
Motivation in the gym. A qualitative approach

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Abstract

Students' motivation is a major concern of physical education teachers as well as it interest the others educators. Understanding of that complex variable increased during the last two decades. In the physical education domain, many studies were focused on isolated variables related to motivation and on their relationship with pupils' behaviours. More recently, qualitative researches were conducted to enter in the class specificity and to integrate the complexity and diversity of the variables that influence students' motivations.

Combining questionnaires interviews and observation, some researchers have confirmed that student's motivation depends on a package of dispositional as well as individual and collective situational factors. They pointed out also the determining role of the teacher in the development of a motivated class climate. This paper will describe a couple of qualitative studies designed to analyse students' motivation and will underline their contribution in the understanding of the phenomena related to the development of motivation by students.

Moreover, as teachers need research directly focused to their concerns, we must now provide them more support helping them to apply research data. The action research design is proposed as an appropriate approach in that way. The description of a pilot action research focused on the improvement of the students' motivation in a secondary school level girls class will also proposed. The main results should provide the starting point of a reflective process about the strategies that teachers could plan on the gym.

As it has been underlined above, the goal of the paper was to share useful information with practitioners and researchers and to encourage them to involve themselves in personal research on students' motivation.

INTRODUCTION

Motivation is a determining factor of numerous human activities. In the educational context, nobody will contest that that variable plays an important role in the achievement of any student. Process-product research showed that students' motivation was related to the learning gains as well in PE as in classroom teaching (Bloom, 1979; De Knop, 1983). More recently, affective characteristics of the students were identified as mediating variables for the effectiveness of the teaching-learning process (Doyle, 1988; Lee & Solmon, 1992).

If students' motivation has always been seen as an efficient lever, it appears that more and more educational specialists consider that motivation seems to progressively disappear in school context. Bonrepaux (2004) pointed out that in a recent consultation of the French inservice teachers, students' motivation was chosen as the first topic that they would tackle during inservice preparation meetings. The recent organisation of some colloquium specifically dedicated to motivation at school reinforces the place that educational

authorities provide to it (Communauté française, 2004). Nevertheless, it is not a new concern for PE teachers. In 1983, Capel already identified lack of motivation as a factor explaining 14% of the variance of the anxiety of beginning PE teachers.

If students' motivation is identified as problematic by educators, it must be noted that several studies pointed out that most of students have a relatively positive attitude towards school. As underlined in several European studies undertaken at primary and secondary school levels, the attitude towards physical education is moreover more positive (Delfosse, Ledent, Carreiro da Costa, Telama, Almond, Cloes & Piéron, 1997; Piéron, Delfosse & Cloes, 1994). Youth and adults seem to not share the same framework about the motivation level assessment. Famose (2001) stated that students are motivated but that their motivation is not oriented towards the goals determined by the school professionals.

Many researchers have analysed the relationships between student motivation and several variables. Gender, age and school grade level, ability level on one hand, teacher and environment characteristics, on the other hand, are some of the most common variables that were considered in comparisons of more and less motivated PE students. Actually, independent variables associated with motivation are divided into dispositional and situational categories (Figure 1). The dispositional variables deal with characteristics directly related to the students, while the situational variables concern the context in which they live. According to the characteristic traits of each student (e.g. sport practice during leisure time, motives for sport participation, parents' involvement ...) and features describing the educational context (e.g. motivational climate of the class, teacher's expertise, school characteristics, social environment...) situational variables can be respectively divided into individual and collective categories.

