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# **Opinions about the generalisation of an experiment consisting in doubling the PE time at primary school in Wallonia<sup>1</sup>**

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## **1 Introduction**

As pointed out by all international and national health organisations, physical activity is one of the major lifestyle-related health determinants. According to the growing prevalence of sedentary lifestyles in Europe as well as in most parts of the world it is now well acknowledged that paying increasing attention to physical activity promotion is an important component of public health action (WHO, 2007). Success depends on a comprehensive, integrated and inter-sectoral approach involving interventions to be introduced at individual, institutional, community, environmental and policy levels.

Even if it does not represent the only context where youth can be active (Cale & Harris, 2006), school is traditionally associated with the provision of physical activity to children and adolescents. For many young people, it represents the only place where they can be involved in organised physical activities. Health agencies have realised of the fact that school has a potentially powerful influence on the health behaviours (including physical activity) of young people (Stewart Burgher, Barnekow Rasmussen & Rivett, 1999). Physical education's status as physical activity provider has grown quickly and PE is considered as, conceivably, a cornerstone for the promotion of lifelong physical activity (Tappe & Burgeson, 2004). Experts concur that it can play a key role in the promotion of a lifelong active lifestyle (Pate, Davis, Robinson, Stone, McKenzie & Young, 2006).

The impact of PE is conditioned by the quality of the process as well as of the context. One of the determining aspects deals with the amount of time that is allocated to the physical activity. In that way, the Surgeon General's Report on Physical Activity and Health (U.S. Department of Health and Human Services, 1996) underscored the importance of offering a physical education lesson each school day when it stated that "every effort should be made to encourage schools to require daily physical education in each grade and to promote physical activities that can be enjoyed throughout life" (p.6).

Daily physical education has often been presented as an appropriate approach to reach a better balanced school life in pupils. Several experiences in Australia (Dwyer, Coonan, Leitch, Hetzel & Baghurst, 1983; Tinning & Kirk, 1991), Canada (Chad, Humbert & Jackson, 1999; Trudeau, Laurencelle, Tremblay, Rajic & Sherphard, 1999), Germany (Wasmundt-Bodenstedt, 1984) and Wallonia (Piéron, Delfosse & Cloes, 1996) have confirmed the positive impact that daily physical education has on fitness, motor development, psychosocial aspects, lifestyle and "academic" performance.

It is surprising that in most studies focused on daily physical education, few data were collected on the perceptions and feelings of teachers involved in the experiments. Pollastchek,

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Renfrew & Queen (1986) used questionnaire and interview and underlined that teachers were generally satisfied with the programme as well as the establishment of relationships within the staff. Tester & Watkins (1987) criticized the “Daily Physical Education Program” launched in South Australia claiming that not all teachers really accepted their mission. Tinning & Kirk (1991) proposed a selection of papers presenting results of studies analysing the same programme with a systematic approach. They indicated that teachers were rather confident and that the programme has been successful in terms of creating better relationships within the educational staff, confirming above mentioned data. The same trend was also identified in a Belgian experiment proposed in the early nineties (Piéron et al., 1996). These authors showed that teachers from the pilot schools declared to have a more positive approach towards their job than their control group colleagues. The “Canadian Quality Daily Physical Education” program was seen as effective in creating awareness and support by a sample of teachers, principals and educational stakeholders (Chad et al., 1999).

One characteristic of all daily physical education projects that have been analysed is that educational staffs are seldom involved directly in the programme’s development. Decisions are more often taken by policy makers who invite politely schools and educators to join the project. Moreover, even if they represent one of the actors involved in youth education it appears that parents seem to be ignored in a large majority of the studies. Another peculiar informal observation regarding daily PE programmes is that they are often proposed during a determined period during which the community can appreciate their positive impact until budget problems lead to their withdrawal.

