teachers of both sexes formulate didactic strategies differently because the teaching/learning/assessment situations defined are indicative of the influence of experience and gender in gymnastics teaching;
- The handling of pedagogical-administrative documents is linked to the expertise and the personal relationship to the knowledge of each of the teachers' statutes.

Methods

Twelve teachers including six male teachers and six female teachers interacting with their students were followed in gymnastics continuums. We used three types of investigative tools: interview, questionnaire and observation of filmed lessons. The theory of joint action (Sensevy *et al*., 2007) [25] allowed us to gauge the personal relationship to knowledge and the knowledge mobilized in the dynamics of evolution of the didactic contract in certain situations and the comparison of didactic actions allowing to highlight, the elements of genericity and specificity following the interviews with the interactants using the analyzers of the practice (to define, regulate, devolve and institute) and the descriptors (the topogenesis, the chronogenesis, the mesogenesis) of the model.

The results of the categories of situations were processed using descriptive statistics, the number (n), the mean (X), the standard deviation (δ) and the variance (V) were determined and presented by category of teachers.

Finally, the student test was used to assess practice level goodwill per situation. The threshold of statistical significance was set at $p<0.05$.

Results

Comparison of the teaching strategies of teachers

Didactic strategies for teachers

Table 1: Summary of Didactic Strategies for Teachers

Order of Strategies	E.S. M.	E. S. F.	Observations
Taking information	Learning based on the balance-tracking of verticality.	Learning based on the equilibrium-tracking of verticality. Genericity:	**Genericity:** The approach adopted by ESM and ESF is to introduce into a regular cycle of gymnastics two usual tasks. **Specificity:** ESM has experiences deemed compatible, they identify and identify in the student's activity traits deemed relevant or irrelevant for his teaching project in relation to ESF
Segmental alignment	Learning placement support.	Learning placement support	
Stability	lift the levers (whipped legs) to stabilize vertically	lift the levers (Whipped legs) to stabilize vertically.	
Descent	Actions of the arms (flexion) and head (chin) initiate the fall.	Actions of the arms (flexion) and head (chin) initiate the fall.	
Roll	In camber	In camber.	
Balanced	Safe exit.	Safe exit.	

ESM = Male Sex Teachers ESF = Teachers Gender Female

This table shows the methodology used by these teachers to go from the simple to the complex so that the learners interiorize the gymnastic elements with promptness.

Comparison of teacher teaching content structuration

Teachers have programmed the teaching of gymnastic elements by families taking into account the educational interest; the internal logic and the resources solicited in relation to the sequence chosen for each level of study.

Structuring of teaching content in teachers' lesson

The titular teachers did not take into consideration the sex of the pupils, they proposed the same tasks to all the pupils. On this subject, the teachers explained to us that: "all the pupils have the same level, the elements retained in each sequence must be realized in the same way by these, they organized the confrontation of the pupils (passage by challenge).

In the pre-lesson interview, teachers organized the class according to single-sex levels: "by sex, that is, girls will work with each other and boys among themselves and also by level group, girls 'workshops and boys' workshops to merge the workshops in the main part.

Genericity

All teachers do a 12 to 15 minute warm-up, during which students run a small stride, a circumduction of the arms, heels, buttocks, lateral movements, and stretching exercises and relaxation. Generalized heating at the beginning and specific heating at the end of the start-up. After installing the equipment and warming up, the teachers started by explaining to the whole class what to do in each of the workshops.

Specificity

The male teachers have provided for the teaching of the technical elements, the layout of the pupils by diagrams explaining the various technical elements to be realized, as close as possible to the different workshops, so that the pupils can refer to them.

We have taken note of the fact that female teachers do less regulation, the chronogenesis of the lesson reveals two major modalities: a desynchronization of gymnastic action and a logic of cumulative progression (Marsenach, 1991) [19].