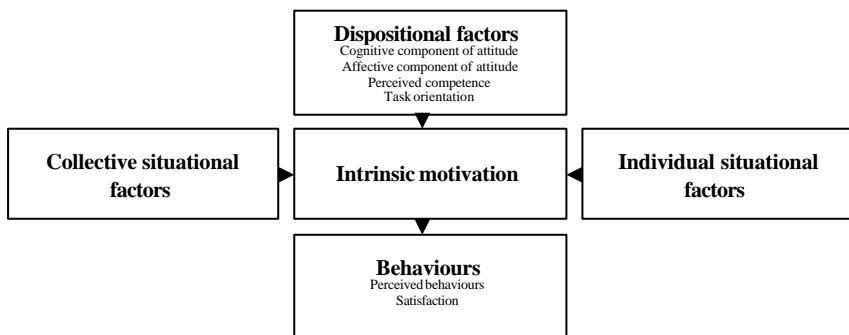


Figure 1 – Students' intrinsic motivation in physical education

Viau (2004) proposed four groups of external factors influencing motivational dynamic that specify the situational factors: factors related to the class (activity, assessment, teacher's characteristics and behaviour, praise and punishment, class' climate, relationship between pupils...), factors related to the pupil's life (family, friends, leisure activities...), factors related to the school's environment (rules, schedules...), factors related to the society (values, culture,...). Epstein (1989) defined the motivational climate –within the class – in reference of six areas corresponding to the acronym "TARGET": Task, Authority, Recognition, Grouping, Evaluation and Time.

These dimensions underline the central place of the school environment and teacher in the development of the students' motivation pointed out by Sears and Hilgard 40 years ago. However, according to Cloes, Ledent, Delfosse & Piéron (2001), PE teachers consider that pupils constitute the main source of motivational problems (68.4% of the items identified in teachers' answers) while school environment and parents accounted respectively for 24.2 and 7.4%. School environment referred to direct (e.g. buildings and heterogeneity of classes) and indirect (e.g. school and teachers' characteristics) aspects.

Silverman and Subramaniam (1999) reviewed the outcomes of the research on the students' attitude towards physical education, focusing on comparisons according to variables such as physical educator and curriculum, gender, age and school grade level, marginality of physical education, and skill level. A deterioration of the situation has been identified during schooling. If several differences were identified according to the cultural context of the country where the youth live, boys regularly showed the highest level of attitude towards physical education as compared to girls. When comparing motivational characteristics in low and high achievers, Piéron, Delfosse, Ledent and Cloes (2001) pointed out to the fact that the very favourable attitudes came from the students who were considered as good performers.

The students' attitude was not the only motivational variable compared according to situational variables. The mastery dimension of perceived climate (Cury Biddle, Famose, Goudas, Sarrazin & Durand, 1996) and perceived learning environment (Mitchell, 1996) were identified as predictors of intrinsic motivation measured by derived versions of the Intrinsic Motivation Inventory. Piéron et al. (1997) showed that low achievers felt less competent than high achievers, underlining the risk of developing a negative attitude towards physical education and thus worsening their intrinsic motivation.

These results contribute to validate the two main theories that emerged in the study of students' motivation during the last two decades: (1) the cognitive evaluation theory as a part of self-determination theory, introduced by Deci and Ryan (1985), and (2) the goal achievement theory developed from Nicholls' works (1984, 1989). Individuals possess three innate psychological needs: competence, relatedness and autonomy (Ryan & Deci, 2000). Competence refers to the perception of being effective. Relatedness deals with social recognition and integration, while autonomy is related to the control of behaviours by the individual. Conditions perceived as likely to provide opportunities to satisfy these needs will also facilitate motivation (Vallerand & Losier, 1999), underlining the role of the social factors. The latter authors presented the following motivational sequence (Figure 2):

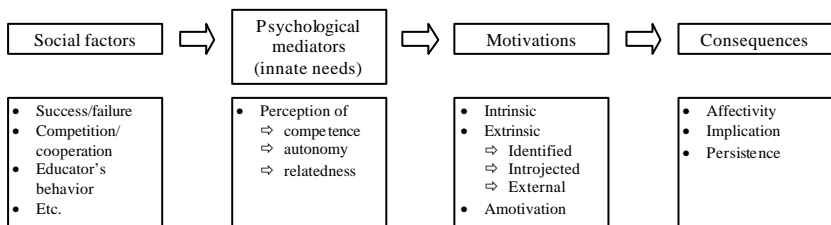


Figure 2 – Model of the auto-determination theory (Vallerand & Losier, 1999)

social factors (e.g., success/failure, type of interaction with peers, educator's behaviour, etc.) influence the psychological mediators of motivation (perceptions related to the innate needs) that act upon motivation, thus exerting an impact on behaviours and feelings.

Viau (1998) has proposed a model where the pupils' perceptions of the pedagogical activity are considered as the origin of the pupil's motivational dynamic (Figure 3): perception of the educational activity's value, perception of his/her competence to achieve it and perception of the control that he/she exerts on its unfolding. A motivated student chooses to involve him/herself into the activity and to persevere. Finally, these behaviours cause achievement.