Particularly, this was the case in Australia but also in Wallonia. In this Belgian region that assumes responsibilities concerning education for the French speaking part of the country, while a daily PE programme has been experienced by the Ministry of Education between 1992 and 2000 and was identified as effective (Piéron, Cloes, Delfosse & Ledent, 1994), a new experiment was launched in 2005 without taking into account the current recommendations. The main difference between both projects was with the status of the teachers providing PE lessons. In the first project, pilot pupils had weekly three lessons with their classroom teacher and two with a specialist PE teacher. In the current project, they receive four, 50-minute lessons with a physical educator. Control pupils receive two PE sessions as it is the case in all schools in Belgium (De Knop, Theeboom, Huts, De Martelaer & Cloes, 2005).

The purpose of this paper was to analyze the findings of a study that investigated the practitioners’ perceptions regarding the opportunity to generalize the project using an original approach based on the “reconstruction” of a general discourse from the interviews of the practitioners.

## **2 Method**

In July 2004, the Ministry of Sport announced a plan for battling the growing sedentary lifestyle of the youth in Wallonia. An experiment in partnership with the Ministry of Education colleague was developed that aimed at doubling the amount of the PE lessons in primary schools (grades 3 to 6 = 9 to 12 year old children). Schools were invited to apply to the programme. In July 2005, according to the available resources, a working group selected 11 pilot and 9 control schools representing the educational landscape of the region. Eight experimental schools received their matched control schools according to several

characteristics (location, educational network, socio-demographic context, facilities). One school participated as experimental and control school (at each grade level, one class was involved in the experimental design while two other classes remained with the basic amount of PE lessons). Finally, two more experimental schools did not receive their control counterparts according to the specificity of the teaching process that they proposed. The experiment started in September 2005 (staffs and parents were informed before the beginning of the school year) It will continue during four school years, until 2008-2009.

Several data were collected during the school year. A questionnaire was completed by the 2.500 pupils designed to gauge students' attitudes towards school, PE and sports, self perception, affective aspects and lifestyle. Researchers asked PE teachers to list the activities that they planned during the whole year. This paper focuses on two other data sources collected at the end of the school year: (1) interviews of the staff members, and (2) answers of parents to a questionnaire.

Between March 8 and June 2 2006, the author met individually all principals and at least one PE teacher in each school (Table 1). Each semi structured interview lasted from 40 to 75 minutes. A guide was used to follow the same design with all subjects. Four themes were tackled (context of the school, educational school project, characteristics of the PE course, opinion about the PE lessons' doubling). The fourth topic was focused on several aspects: course of the project, possible problems and solutions considered, reactions of the pupils, the teachers and the parents, possible modifications, opinion on generalization of the experimental programme (pilot schools) or its feasibility (control school).

<b>Table 1 – Subjects</b>		
<b>Experimental schools</b>		
School 1	Pr. 1	PE 1
School 2	Pr. 2	PE 2
School 3	Pr. 3	PE 3
School 4	Pr. 4	PE 4
School 5	Pr. 5	PE 5a + PE 5b
School 6	Pr. 6	PE 6
School 7	Pr. 7	PE 7
School 9	Pr. 9	PE 9
School 10	Pr. 10	PE 10
School 11	Pr. 11	PE 11
<b>Mixed school (experimental and control classes)</b>		
School 8/58	Pr. 8	PE 8
<b>Control schools</b>		
School 51	Pr. 51	PE 51
School 52	Pr. 52	PE 52
School 53	Pr. 53	PE 53
School 54	Pr. 54	PE 54
School 55	Pr. 55	PE 55a + PE 55b
School 56	Pr. 56	PE 56
School 57	Pr. 57	PE 57a + PE 57b
School 59	Pr. 59	PE 59
<b>Total</b>	<b>19</b>	<b>22</b>