Regarding the desynchronization of the action:

- At the work-by-shop level, male teachers cut out the key gymnastic elements in a number of moments corresponding to their chronological sequence in order to conceive the progression of learning according to a cumulative logic. Some students first worked on these items in Workshops 1 and 2, then whipped legs in Workshop 3, Mastering the final position held in Workshop 4, and finally the ATR held down and rolled in Workshops 5 and 6;
- On the other hand, female teachers have not put in place for teaching key elements (difficult like ATR and many others) but two tasks. The analysis of the transcripts shows that within this same group of strong students, the teachers proceed by a "level subgroup" work. They introduce, at the end of each tense thrust sequence and other elements, a parade. With regard to task planning, female teachers offered students only open tasks that require a research activity on their part leading to learning.

Comparison of the teaching communications of teachers

To try to understand the personal relationship to the knowledge of the two teachers, we analyzed the different situations formulated by them and the nature of the tasks proposed to the pupils.

Table 2: Comparison of teachers' pedagogical communications in the introductory lesson

	E.S M. (n = 6)	E. S. F. (n= 6)	P
S D	19,63 ± 1,41**	16,00 ± 0,80	< 0,01
S N D	10,50 ± 1,20**	7,00 ± 0,80	< 0,01
S A	4,13 ± 0,83***	2,75 ± 0,50	< 0,001

ESM = Teachers Male Sex; ESF = Teachers Gender Female; SD = Educational situations; SND = Non-Educational Situations; SA = didactical situations, NS= non-significant difference, *** highly significant

Table 3: Comparison of teachers' pedagogical communications in learning lesson 1

	E.S M. (n = 6)	E. S. F. (n = 6)	P
S D	19,25 ± 0,96**	18,63 ± 1,3	< 0,01
S N D	8,50 ± 0,53**	6,75 ± 0,50	< 0,01
S A	2,50 ± 0,53**	1,50 ± 0,58	< 0,01

ESM = Teachers Male Sex; ESF = Teachers Gender Female; SD = Educational situations; SND = Non-Educational Situations; SA = didactical situations, NS= non-significant difference, *** highly significant

Table 4: Comparison of teachers' pedagogical communications in learning lesson 2

	E.S M. (n = 6)	E. S. F. (n = 6)	P
S D	19,75 ± 0,50 **	17,63 ± 1,06	< 0,01
S N D	8,13 ± 0,83***	6,75 ± 0,50	< 0,001
S A	2,75 ± 0,46**	1,25 ± 0,50	< 0,01

ESM = Teachers Male Sex; ESF = Teachers Gender Female; SD = Educational situations; SND = Non-Educational Situations; SA = didactical situations, NS= non-significant difference, *** highly significant

Table 5: Comparison of teachers' pedagogical communications in learning lesson 3

	E.S M. (n = 6)	E. S. F. (n = 6)	P
S D	20,50 ± 1,92***	16,63 ± 0,74	< 0,001
S N D	7,38 ± 0,52**	6,50 ± 0,58	< 0,01
S A	2,25 ± 0,46**	1,00 ± 0,00	< 0,01

ESM = Teachers Male Sex; ESF = Teachers Gender Female; SD = Educational situations; SND = Non-Educational Situations; SA = didactical situations, NS= non-significant difference, *** highly significant

Table 6: Comparison of teachers' pedagogical communications in learning lesson 4

	E.S M. (n = 6)	E. S. F. (n = 6)	P
S D	21,00 ± 0,82***	16,13 ± 0,35	< 0,001
S N D	6,88 ± 0,35	6,25 ± 0,50	NS
S A	2,13 ± 0,35**	0,75 ± 0,50	< 0,01

ESM = Teachers Male Sex; ESF = Teachers Gender Female; SD = Educational situations; SND = Non-Educational Situations; SA = didactical situations, NS= non-significant difference, *** highly significant

Table 7: Comparison of teachers' pedagogical communications in learning lesson 5

	E.S M. (n = 6)	E. S. F. (n = 6)	P
S D	21,25 ± 0,50***	15,50 ± 0,53	< 0,001
S N D	6,13 ± 0,35	6,00 ± 0,82	NS
S A	1,50 ± 0,53**	0,50 ± 0,58	< 0,01

ESM = Teachers Male Sex; ESF = Teachers Gender Female; SD = Educational situations; SND = Non-Educational Situations; SA = didactical situations, NS= non-significant difference, *** highly significant