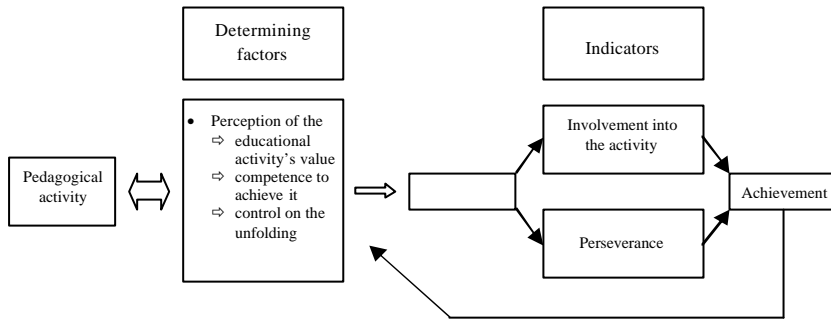


Figure 3 – Pupil's motivational dynamic (Viau, 2004)

Although quantitative studies laying on comparisons of several groups provide interesting information, they focused usually on isolated variables and did not provide an overall perspective of the relationships of all variables involved in the development of the students' motivation. Newton and Duda (1999) proposed to follow a qualitative approach to better account for the large inter-individual variability of motivation within a class.

Qualitative studies have grown during the last two decades. This paper will focus on two categories of qualitative approaches focused on students' motivation: (1) cases' analysis and (2) research action. In both orientation, data collection laid on a package of instruments that provide a large array of information. According to publication guidelines, it will only possible to present here a synthesis of the methods and results of selected research projects.

A MORE QUALITATIVE LIGHTING

In a recent review of the literature, Cloes, Ledent and Piéron (2004) summarized some of the published qualitative studies focused on students' motivation. The studies carried out by Morey and Goc Karp (1998), Cloes, Motter, Ledent and Piéron (2002) or Ledent, Motter, Piéron and Cloes (2003) constitute examples of research aiming to enter into the specificity of the class and to integrate the myriad of influences which determine the motivation with regard to physical education.

Morey and Goc Karp (1998) selected classes in which pupils showed a weak interest with regard to the activity. The authors led a case study centered on three pupils considered as good achievers but demonstrating neutral or negative feelings towards physical education. They followed them during 19 weeks and observed them in PE lessons as well as in other activities. The pupils, the parents, the PE teachers and the other members of the educational community were interviewed in order to supplement the analysis of the site. The physical education programme, the family context, the community and the personal characteristics of the students were identified like the most influencing factors of a neutral or negative attitude towards PE. The differences between pupils' expectations and those of the teachers represented a major factor of loss of motivation. Moreover, the lack of attention of the teacher towards the less motivated pupils also contributed to the development of an inappropriate attitude. The results also highlighted the important role of the pupils' life out-of-school. Indeed, of the family problems or the characteristics of the families appeared among the factors exerting the strongest influence.

Cloes et al. (2002) followed a model of research based on a double axis taking the intrinsic motivation as the point of convergence (Figure 1). On the horizontal axis, the intrinsic motivation is related to the collective and individual situational factors. The vertical axis represents the relationship between the dispositional factors and the intrinsic motivation, on the one hand, between the intrinsic motivation and the class behaviors (for example, the efforts carried out, satisfaction, pleasure, improvements), on the other hand. The data presented in the study came from a vocational boys secondary school level class. Two stages were considered: (1) identification of the two most and the two least motivated pupils on the basis of four dispositional factors (the affective component of attitude towards physical education, the importance of physical education, the perceived competence, the task orientation); (2) the interview of the four pupils and their professor in relation to the individual and collective situational factors as well as the satisfaction and the behaviors perceived during the lessons of physical education.

The interviews of the pupils confirmed that their motivation depended on the combination of a broad range of factors. The graphic representation of the answers highlighted that no simple model can exist. The teacher was clearly conscious of the characteristics of his pupils. Considering that the class was highly motivated in spite of a relatively unfavorable socio-economic context, the skill of the teacher to collect and use information relative to his pupils was regarded as a determining factor for the development of a motivational climate. Keep in mind that the majority of the motivated pupils stressed that their teacher planned a contents oriented towards play and learning. This confirms that a class climate centered on students' mastery contributes to develop satisfaction and pleasure in learners (Seifriz, Duda & Chi, 1992; Walling, Duda & Chi, 1993). All the pupils mentioned the excellent quality of the relationship which they had with their physical education teacher. A graphic representation of the qualitative analysis summarized the links identified between all the variables taken into account (Figure 4).