Pr.. = Principal ; PE = PE teacher ; CT = classroom teacher

The interviewer wrote the answers following the thread of the speech knowing that the latter was recorded for further control. The analysis was undertaken a posteriori. During that process, the researcher identified in the field notes any information connected with a specific theme and wrote it in a synthesis table. Confirmation of the direct transcription was possible through an access to the verbal records. This paper will focus only on the answers provided by the subjects in the experimental schools on the matter of the generalization of the experimental programme. Each quotation provided by the subjects on that aspect was then classified in order to “reconstruct” an imaginary interview combining the answers of all subjects. That original approach is supported by some recommendations to explore new prospects in qualitative research (Nilges, 2001). It follows the same principles than the narrative analysis (Oliver, 1998): through the elements identified in the subjects’ answers the authors reconstruct a “story”. In our case, this story corresponded to the development of the interview during which the subjects provide their opinion about the generalization of the experimental project. In reality, items were not systematically proposed in the same order nor mentioned by each subject.

This qualitative analysing process was validated by sending the researcher’s work to the subjects who had to comment it (Locke, 1989). All reactions confirmed the lifelikeness of the reconstruction. Moreover, in the results section, we have presented in two columns the reconstruction and the quotations identified in subjects’ interviews. In that way, the readers will be able to verify also the validity of the work.

The parents’ questionnaire comprised 14 closed and 2 open ended questions. Closed questions were using four-level scales. Parents ticked their level of agreement to each proposal (from 4= I strongly agree to 1= I strongly disagree). In the questionnaire distributed in pilot schools, one item dealt with the opinion about parents’ agreement on the following proposal: “You would recommend to the principal to carry on the experiment during the next school year” (272 questionnaires collected in 6 schools). In control school, the proposal was: “Which is your degree of agreement with the opportunity of modifying the organization of the school in order to propose twice more lessons of physical education to your child?” (299 questionnaires collected in 3 schools).

### **3 Results**

#### **3.1 Opinions of staff’s members**

As mentioned above, the left column presents the “typical answer” that the researcher has built through the 23 interviews while the right column provides the “real answers” identified in the interviews. In the next pages, PE<sup>2</sup> means “doubling PE hours”.

## Reconstruction

This project turns out to be important because of benefits that it is possible to expect in children. Those who largely need to move and do not have always the opportunity to do it on their premises nor when they have only the periods of physical education envisaged in the traditional program. It is the society which will profit from the modifications to which the doubling of the hours of physical education will lead.

As the program works without problem in certain schools, it should not exist too much difficulties so that its generalization can be considered within possible shortest possible time ...

... even if it were necessary for that to increase the volume of the children attendance at school.

Indeed, a decree could induce this change and the schools would be well obliged to implement the official decisions. However, it would be the same thing as with the introduction of two sessions of fundamental motor development in kindergarten, the nice principles imagined by the administration would run up against the field context that it is sometimes very difficult and would be likely to be opposed to local characteristics or to call in question other projects which completely satisfying teaching staffs.

Sufficient human resources would be necessary in order to obtain a permanent supervision of the pupils. The teachers' availability as well as the concentration of their schedules in a limited number of

## Quotations

*It would be good (PE11)*

*It would be important (Pr.9)*

*PE<sup>2</sup> is a real contribution to generalize (Pr.11)*

*People should be encouraged to move (Pr.1)*

*Children need it (PE6)*

*PE<sup>2</sup> is something more because 2h/week, it isn't enough to give the taste of the sport to the children and to make them bettering PE (Pr.7)*

*Vital for the society, more for the children than for sport itself. (PE7)*

*It's important because in schools like S1 parents don't register their children for activities in clubs. (Pr.1)*

*I believe that it should be possible (PE9)*

*It's possible in the schools where I work, as well as for schedules than for human resources (PE4)*

*That could be implemented in the schools where I have already taught. (PE9)*

*If that works here I don't know see why wait! (PE1)*

*It is necessary that that is done as quickly as possible (PE7)*

*PE<sup>2</sup> should be implemented even if it means increasing the hour number of the schedule. (Pr.1)*

*If the French speaking Community imposes, schools dispose and have to organise themselves and to propose appropriate schedules (Pr.1)*

*That's the same problem than with the introduction of the fundamental motor development: the obligation was there even the local context wasn't appropriate. (Pr.2)*

*That's the problem of some compulsory activities (Pr.1)*

*I have some reserve because the safety of the children is not ensured permanently; teachers are not there all the time. (Pr.2)*

schools would constitute a determining element for the success of the project.