Table 8: Comparison of teachers' pedagogical communications in learning lesson 6

	E.S M. (n = 6)	E. S. F. (n = 6)	P
S D	21, 75 ± 0,50***	15,50 ± 0,53	< 0,001
S N D	5,50 ± 0,53	6,00 ± 0,82	NS
S A	1,13 ± 0,35***	0,00 ± 0,00	< 0,001

ESM = Teachers Male Sex; ESF = Teachers Gender Female; SD = Educational situations; SND = Non-Educational Situations; SA = didactical situations, NS= non-significant difference, *** highly significant

Table 9: Comparison of teachers' pedagogical communications in the final lesson

	E.S M. (n = 6)	E. S. F. (n = 6)	P
S D	9,13 ± 1,73***	8,25 ± 0,96	< 0,001
S N D	9,63 ± 0,74***	6, 00 ± 0,82	< 0,001
S A	3,38 ± 0,52***	0,75 ± 0,50	< 0,001

ESM = Teachers Male Sex; ESF = Teachers Gender Female; SD = Educational situations; SND = Non-Educational Situations; SA = didactical situations, NS= non-significant difference, *** highly significant

During the gymnastics cycle, male teachers averaged 19,63 ± 1,41 didactical situations, whereas female teachers gave only 16,00 ± 0,83, ie a p<0, 01; in non-didactic situations, male teachers issued 10,50 ± 1,20 against 7,00 ± 0,80 emitted by female teachers for a p<0,01; while in didactical situations, male teachers emitted 4,13 ±0,83 against 2,75 ± 0,50 for a significant p<0,001 (table 2).

On average, male teachers averaged 19, 25 ± 0,96 didactical situations, whereas female teachers gave 18,63 ± 1,3 ie p < 0,01; in non-didactical situations, male teachers emitted 8,50 ± 0,53 against 6,75 ± 0,50 emitted by female teachers for a p < 0,01; while in didactical situations, male teachers issued 2,50 ± 0,53 against 1,50 ± 0.58 for a significant p <0,001 (table 3).

On average, male teachers gave an instructional lesson n°2 : 19,75 ± 0,50 didactic situations, while female teachers gave 17,63 ± 1,06 p<0,01; in non-didactic situations, male teachers emitted 8,13 ± 0,83 compared to 6,75 ± 0,50 emitted by female teachers for a p<0,01; while in didactic situations, male teachers issued 2,75 ± 0,46 against 1,25 ±0,50 for a

significant $p<0,001$ (table 4).

On average, male teachers averaged 20,50 ± 1,92 didactical situations in lesson n°3; female teachers, on the other hand, reported 16,63 ±0,74, which is a $p<0,01$; in non-didactic situations, male teachers emitted 7,38 ± 0,52 against 6,50 ± 0,58 emitted by female teachers for $p<0,01$; while in didactic situations, male teachers emitted 2,25 ± 0,46 against 1,00 ± 0,00 for a significant $p<0,001$ (table 5).

On average, male teachers gave a learning lesson n°4: 21,00 ± 0,82 didactic situations, while female teachers only gave 16,13 ± 0,3 ie, $p<0,01$; in non-didactic situations, male teachers emitted 6.88 ± 0,35 against 6,25 ±0,50 emitted by female teachers for a $p<0,001$; while in didactic situations, male teachers emitted 2,13 ± 0,35 against 0,75 ± 0,50 for a significant $p<0,001$ (table 6).

On average, male teachers gave a learning lesson n°5 (table 7): 21,25 ± 0,50 didactic situations, but female teachers only reported 15,50 ± 0,53 ie, $p < 0,001$; in non-didactic situations, male teachers emitted 6,13 ± 0,35 against 6,00 ± 0,82 issued by female teachers for a $p<0,001$; while in didactic situations, male teachers emitted 1,13 ± 0,35 against 0,00 ± 0,00 for a significant $p < 0,001$ (table 8).

On average, male teachers averaged 9,13 ± 1,73 didactical situations, whereas female teachers emitted 8,25 ± 0,96, ie $p < 0,001$; in non-didactic situations, male teachers emitted 9,63 ± 0,74 compared with 6,00 ±0,82 issued by female teachers for $p<0,001$; while in didactic situations, male teachers emitted 3,38 ± 0,52 against 0,75 ±0,50 for a significant $p<0,001$ (table 9).