The study of Ledent et al. (2002) followed the model with double axis described previously and used the same approach to compare two classes of secondary school level girls, clearly differentiated in terms of intrinsic motivation levels. Results indicated that the teaching context differed considerably between both classes. In the most motivated class, the conditions of practice were perceived as more favorable, the pupils belong to an environment which support the physical activity and the class behaviors corresponded more to descriptions of the motivated pupils (Cloes et al., 2001; Gonçalves, Carreiro da Costa & Piéron, 2000).

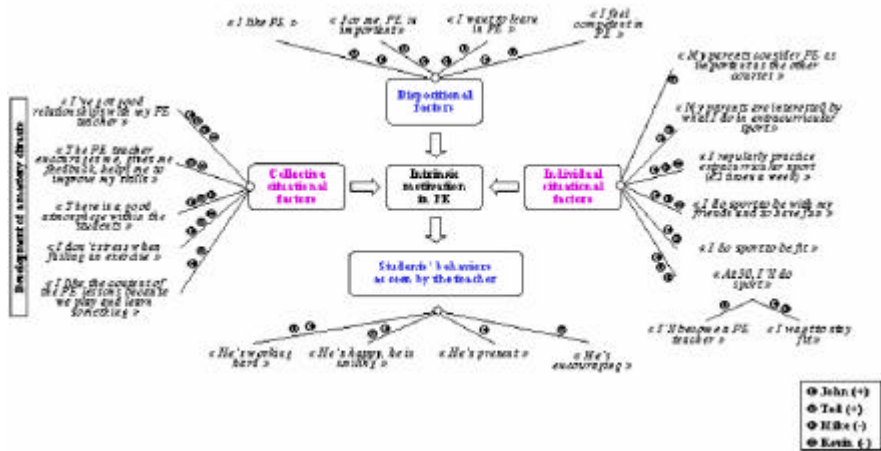


Figure 4 – Links between intrinsic motivation and analyzed factors (Cloes et al., 2002)

The reviewed studies clearly highlight the interindividual variability of the factors which influence the development of the pupils' intrinsic motivation. The approach combining the collection of quantitative and qualitative information seems to constitute a promising solution for better understanding of the interactions between all the variables concerned. Collecting information coming from the whole of the individuals implied in the process of teaching (pupils, PE teachers, teaching staff, parents...) appears quite as essential.

By the creation of a motivational climate and the choice of activities stimulating the interest of his pupils, the teacher appears to be able to activate a lever which makes it possible to improve the students' motivation. However, on the basis of data presented above, it should be admitted that the teacher does not control all the keys determining the effectiveness of the mechanism. His intervention can undergo the constraint of parameters external to the school context against which he will remain impotent if he does not combine with the other members of the educational community.

It is obvious that collaboration between researchers and practitioners will be essential in any search for solutions to this new challenge.

A MORE APPLIED APPROACH

The need of strategies aiming to improve the students' motivation led some teachers educators to publish paper and books focusing on principles and examples of good practices. Viau (2000) have proposed a list of ten conditions to respect in order to increase the pupils' motivation. He pointed out that any learning activity should: be meaningful for the pupils; be diversified and integrated into the other activities; represent a challenge for the pupils; be authentic; require a cognitive engagement of the pupil; provide responsibility to the pupil allowing him to make choices; allow the pupil to interact and collaborate with the others; be interdisciplinary; lay on clear instructions; be held over one sufficient period of time.

Since 1983, in a work which marked the world of the physical education teachers' education, Siedentop clearly highlighted that the teachers should create a positive climate and proposed some examples of positive behavioral interactions. Since the end of the 20th century, teacher's behavior seems become not sufficient to motivate all pupils and educators must now exploit a broad range of strategies. Florence, Brunelle and Carlier (1998) pointed out the role of the task selection identifying several characteristics of activity that could help teachers to propose a class environment where the students would want to learn what they consider they have to teach them.

The content of 14% of the papers published by a French journal dedicated to PE teachers focused on pupils' attitude and practical solutions designed to improve it (Bertone & Méard, 1999). This underlines that there is a particular demand of the practitioners to learn and to share new teaching formula aiming to motivate their pupils.