Before launching this type of ambitious action, it would be advisable of course to know if the French Community's budget would be sufficient to support the whole of the expenses necessary in order to perpetuate the experiment. The contribution of other public authorities should not be neglected.

It would be particularly used to ensure of the conditions of correct practices in each school. Indeed, there is a very great disparity between schools on the matter of sport facilities and equipment. Some sport buildings are already saturated and let us not speak about the swimming pools!

The school schedule's would require an increase in the hours of the classroom teachers' services, it would be necessary that the these teachers (and their trade-union organizations) agree to modify their practices and privileges, the more so as the additional physical education lessons would be likely "to nibble" the place acquired by other activities in which they find perhaps more personal interest.

The role of physical education teacher is crucial as they constitute the principal architect of the success of this kind of project. Indeed, it is absolutely necessary that

*Need of good financiers (PE2)*

*It is necessary to pay and there is no budget (D7)*

*I never heard to say that it was not feasible if the budget was there. (PE7)*

*A generalization is a little bit a dreams according to the financial aspect. (Pr.9)*

*Generalization would be terrific if budget allows it! (Pr.11)*

*Why not a contribution of the ministry for health? (Pr.9)*

*The facilities will be a major problem for some schools. (Pr.1)*

*It should be possible if the classes' number remains the same but if it continues to increase, the facilities will be saturated. (Pr.2)*

*In this school, we have enough room to do it but others are not equipped enough. (PE2)*

*It is not possible according to the facilities' availability. (PE4)*

*The essential problem lies in the facilities' level. (PE6)*

*I am in a good context, it's true, but I believe that it should be possible elsewhere too! (PE7)*

*Take care to the shortage of facilities! (PE11)*

*It isn't so obvious because there are difficulties to find enough facilities in some schools. (Pr.7)*

*It would be necessary to take care of the availability of the facilities. (PE 2)*

*About the risks, there would be the resistance of the classroom teachers to the change; to avoid the cancellation of other projects. (Pr.1)*

*The difficulty they are the problems with the classroom teachers if PE<sup>2</sup> is organized everywhere. (PE1)*

*It's difficult to increase the number of lessons.*

*It should come from the PE teachers. (Pr.7)*

*It would be great but it would be necessary that the 4 hours would be used. That's the problem of human resources as in any subject matter. (PE1)*

they all are able to propose contents likely to make it possible to the children to achieve the goals pursued by the programme. This will require the integration of motivated professionals whose concern will exceed simple the "occupational one". It would act consequently, on the basis of concrete projects, to be able to select the skilled people and to ensure an assessment of the quality of work that is carried out...

... but the physical education teacher cannot be the only concerned one. Indeed, without the support of the principal who impulses a style to a school and largely influences the orientations of the school's project, he can nothing make. The physical activity promotion must be a permanent feature within the teaching staff on pain of seeing the physical educators well isolated and their action on the pupils limited to their specific area. The essential collaboration for this kind of project thus requires the involvement of all the staff members.

An aspect to be retained is that if the project is not chosen by the teaching staff, it will be implemented reluctantly, consequently limiting the needed enthusiasm necessary to the success of any undertaking, whatever its value.

Thus, it would be convenient to devote the available resources to projects which would have been requested by the schools, by selecting them on objective bases and taking care to control their implementation.

A structure providing assistance should be envisaged in any case to encourage staffs that are motivated and eager to launch out into that kind of programme; sharing good practices can only be "contagious" if one allows the mouth with ear to underline the advantages of some models.