Discussion

It appears that "intervention is a co-constructed activity", in so far as teachers' actions are partly linked to the activity of their pupils, which itself depends on the intervention of teachers, and in particular devices they design and regulate in joint action.

The organization and dynamics of the class are not due to chance, there are relations between context and action. All teachers first issue collective instructions of an organizational nature and then guide their students' actions. The personal relationship to the knowledge of our teachers brings out different forms of organizations and teaching contents through their interactions. The effects of interactions are more plausible among male teachers than among female teachers. This educational act is justified by the fact that supervisors do not have enough difficulty putting the documents of male teachers in order compared to those of female teachers, or supervisors are obliged to inculcate techniques and terminologies to these.

Table 1 tells us about the practice that responds to a logic of success that facilitates student learning by referring to the data of these authors (Kherroubi and Rochex, 2004) [17] on the formulation of didactic strategies. These strategies differ from one teacher to another depending on the responses to the interactions with the pupils, of these feed backs comes mainly the didactic engineering of the teacher; the didactic strategies formulated are to be considered as adaptations between different constraints which weigh on the teachers. Students' rapid dropout, academic task, limited persistence in the face of error, potential for transgression, are all factors that lead teachers to a quick success. Through the formulation of these strategies, teachers strive to maintain a maximum number of students engaged in the course by emphasizing affective, motivational rather than cognitive aspects. The logic of immediate success goes through a simplification of learning and a parcellarisation of knowledge. In this respect, male teachers do better than female teachers, male teachers adapt easily, offer adapted and adaptable strategies to accommodate the difficulties of some students, while female teachers try to regulate and if necessary move on to another motor task leaving students in trouble. Thus, male teachers better handle the formulation moments of didactic situations, non-didactic situations and didactical situations.

The simplification of learning is often linked to the widespread belief in a cognitive deficit of students (Kherroubi and Rochex, op.cit.) Thus, during the work phase, male teachers made individual follow-up students moving through inter-vaques, intergroups (placement-moving) etc. Very active, they are always ready to help each student individually at the slightest sign of difficulty (topos). Finally, the collective phases of synthesis and institutionalization are significant, once again to limit the opportunities for agitation between students.

Their strategies allow students to be active and almost silent, and to be successful; Both teachers and students are convinced that the course should be successful and at the end, the feeling that the course has gone well, that the goal has been achieved. On the other hand, strategies formulated in class limit learning and their transfers (Kherroubi and Rochex, 2004) [17]. The pupil is content to carry out the proposed task, without having a collective reflection on its interest and its aims. In addition, the constant individual monitoring of the teacher does not allow the student to fend for himself or herself in the face of another type of task. It is in view of this way of conducting the course that the teachers' performances differ and the practice results from it, so we noticed about the conduct of a lesson, the climate or the atmosphere of the lesson class is decisive. In this theme, we are interested in the way in which teachers live the classroom and induce or impose a certain climate, a certain atmosphere of work, attitude and behavior. The class atmosphere is marked by the personality of the teachers and that is why the elements of the status (male teachers and female teachers) are expressed.

The forms of grouping and temporal organization specify few indications about the status. The emotional climate orients the classroom atmosphere according to the signs emitted by the teachers. It is negatively affected when the teachers show irony, criticism, threat, impatience towards the student, it is positively affected when the teachers emit praises, encourage, recognize the merits, show solicitude. In general, female teachers convey more elements of a negative climate compared to their male colleagues.

Teachers (of both statuses) interact in positive and negative ways by gender, girls receive more positive climate interactions, and boys experience more negative climate interactions for significant progress. More interactions with boys are confirmed even when they are negatively affected in both categories of teachers.

The observation of the authority and the control of the students put in place also denotes a difference of status.