Exploiting the technique of the nominal group (Brunelle, Drouin, Godbout & Tousignant, 1988), we set up activities of inservice training during which the participants collectively create practical solutions likely to answer concrete situations of teaching considered as problems. This share of experience and the reflexive process requesting the creativity of each one are perceived in a very positive way by the majority of the teachers. They consider that this approach contributes to enrich their framework and to facilitate their later interactive decision-making. Table 1 illustrates some projects imagined by the teachers during their collective reflection in order to improve students' motivation.

Table 1 – Examples of projects proposed to motivate students

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|---|
| Great scale projects (school or several classes) |
| <ul style="list-style-type: none"> • Participation in a demonstration outside the school then reproduction of the activity in the school in collaboration with other schools • Exchange with foreigner schools: organization of a competition in team sports and preparation of a spectacle of folk dances • Adaptation of the physical education programme designed to prepare inter-school competitions (Euro-marathon, School Trophy, badminton tournament, roller inline learning programme...) • Organisation of an intramural volleyball tournament involving sport management decisions • Promotion of physical fitness through a five days bicycle ride • Organization of a "Sport day" for the local community |
| Middle scale projects (class or small group) |
| <ul style="list-style-type: none"> • Inscription to the inter-school championships and organization of specific training during PE lessons • Participation of a class in a community championship • Active participation in the preparation of a cabaret organized by the school (the oldest pupils teach their dance to the youngest • Creation of a ballet also occurring in out-of-school |
| Small scale projects (individual pupil) |
| <ul style="list-style-type: none"> • To improve pupil's self perception of competence by doing the requested exercise with him (holding him by the hand during a race of 400 m without stop) • Involvement of pupils under medical certificates in the lesson as observers, referees or managers |

If a great number of authors have proposed strategies aiming to improve the motivation of the pupils, it is worth to note that no research seems to have been envisaged to check the effectiveness of the described approaches. To experimentally check the effectiveness of the teaching processes on the field, the more usual methodologies of research respect either the model of comparison of an experimental group to a control group or the principles of the multiple baseline. Nevertheless, these approaches are particularly time consuming and not always easy to apply in teaching situation. In the case of a complex variable as student's motivation, it would be appropriate to turn to approaches closer to the real living

conditions and directly involving the practitioners. The action research seems to be able to fill this requirements.

This research's design was developed on the basis of the ideas of Kurt Lewin. In the field of the intervention in the sport and physical activities, this methodology developed in the Anglo-Saxon countries (Martinek & Schempp, 1988) and starts to get a foothold in the French-speaking culture. Durand (2001) thus drew the attention to the need for developing more collaborations between the practitioners and the researchers while Cloes (2003) reviewed the PE specific literature on that scientific approach and provided some indications about its usefulness. The fundamental principles of the action research or collaborative research are the subject of many publications (Carson, Connors, Smits & Ripley, 1999; Dick, 2002).

In general the action research comprises five phases which are more or less developed according to undertaken experiments (Mayer & Ouellet, 1990). These various steps are connected and the process can be represented as a spiral cycle in which one recognizes four key aspects represented on Figure 5: planning, action, observation and reflexion (Cloes, 2003).

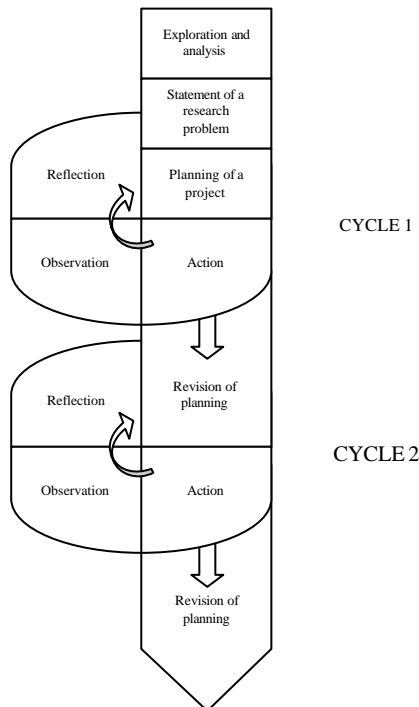


Figure 5 – Spiral cycle of the action research (Cloes, 2003)

Action researches focused on students' motivation and planned in the gym should contribute to develop practical information which exceeds the purely theoretical level of methodologies presented by theoreticians and would make it possible to concretely check the effectiveness of the strategies worked out on the basis of reflexion.

