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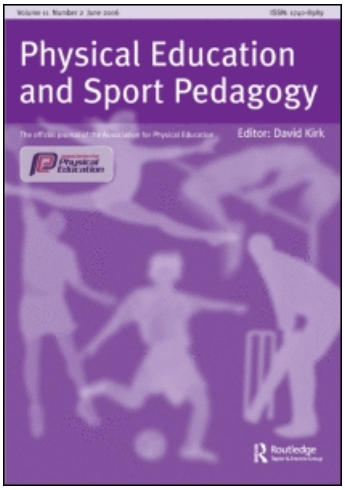

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'Badminton player–coach' interactions between failing students

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Background: Physical education teachers often use the player–coach dyad in individual opposition sports so that students can obtain information on their actions and then better regulate them. This type of work also develops methodological and social skills. However, the task of observing a partner often poses problems for failing students, who tend to reject it.
Purpose: Failing students are known to develop an emotional and meaningful relationship to knowledge. We therefore investigated how a 'scholastic form of practice' of badminton might be used to encourage these students to accept and invest in the task of observing their partners. We also evaluated the impact of this investment on the acquisition of motor and methodological skills, as well as the conditions conducive to effective reciprocal peer tutoring in badminton.
Participants and setting: Our work focussed on two first-year classes in a French secondary school (Marseilles) with a majority of failing students, i.e. students with academic and behavioural problems. Each class was composed of 16 students, approximately 12 years old, who had never practised badminton.
Research design: Each class practised a nearly identical form of badminton during six lessons. Only the relationship between the players and observers differed. The observers had to transcribe the nature of the points scored by the players on a worksheet and then give the players feedback about their performance during coaching sequences. In the 'coach' class, the player and his or her observer were teammates: the scores of their respective matches were added together for a total score. In the 'observer' class, the player and observer had no special relationship.
Data collection: Data were collected on a detailed observation worksheet by an expert observer who identified the parts of the court in which players scored. These results were then compared with the data collected by the students. In addition, all coaching sequences were filmed.
Data analysis: The progress made by the two classes in terms of motor and methodological skills was compared between a pre-test and a post-test session using two nonparametric tests: the Wilcoxon test and the Mann-Whitney U test.
Findings: The results showed that 'coach' class students were much more invested in the observation activity than those of the 'observer' class, and their motor and methodological achievements were notably higher.
Conclusions: The meaning attributed by failing students to dyad work is dependent on how the work is actually structured by the teacher. The creation of conditions for interaction between students is thus an integral part of the scholastic form of practice built by the physical education teacher.

Keywords: badminton; physical education; scholastic form of practice; meaning; interactions between students

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Introduction

Physical education teachers use dyad work in many sports. Does the way the dyad is constructed in an individual sport (badminton) have an influence on the interactions between students and on their motor and methodological learning? In order to investigate this, we conducted this study in two first-year classes (12-year-olds) of a secondary school in Marseilles, France, that had a high percentage of failing students. All of the students were beginners in badminton and were known to have academic and behavioural problems. We based our research on a technological approach (Bouthier and Durey 1994) with several stages corresponding to the rational use of techniques in the context of the design, implementation and evaluation of a project. This approach seemed particularly appropriate as our work was conducted with the aim of transforming the way badminton is taught in physical education. Research in the field of technical knowledge can be conducted at three levels (David et al. 1999): the task and the actors' work; the task context and actors' resources; and the organisational context of the task and the social significance of the practices. We therefore examined the influence of dyad work in badminton on the students' motor and methodological activity, as well as on the activity of physical education teachers.

Theoretical framework

Our theoretical framework was based on the relationship between social practice taken as reference at school and a 'scholastic form of practice'. We first analysed the advantages and limitations of dyad work and then explored the influence of meaning on failing students' learning.

Social practice taken as reference at school and a 'scholastic form of practice'

Unlike other school subjects, physical education cannot be directly based on a corpus of established scientific knowledge. It can, however, be based on a social field of physical practices. Martinand (1982, 1989) called these practices social practices taken as a reference at school. Physical education should not be confused with the practices outside of school, but should be seen in relation to them as it attempts to transpose them, construct them, and even invent them (Martinand 1989). The notion of a 'scholastic form of practice' reflects this perspective. It is a construction by the teacher who stands at the interface of sport (with its cultural and historical foundations, rules, and techniques) and physical education (with its institutional constraints, its timetable, and the heterogeneity of its students). But this construction can take several forms, which we will study in badminton.

A scholastic form of practice in opposition

A literature review of professional French journals and books dealing with badminton teaching in physical education identified four perspectives on badminton teaching: a playful perspective (which offers games that are not actually badminton, especially for very young students); a 'technicist' perspective (which offers only the repetition of badminton strokes); a reinvestment perspective (which offers more or less the repetition of strokes, but also emphasises the importance of mastery for future games); and a 'cultural' perspective (which focuses on the management of opposition). We retained the last perspective because it best reflects the cultural foundations of badminton and allowed the students to experience a genuine badminton game. The scholastic form of badminton practice that we tested thus opposed two players. But what would the students learn from it?