Some will consider that this kind of project can be implemented only in schools having the means to do so and that it presents so much snags that it is utopian to believe that

*The main thing would be to have teachers who want to work within the system, whatever it is! (Pr.4)*

*A motivated PE teacher who has projects! (PE1)*

*Qualified and motivated people are the main thing. (PE1)*

*As I am physically active, I am taker. (Pr.7)*

*The interest of the principal is fundamental for the project's success. (Pr.7)*

*All must start from the school's project (PE1)*

*... but it depends on the school culture. (PE1).*

*It would be necessary to generalize in so far as one hold account of the opinions of all the actors. (Pr.6)*

*It isn't recommended to make it compulsory because there will cause refusal. (PE1)*

*One risks smothering a school making this kind of project compulsory. (PE6)*

*Rather than to make the project compulsory, it would be better to give a budget to those schools which have a project (PE1)*

*A coordinator who would follow and assist the practitioners would be a positive tool. (PE1)*

*PE<sup>2</sup> is good for big schools. (Pr.2)*

*Finally, it would bring many difficulties. (PE2)*

“active schools” could actually come to fruition.

On the other hand, others proclaim however that it is not because things are difficult that one does not dare to do them, it is because one does not dare to try them that they appear difficult.

*It is important to don't pay too much attention to problems. (Pr.6)*

Lastly, there exist so many teaching experiments - conclusive – that unfortunately not have been exploited or have quite simply fallen in the lapse of memory that it would be regrettable that the hopes born of this new initiative cannot be met.

*The political leaders supervising the project should not forget to continue the operation once that it will be finished. (PE1)*  
*I formulate the wish to continue something interesting after the 4 years envisaged for the experiment. (Pr.7)*

As in the first Wallonian experience (Piéron et al., 1996), teachers showed a real interest towards the project. This opinion seems to be linked to the perceived positive impact that increasing physical activity has on pupils (better behavioural control, better attitudes towards school, fitness improvement...) without decreasing of the academic performance.

Even though they are key persons within the schools, principals were not often considered in daily PE studies. Our results pointed out clearly that they identified determining factors that could contribute to guarantee the effectiveness of projects aiming to promote physical activity within the educational context.

As any programme, daily PE must be sustained by the school project and needs to be adapted to the local context. Teaching staff – PE and classroom teachers – have to be convinced by its appropriateness and to be decided to put it at the centre of their action. It seems that prior to propose (impose) a daily PE project in a school it would be necessary to verify if the latter respects most of the dimensions of the model of the “active schools” described by Cale (1997). The motivation of people to overcome the existing difficulties is certainly a restricting factor.

One of the most tangible variables that scare practitioners on the matter of a potential generalization of PE<sup>2</sup> deals with the sport facilities availability. De Knop et al. (2005) underlined that quantity and quality of Belgian schools sport facilities represent a major problem considering the quality of PE. The situation seems more serious in primary schools than in secondary school level as very few have their own sport building.

Moreover, according to the long term effects that daily PE programmes can have (Trudeau et al., 1999) as well as the investment that they represent, the pursuit of such experiments should be conducted for a longer time than the official duration of a study. As it was pointed out above, it is not logical that positive results are not used to improve the educational context.

Finally, one of the main interesting aspects to emphasize out of these results is that some subjects agreed on the interest to develop a more participative project where local initiative would be supported by educational authorities. Sharing good practices constitutes one of the most interesting aspects that could contribute to promote effective projects. Several actions have been launched in Europe and other parts of the world to help schools and teachers to

develop concrete activities according to their specific environment: publications, grants... (Boudreault, Cantin & Ferland, 1999; L'Ecole bouge, 2007). Daily PE does not represent the only way to improve health-related physical education. However, the effectiveness of interventions aimed at increasing children's physical activity during physical education classes is well documented in North America (Kahn et al., 2002), and Verstaete, Cardon, De Clercq & De Bourdeaudhuij (2007) seem to have demonstrated that that kind of approach is also valid in the European context. It is now the time to integrate all these information in in-service education, especially for primary school PE teachers.