It is possible to argue for a trend specific to each status. Male teachers show more signs of authority, while female teachers make little use of them. While male teachers govern student activity strictly, female teachers are more flexible on this point. Authority and control are also declined according to a status effect. Female teachers more easily use a form of control (notes, sanctions, threats), male teachers, authority based on physical presence (call-backs) while regulating their

learning. For the most part, female teachers do not wish to implement authority and admit they do not like to play this role of "policeman". This result supports the claims of King (2000) and Sargent (2001) that female teachers do not wish to make use of authority with students, stating clearly that this does not correspond to their identity and using other means more diverted to control the students (physical proximity, affectionate relationship...). For this indicator, we notice a status effect. In the subjects of the results of Table 2, 3, 4, 5, 6, 7, 8, 9, the indicator of didactic communications, male teachers sometimes dramatize their remarks by a varied and accentuated nonverbal communication (voices, mimicry, caricatures) and can express a humorous behavior; Female teachers use strategies similar to those of male teachers.

For the emotional climate, they deliver more positive affective interactions than female teachers, they show more humor, solicitude, encouragement with students. These brands are congruent with socially expected behaviors for female teachers. Qualitative analysis focused on non-didactical situations reveals marked differences in the effect of status. Indeed, the power of the voice is characteristic of the behaviors of masculinity and femininity according to the previous studies (Fontaine, 1999) [15]. Male teachers speak with a loud voice, while female teachers speak softly. There is a dominance of the pedagogical aspects of which here are the observations and arguments: the power; the tone the speech; flow and gesture are dominant among male teachers compared to that of their female colleagues. In this regard, psychology informs that in the group activities, a large amount of information is transmitted in an invalid way, the reception of the message communicated by the teacher is done on a double base, first the language composed of the words, phases, signs, intonation and all the information constituted by the gesture, the attitude and the position (Piaget, 1985) [22].

Ditto the dynamism and discipline that depended on the activity to be taught, the interest of the proposed didactic strategies and the effective participation of students.

Clarity and conciseness were the two elements that settled the voice of teachers of both statutes. These different pedagogical aspects, human qualities, scientific and technical qualities are in line with a movement of reinforcement of the question of the status particularly crossed for this category. The set of parameters confirms the influence of the status to apprehend the professional practices of teaching PE. PE teachers choose their didactic strategies, initiate didactic choices, develop behaviors with their pupils, which are partly explained by their identity of status.

Our finding is consistent with that of previous studies, with the IRSB (Bem Gender Roles Inventory) and Carnus (2008) [6] items, on the comparative analysis of the teaching and professional practices of expert and novice teachers. These authors state that the type of interaction register mentions a higher number of interactions in favor of expert teachers, compared to novice teachers who have a reduced number interactions.

With regard to the number of teaching strategies, let us agree with Fonkoua (2000) [14] that they constitute a set of pedagogical operations planned by the educator (the teacher of PE) for the subjects being taught in French.

Other words, it's the transcription of everything he says, all he asks the students to do. Reading these two tables (n°1, p4 and n°2, p6) shows that in terms of genericity, the two categories of teachers prepare their teaching forms while following a chronogram of actions developed at the end of diagnostic lesson, the content to be taught is explicit and transmittable. However, in terms of specificity, male teachers offer more, adapted, and adaptable strategies compared to their female counterparts who offer fewer strategies and adapt less and less to situations. This is because male teachers receive more productive feedback to organize their work in terms of a real dynamic of interaction compared to female teachers who only maintain local unspecified interactions (Durand, 2001) [12].

We also note that male teachers are at the heart of the ternary interaction, convey a productive message, so the content taught differs, this can be explained by the rich repertoire of strategies of the latter, compared to their colleagues female teachers who do not permanently adopt a mode of action aimed at ambitious educational objectives (Durand, op.cit.).

In this regard, Tardif and Lessard (2005) say that male teachers often teach and face different constraints related to concrete situations that require a degree of improvisation and personal skill. However, it is only by developing skills, skills acquired in and through actual practice that the teacher can cope with the constraints and imponderables of the job (Tardif and Lessard, op.cit.). This is not the case for female teachers who only come to point the hours of work without perfecting themselves. It emphasizes the importance of "knowledge of experience", defined by Tardif and Lessard (op.cit.) As: "a set of updated knowledge, acquired and required in the context of the practice of the profession". It forms "a body of work knowledge".