The Figure 6 proposes the time line followed in a study that we planned during a great part of the 2002-2003 school year in order to check the impact of processes imagined by a teacher in order to improve the motivation of her pupils. Five steps were successively envisaged.

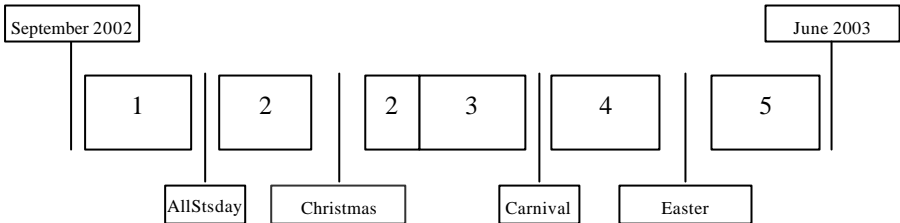


Figure 6 – Time line of the action research

Preparatory phase (Figure 6-1)

We contacted the principal of a secondary level school located in the region of Liège, in a very unfavourable socio-economic context and explained our wish to work in collaboration with a teacher who worked with one girls class characterized by a lack of motivation towards physical education. We met a teacher who accepted to participate to our project (female who had 27 years of teaching experience). It was acted that the only constraint which would be imposed to the practitioner was our regular presence in the class. We thus chose to follow a grade 9 girls class (age comprized between 14 and 16). At the beginning of the year, 17 girls were in that class but 2 dropped out.

Phase of identification of the problem (Figure 6-2)

During this phase, we collected various information concerning the level of the pupils' intrinsic motivation through a questionnaire. We also appreciated the class environment analyzing several video recordings. We finished by the analysis of the opinions about sports activity and physical education of four target pupils (the four least motivated ones) as well as those of the teacher concerning her students and teaching conceptions. The data collected were processed qualitatively, which makes it possible to approach the teaching context of a broader manner.

Planning phase (Figure 6-3)

A file gathering several documents presenting strategies and activities designed to improve pupils' motivation was provided to the teacher. The objective of this file consisted in providing her materials to reflect about the way to modify some aspects of her teaching decisions. We wished to provide her new ideas in order to encourage her to imagine new

strategies. After she had consulted the file, we met her to elaborate a project. Moreover, we also presented to her the synthesis of its interview and that of her pupils in order to ensure the credibility of our data.

Surprisingly, during the meeting, the teacher told us that she had not really found new solutions concerning the lack of motivation of her pupils in the file. According to her, she already had tried most of suggested strategies and examples. She did not have prepared her own action programme. It was thus decided to gather the ideas and experiments in order to imagine a project. On the basis of observation and results of the interviews, we thus put forward the particularly important role of the played forms and of some versions of competitive situations. Two methods of organization of the practice were adopted as strategies of intervention. These forms of play and situations were considered as opportunities to increase the pleasure of the pupils, their progress and their motor experiments by multiplying the occasions of practice, the personal or collective challenges as well as the discovery of new skills.

Captivated by the opportunity to bring a certain novelty to her lessons, the teacher proposed to make the necessary supports for the implementation of the project. She also selected the situations to planify. Her enthusiasm towards this original activity led her to adopt the same formula for various courses.

Intervention phase (Figure 6-4)

During this stage we analyzed the teaching process in order to identify behavioral modifications in the whole class and in the four target pupils. Direct observation and analysis of the video recordings of the lessons were used. We also collected the opinions of the pupils and the teacher as well as the analysis of the answers to the questionnaire of intrinsic motivation filled in at the end of the year. Data concerning pupils' motivation were systematically communicated to the teacher who has regular informal meeting with the researchers. In respect of the action research spiral principle, some adaptations of the programme were decided according to what occurred in the gymnasium.

Phase of analysis and presentation of the results (Figure 6-5)

This last stage consisted to analyse and process the data collected during the year in order to determine the impact of the study. A synthesis meeting was organized at the end of the school year in order to present the main results to the teacher. The goal was to get a validation of the researchers' interpretations.

What did we learn from that action research?