### 3.2 Opinions of the parents

Figure 1 show clearly that a large majority of the parents has a positive opinion about the opportunity to propose more physical activity to their children. In parents of experimental schools, the ratio of very positive opinion is higher than in their control schools' counterparts, underlining that lived experience would help to be more convinced that more regular PE lessons have positive impact or don't have negative effects. A common apprehension is that additional PE time will disturb the learning process for "more academic" matters.

Analysis of parents' opinions supports the initiative and should help political leaders to promote that kind of project, justifying more easily the expenses. The development of such programmes depends on the educational policy where physical activity and promotion of an active lifestyle do not seem considered as central topics.

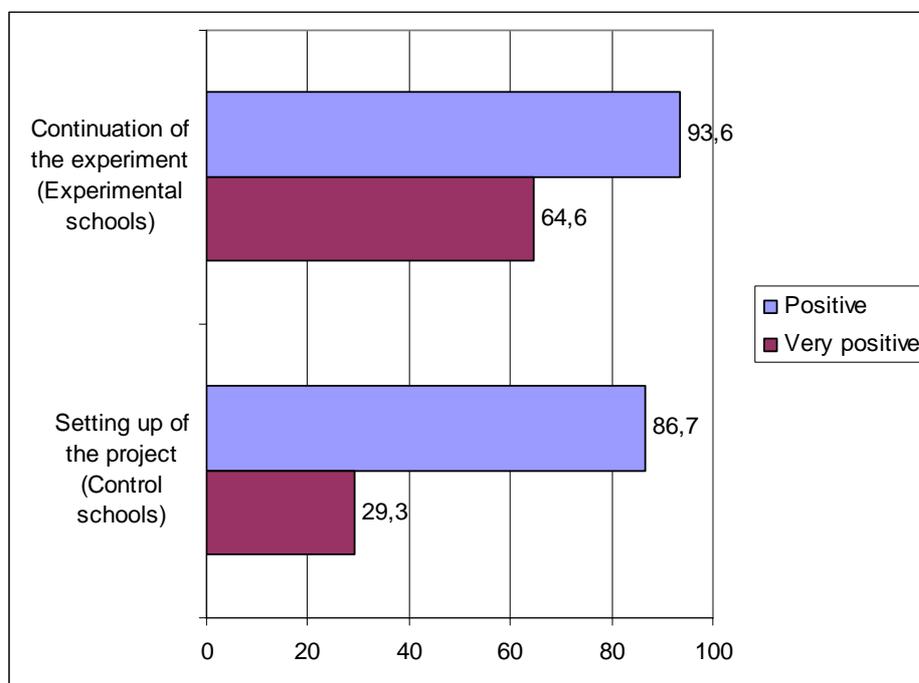


Figure 1 – Opinions of the parents (%)

## 4 Conclusions

As sport pedagogy specialist Wolf-Dietrich Brettschneider has supported the idea that developing an active lifestyle needs a coordinated approach where physical education takes a central role. Moreover, in his research, he has pointed out that what is often considered as evident might be different when analysed carefully. One example deals with his study showing that the positive impact of sport could be relativized. Thus Wolf-Dietrich will agree with the assumption that the qualities of the educators' action as well as the context influence the effects of any programme or activity.

This paper has emphasized that when implementing a project such as doubling the number of weekly PE sessions, practitioners' views should be heeded. The practitioners pointed out that they need mainly to be encouraged when they have good ideas. If specific human resources and facilities' availability were identified as determining factors, it seems that the main condition of success lies on the real wish of a teaching staff to put the physical activity in the centre of the educational mission of its school. It implies the leadership of the principal, the involvement of the PE teachers and the collaboration of each classroom teacher. A national programme imposed will not have a greater effectiveness than shared positive experiences intelligently highlighted by a marketing action if results of action research would bring objective support helping to convince those who prefer the security of the tradition to any calling into question and additional work.

Those attitudes were certainly not characteristics of Wolf-Dietrich Brettschneider who is appreciated as a colleague always ready to test a new way to be more effective and to bring more to the main beneficiaries of the sport pedagogy studies: the children and youth who, finally, should be better helped to grow in a well balanced way.

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