In the same vein, Connelly (1995) [11] and Elbaz (1993) [13] argue that the teacher internalizes knowledge, beliefs, skills, etc., forming his personality and relationships with others that would be updated and reused in a meaningful way non-reflexive in the practice of the profession. Thus, the teacher's experiential knowledge stems from the preconception of teaching and learning inherited from the story of his life.

How did these two categories of teachers manipulate the structural elements of the didactic relationship and the descriptors of the construction of the reference in class?

Definition

Regarding genericity, both categories of teachers pass on the rules to students to engage in a task. As for specificity, male teachers emphasize didactical situations, they make trips back and forth on the rules according to the behavior displayed by students at each "t" moment of learning. For female teachers, they are less engaged in the task compared to their counterparts. The knowledge mobilized by male teachers allows students to play "the right game" using "the right objects". This is why Sensevy *et al*., (2000) specify that a situation can be defined either by referring, that is, by highlighting the referential dimension of collaborative work, or by indicating what in the present activity of pupils can be preserved, adapted as a constitutive rule of play (Sensevy *et al*., op.cit.). This is the case for male teachers compared to female teachers.

Devolution

On the subject of genericity, all teachers make students accept responsibility for the learning situations of gymnastics elements per family. This is explained by the fundamentals of training because there is a whole basic training pedagogy and an evolution that is imposed on all teachers (Bui-xuan *et al.*, 1993) [5].

As for the specificity, male teachers have teaching strategies that allow their students to easily assimilate the realization of gymnastic elements through workshops set up during the apprenticeships, by an analytical study in accordance with the rules of the other educational sciences, female teachers through an analytical study without benchmarks and without

internalization of the phases of realization t and does not rely on contingency as a learning engine.

Middle

As far as genericity is concerned, both categories of teachers docent courses in the same facilities, where everything that affects the pupils and everything the student acts on is dynamically articulated. Concerning specificity, male teachers have set up several workshops based on enrollments to maximize the number of rehearsals, whereas female teachers have set up apprenticeship workshops that do not fit the numbers and do not do not maximize the dosage. It is according to the number of workshops that the dosage differentiates the contributions in volume of learning. In this regard Amade-Escot (2003) [1] said that this causes a lot of care and rigor to the material and human development.

With respect to genericity, both categories of teachers influence the production of winning strategies by students in decreasing numbers (Sensevy, 2007) [25].

As for the specificity, the male teachers intervene, correct, place themselves in the beautiful place of production compared to their female colleagues; only male teachers articulate the three logics of activity, student and personal logic and do not dissociate technique from tactics compared to their female colleagues.

Institutionalization

There is a consideration for gymnastics students and their teachers, the situations used are a didactic because they are designed and carried out in order to promote the student's interactions with the environment, thus leaving a great autonomy to the pupil in the construction of his knowledge. The interaction is seamless and the form of dialogue that teachers use is more incentive than prescribed. Our results are consistent with those of Amade-Escot (2007) [2] who certify that the teacher means to students the knowledge or the practices they need to remember, such as the learning issues expected.

Ostension

As far as genericity is concerned, both categories of teachers communicate the techniques and procedures for learning the gymnastics elements by family to their pupils in learning situations. With regard to specificity, male teachers communicate elements of the analytical and overall realization of gymnastic elements compared to female teachers, in other words, the ostensive procedures used are very varied in a communication register which favors verbal ostension and direct physical expression, they respond to conjunctural necessities. Our results corroborate those obtained by Chevallard (1989) [10] who says that the ways in which individual's appropriate knowledge depend on their "personal relationship to knowledge".

Chronogenesis

With regard to genericity, there is a progression of knowledge during the advancement of didactic time. There are three stages of engineering: teacher-initiated start-up, workshop-based work where students are autonomous, and co-evaluation to check what has been assimilated. All teachers respect the different parts of the lesson (grip, start-up, main part, return to calm and recovery) (teacher preparation sheets). Regarding the specificity, the duration of practice differs from one category to another in both statutes.