Hitting to 'danger zones'

Students must be confronted with an educational object in order to become more effective in a given activity. An analysis of the progression of a badminton player's activity (in game) from beginner to expert (Mascret 2008) enabled us to determine which object would be most appropriate for beginners. The tool we built for observing players showed that the higher players' levels became, the more the players hit to what we called 'danger zones', i.e. the front third (forecourt) and the back third (rear court) of the opponent's court. Following the first physical education sequence of badminton lessons (six lessons) oriented towards targeting these zones, 50% of the strokes sent to the forecourt and 80% of the strokes sent to the rear court scored points (versus 16% to the midcourt). The scholastic form of badminton practice for a beginners' class therefore incorporated an educational object that focussed on attempts to hit to these danger zones.

Dyad work: cognitive and motor influence

The technological approach also led us to take into account the scientific knowledge in the field of badminton teaching in physical education. We concentrated particularly on knowledge related to a social approach to learning and the role of added information from learning and motor control theories.

Cooperative learning

A considerable amount of research on 'cooperative learning (Duran and Monereo 2005) has been conducted. 'Cooperative learning is a way of thinking about and implementing physical education that leads to improvements in both teaching and learning. It is defined as small-group instruction and practice that uses positive student interactions as a means of achieving instructional goals' (Dyson and Grineski 2001, 28). Originally, Doise and Mugny (1981) emphasised the importance of socio-cognitive conflict in the construction of cognitive skills when dyads are asymmetric by showing that both slower and advanced children were able to progress by the comparison of ideas. More recent work (Doise and Mugny 1997) showed that children at approximately the same level can also confront their ideas and progress, without the need of any asymmetry of skills between the two members of the dyad. The research on 'Reciprocal Peer Tutoring' (Fantuzzo et al. 1989; Fantuzzo, King, and Heller 1992; Fantuzzo and Ginsburg-Block 1997) has developed from findings such as these. According to Buchs, Lehraus, and Butera (2006), exchanges of information and resources promote learning. Preparing to communicate information and then doing so is an effective way to organise, develop and retain the information. If the child must first summarise information and then transmit it, a cognitive reorganisation is necessary, which facilitates the personal consolidation of the information. Indeed, it has long been observed that explanations have more influence on the one who gives them than on the recipient (Johnson et al. 1985; Webb 1985). Nevertheless, the experiments conducted by Spurlin et al. (1984) and Webb, Troper, and Fall (1995) showed that alternating the roles of the information communicator and the recipient had an impact on motivation and investment in the long run. In the preparation of our scholastic form of badminton practice, we put into place dyad work with a player and an observer, because it was observed that 'cooperative learning utilized specific roles such as coach, recorder, performer, and captain as a means of skill acquisition, strategy application, and accountability' (Grenier et al. 2000). In this set-up, the player states where he or she expects to score most before the set even begins. The observer marks the area in which each point was scored on a worksheet.

At the end of the set, they compare the original expectation with the actual results. They are then free to discuss any observed discrepancies. This mode of operation aims at enabling the observer to transmit strategic elements that would make the player more effective. During the lesson, students alternate the roles of player and observer several times. As differing points of view are expressed, a debate of ideas can take place (Gréhaigne 2007), and from this process the rules for effective action can emerge for strategic construction.

The impact of added information on motor activity

According to Temprado (1997), the main function of added information is to inform subjects about the nature and effectiveness of their actions. This process of causal attribution can generate research strategies for coordinating and corrections of the parameterisation of the coordination from one try to another. The impact of pair work is not confined to seeking the cognitive and strategic reorganisation of the observer. This modus operandi applied to physical education teaching also allows the player to regulate his or her actions to make them more effective or to stabilise them. Temprado et al. (1997) showed that added information can be used to make gains in time and performance while acquiring a motor skill, and they noted that this was particularly true for transition information (Kernodle and Carlton 1992), which provides information for correction during upcoming attempts. But according to Buchs, Lehraus, and Butera (2006), in order to make the best use of explanations, the recipient should have the opportunity to implement them in order to be able to manage his or her understanding and possibly become aware of encountered problems. Thus, players can reorganise their motility by exploiting the observer's explanations. We put into place a scholastic form of practice in several sets: students played three sets of seven points, interspersed with sequences of feedback on their actions. We assumed that this would lead to progressive technical transformations. The detailed observation sheet served as an artefact, i.e. a phenomenon introduced into individuals' activity to make them evolve. This worksheet was both a material artefact (Rabardel 1993), in that it was seen as an instrument for the students, and a cognitive artefact (Rabardel 1993), in that it could direct the students' activity by changing their representations (here the importance of hitting to danger zones).