Teacher and the overall class agreed for saying that the new organization was more funny than those usually proposed by the teacher. Most of the students mentioned that if the same activities would be repeated, it would encourage them to take part more positively to physical education lessons.

We must unfortunately note that few positive modifications were detected in the attitude of the four target pupil at the end of our research. It is necessary to question ourselves about the reasons explaining why these girls did not improve their motivation to participate. As the professor specified it at the beginning of school year, we thought that three out of these

pupils were "irreducible" unmotivated ones. This means that they were pupils who, whatever the suggested activity, would not invest themselves. The moments when they seemed to appreciate what was proposed were always furtive. The innovation and originality of the tasks did not appear to be factors which would generate a possible attraction for sport.

For two of these three pupils, the problem did not seem to be about the PE programme content but rather about the requirements which they did not think to be able to achieve, confirming the model proposed by Viau (2004). They were girls having important problems of self concept and who prefer to avoid practice, to be exempted or to avoid to be present. They were certainly psychologically unstable pupils who should receive a specific and suitable help. The attitude towards the physical education of the third student seemed to be identical in each other school matter. The members of the educational staff complained regularly about her behavior. She never made what she did not appreciate. The problem did not seem to be limited to the simple practice of the sport but rather to a general attitude getting to her a certain dislike towards the school system.

Nevertheless, we were satisfied to have observed in the fourth pupil a real pleasure to take part in the new activities. She appreciated the new teaching approaches. She told us that she hoped that the teacher continues to propose them.

The few modifiable behaviors of the target pupils did not appear to be the only factor having contributed to the lack of result in that action research. We think that the new strategies were not organized in the best way. In spite of an enthusiastic attitude the teacher seemed not always able to develop a motivational climate laying on an effective intervention. According to our decision to let the teacher at the center of the decision making, we missed a possible inservice supervision role. The length of service of the teacher was certainly a factor which could have not facilitated the mission of the researchers who diplomatically did not pointed out the pedagogical errors of the teacher. It is worth to remember that the teacher did not request herself this experiment. Desrosiers (1991) highlighted that collaborative research needs open relationships between the practitioner and the "external" witnesses. It seems that this aspect should have been more developed in this study. It would have been useful to provide a feedback about the lessons to the teacher, underlining the poor time on task of the pupils and the low frequency of interventions. Moreover, a self analysis of the videotaped lessons could also have been useful to allow the teacher to see that pupils were not the only responsible of the weakness of their motivation.

CONCLUSION

Every class, every student, every teacher contribute to the complexity of the pupils' motivation development. Qualitative studies has been successfully used in order to illustrate the mutual link of all the variable. Case-studies should be envisaged to appreciate each specific situation. This methodology could help practitioners to better understand what is happening in their own environment in order to determine which kind of factor are prevailing in their educational situation and to chose way of action.

Available qualitative data confirmed that the teacher plays a determining role in the development of pupils' motivation. However, as teacher's behavior seems also to be influenced by the pupils' behaviors and attitudes, it appears that students' lack of

motivation is at the center of a vicious circle. When the students lack of motivation, their attitudes and behaviours urge the teacher to modify his own attitudes and behaviors. Noticing the little impact of their action, some teachers can lose their motivation. Consequently they attach less and less value to their action, contributing to reinforce the demotivation of their pupils. When trying to motivate pupils, it should first be verified if the teacher is him/herself motivated. Moreover, any project should consider all the influencing factors.

Multiplication of action researches should help the educator to enlarge their framework. Examples of good practices in which they could identify each variable explaining the success or the failure of an experiment should be proposed. Indeed, by carrying out research which tries to include/understand why certain techniques or strategies were effective, the teachers can learn more in connection with themselves as instructors and on the manner with which the pupils perceive these successes. By including and understanding pupils's perceptions, the teachers can try to teach so as to reproduce these experiments with other pupils.

Practitioners need to be prepared to action research. It should begin by the improvement of the reflective practice. It means that teaching quality should be designed as a highly desirable objective. During preservice teacher training, university supervisors –who are often researchers– should develop partnerships with their students in order to continue to work with them after graduation. In inservice context, even if it is sometime difficult to go against the individualism of the teachers, it is essential to create progressively confident relationships so that the practitioner accepts to solicit the researcher. The latter should show that he has something to provide in order to motivate his potential partner.

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