More time for start-up for female teachers; more work time per workshop for female teachers with many repetitions by teaching strategy significantly favoring learning gain. In this perspective, Pérez (1999) [21] said in his study that the action of the teacher is built in the action itself and privileges class interactions as a factor of building skills. The skills lie in the interaction between the actor and the environment.

Topogenesis

In terms of genericity, both categories of teachers occupy positions as well as their students in learning situations. In terms of specificity, male teachers occupy positions more at the center of didactic action, anticipating the pupil's output compared to their female colleagues. They act in triple interventions in the planning and the organization of the lessons, before, during and after the apprenticeship, this action undoubtedly makes it possible to accentuate the motor progress of the pupils. From this perspective, Chevallard (1999) has said that "relationships to knowledge are differentiated and expressed differently according to the position (the topos) occupied by the actors within the institution". We agree with Sensevy (2007) [25] that the action of our teachers within the didactical contract of the way in which their students and themselves share responsibilities (their topos) about the objects of knowledge, that the variations are evolutionary since the objects of knowledge from which students and their teachers interact, advance through the teaching action.

The professional ingenuity linked to the expertise also makes it possible, at different times of the didactic regulations to involve forms of partial institutionalization reducing the uncertainties on what there is to do, in order to build a common reference within the collective class, the first step for students to access new knowledge (Schubauer-Leoni, 2008) [24].

Mesogenèse

The different transcripts show that the two categories of teachers observed offered their students experimental tasks, they reformulated the teaching strategies based on the joint interactions of the students. In the light of the foregoing, male teachers, in contrast to female teachers, use generally informal plans based on diagrams or a few written lines which formalize the main orientation of the teaching sequences, and which anticipate whole lessons or even successions of lessons. Male teachers develop specific provisions that characterize and differentiate them from female teachers, explaining the greatest effectiveness. In this context, it is essentially the students' success that constitutes the criterion of judgment.

Observation, stimulated recall and interactions certify that male teachers have a knowledge of organized and integrated subject matter, the knowledge they have of the gymnastic elements they have to teach is structured by meaningful forms; that is, it reflects relationships between typical body shapes and the efficiency of the athletic movements they induce. Knowledge based on perceptual recognition: they directly perceive and recognize the body shapes that students give as meanings; knowledge structured by and for action: The body forms perceived by male teachers have a functional character orienting action by form (Gibson, 1979) [16].

The analysis of the responses to the questionnaires shows that female teachers who have benefited from the same training offerings as their male counterparts are looking for the

expected return on the practical field, they must enrich their vocabulary while discovering other variables. that they do not use because they do not control them or because over time in the professional curriculum, over the routines that install progressively, they select fewer variables and the same in an activity physical and sports taking into account the behavior of their students.

Our current scientific positioning and the orientations that follow from it can only be understood through a singular path that characterizes our epistemology as a researcher. At the heart of the subjects and centered on the didactic functioning, these orientations join current concerns, relating to the fertility of the articulations between research and teacher training and propose to investigate the heuristic dimension of the notion of competence in relation to the nature of the knowledge that mobilizes each teacher in the didactic interaction.

Conclusion

The results we have reached highlight the fact that the contents taught do not constitute, in PSE, a stabilized corpus (collection), organizer of the lesson. They emerge at the moment of students' achievements and in interaction with them and especially the expertise of the teacher. The relevance of didactic situations is the heart of the teaching profession. Female teachers are focused on the overall management of the classroom, while male teachers take more account of the interests of each student.

References

1. Amade-Escot C. The interactive management of the didactic contract in volleyball: arrangement of environments and regulations of the teacher. In C. Amade-Escot (Eds.), Didactics of Physical Education-State of Research, Paris: Edition *Revue EPS*, 2003, 240-264.
2. Amade-Escot C. Teaching with heterogeneous classes - Chapter 5. in C. Amade-Escot (Coord). Didactics Paris. *EPS Review*, collection For action, 2007, 83-98
3. Barbier JM. Theoretical knowledge and action knowledge. Paris: PUF, 1996.
4. Bourgeois I. Characterization of teaching interventions. Analysis of verbal interactions and action guides in class. Aster Review. 2007; 45:65-90.
5. Bui-xuan G, Gleyse J. Teaching Physical Education ? AFRAPS, Clermont-Ferrand, 1993.
6. Carnus MF. Clinical didactic analysis of experienced and novice teacher practices. In MF Carnus, Garcia-Debanc, Terrisse A. (Coord.). Analysis of the practices of novice teachers. Didactic approaches. Grenoble, The wild thought, 2008, 213-232.
7. Casanova R. A first experience in gymnastics, in Travert, M., Mascret, N., Rey, O, the beginner pupil in EPS, *EPS file* n ° 78, Paris, Editions EPS, 2010, 135-150.
8. Chamoux L. Analysis of interaction in EPS. Strategies of the teacher in a situation of interaction in college in sports swimming and gymnastics, 2012.
9. Chevallard Y. Constraints and conditions of elaboration. The point of view of didactic anthropology (doctoral thesis in Sciences of Education, unpublished). Joseph Fourier University, Grenoble I. accessed, 1997, 2012, http: / / www. didactique.inf
10. Chevallard Y. Fundamental Concepts of Didactics: Perspectives Brought by an Anthropological Approach. Research in didactics of mathematics, Marseille, University Aix-Marseille. 1989; 27(2):73-112.
11. Connelly FM. Rhythms in teaching: The narrative study of teachers' personal practical knowledge of classrooms. Teaching and Teacher Education. 1995; 2(4):377-387.
12. Durand M. Chronometer and tracksuit. Reflections of the experience of teachers in physical education. Paris, *EPS Review*, 2001.
13. Elbaz F. Research on teachers' knowledge: the expert teacher and the "ordinary" teacher. In: Gauthier, C., Mellouki M, Tardif M. (ed.) to have teachers. What do they know? (101-114). Montreal, Logical Editions. Ennis, CD., Mueller LK, Zhu W. Description of knowledge structures within a concept-based curriculum framework. ResearchQuarterly for Exercise and Sport, 1991, 1993; 62:309-318.
14. Fonkoua P. General Didactics, Course given at the UNESCO Chair for Central Africa, ENS Brazzaville, Marien Ngouabi University in, 2000, 2006.
15. Fontaine P. Motivation and physical and sports activities : the influence of sex and gender on the practice of sport and PE, thesis STAPS (unpublished), Paris Sud Orsay University, 1999.
16. Gibson JJ. The ecological approach to visual perception. New York: Houghton Mifflin, 1979.
17. Kherroubi M, Rochex JY. Educational research and PTAs in France. 2. Apprenticeships and professional exercises in ZEP: results, analyzes, interpretations. French Journal of Pedagogy. 2004; 146;115-190
18. King JR. "The problem (s) of men in early education," N. Lesko, Masculinities at school, California: Thousand Oaks, Sage Publications, 2000.
19. Marsenach J. Physical education and sports: what teaching? Paris: NPRI, 1991.
20. Marsenach J, Merand. The formative evaluation in physical education and sports in colleges. NPRI Science Report, 1987.
21. Perez S. Study of the action course of teachers of experienced EPS specialists and non-specialists of gymnastics facing a class of 24, 12 and 5 students: Contribution to an ergonomic approach to teaching. Unpublished PhD thesis STAPS. University of Montpellier, 1999.
22. Piaget J. The equilibration of cognitive structures: central problem of development. Paris, Puf, 1985.
23. Sargent JR. Personal experience and professional experience in teaching PSE: two contrasting case studies in clinical didactics. Education and didactics. Rennes: Rennes University Press, 2001, 2(3).
24. Schubauer-Leoni ML. The co-construction of knowledge. In Wallian N, Poggi MP, Musard M (Ed?), Co-construction of knowledge; the professions of intervention in the APAS, Besaçon; University Press of France6 Committee, 2008, 67-86.
25. Sensevy G. Categories to describe and understand the didactic action. In G; Sensevy and A. Mercier, (dir). Acting together: element of the theorization of the joint action of the teacher and the pupils, Rennes: University Press of Rennes, 2007, 13-49.
26. Sensevy G, Mercier A. To act together: the joint didactic action. In Sensevy G, Merc A, 2007.