Several scientific studies have dealt with the cognitive and motor reorganisation of skills in order to make progress, which also corresponds to the expectations of disciplinary and interdisciplinary school programmes. Nevertheless, Ward and Lee's meta-analysis (2005) of research on cooperative learning in Physical Education identified only nine studies on reciprocal peer tutoring, and these studies were often limited to assessing the effects without trying to understand the underlying mechanisms. The question thus remains: is dyad work always sufficient to bring about real change in students?

Influence of meaning

Although group work is of interest in physical education, especially for team sports, it has some notable limitations for many students during activities of individual opposition. In fact, the observer and the player will often be opponents later in the lesson. Why then would the observer want to identify the player's failures to meet criteria for success and give advice for improvement to a future opponent? Johnson and Johnson (1995) showed that competitive contexts make interactions less beneficial, with people tending to stick to their initial positions, denigrate their partner's point of view, and even denigrate their partner. When the social comparison of skills underlies the interaction, individuals set up

defensive strategies to protect their own competence. Failing students, however, develop an emotional and meaningful relationship to knowledge (Therme 1995). If they do not see the point of the work required of them, their investment is likely to be low or inexistent. According to Charlot, Bautier, and Rochex (1992), the relationship to knowledge is both meaningful and valuable: the individual enhances what makes sense for him or her or, conversely, gives meaning to what has personal value. As pair work does not necessarily make sense for these students, they will give it little value, which may quickly cause deviant behaviour. For this reason, like Barbot in judo (1996, 2004), we proposed a scholastic form of practice in which students work in teams of two players. Each player on the team competes against two players from another team, but the members of the same team never compete against each other. Instead, their results are added together to determine the winning team. While one teammate is functioning as a player, the other is the coach: it is therefore worthwhile to invest in one's role effectively because helping one's partner can make the team win.

The scholastic form of badminton practice that we tested is as follows. Two teams of two players compete in a match: each player will successively play against the two players of the other team. When two players are opponents, their respective teammates have the role of coach. Three zones are drawn on each badminton half court: front, central and back. Through detailed data collection, the coaches must identify the zone in which their partners most often score and provide advice during the coaching sequences between each set (students must perform three sets of seven points). At the beginning of each set, the players must tell their coaches which zone they want to reach. Initially, these beginners frequently sent the shuttlecock to the central zone of the opposing court, which was not difficult for the opponent. The students practised badminton in six lessons, with the main work theme of hitting to the front and back zones. The main differences between official badminton and the scholastic form of practice can be seen in Table 1.

The singular context of physical education class changes the social practice taken as reference at school, while retaining the cultural foundations. We will now focus on the influence of the teaching environment on failing students.

Methods

Participants and organisation

We observed two classes of first-year secondary school students who had their first experience of badminton during six sessions of two hours each, i.e. ten hours of effective practice (which is required by the French national educational programme). Sixteen students who were complete beginners were selected in each class (12 boys and 4 girls), all of approximately the same age (12.12 $\pm$ 0.7 years versus 12.06 $\pm$ 0.66 years). Both classes played

Table 1. Differences between official badminton practice and the scholastic form of practice.

Official form of practice	Scholastic form of practice for beginners
Two winning sets of 21 points	Three compulsory sets of seven points
Singles or doubles	One team of two players against another team
Two players on a court	Two players and two observers on a court
Regulatory layout of the badminton court	Regulatory layout of the badminton court + three areas (front, central, back) drawn on the court
A coach who is not a player	A coach who will become a player in the next match
An implicit strategic project	An explicit strategic project (an announced area, noted on a worksheet)

several badminton matches in each lesson. Before each set, the players told their partners which zone they wanted to target as a priority. During breaks between sets, the partners gave appropriate advice thanks to the information collected during the set, i.e. the distribution of points scored in the zones. The class that we called the 'coach' class was divided according to the principle of teams of two players whose results were added. The two players never competed against each other: they were teammates. The class called the 'observer' class worked in dyads without any special relationship between the two members (which is the type of dyad work systematically used in physical education).

Hypothesis

Our null hypothesis, H0, was the following: the 'coach' and 'observer' classes would show no motor or methodological differences between pre-test and post-test. The alternative hypothesis, H1, was the following: the 'coach' class would show greater motor and methodological differences between pre-test and post-test than the 'observer' class.

Data collection

The data were collected during the second lesson (which was the pre-test) and then during the sixth and last lesson (which was the post-test). The first lesson of the cycle was devoted to learning the serve and the main rules and to working with the concepts that would be used in the sequence. We compared the evolution in the data collected for each mode of dyad work on motor and non-motor levels. On the motor level, we examined the changes in the distribution of points scored by students in the forecourt and rearcourt in each class. To collect these data, an expert observer was assigned to each court to document the nature of the points scored by the players during the matches.

On the non-motor level, we first compared the developments in the strategic projects made by the students before each set for both classes. The findings were classified into three categories according to the nature: relevant project (the player gave priority to the front or back zones), irrelevant project (the player gave priority to the central zone), or no declared project. This declaration of intention was noted by the observers on their worksheets, which allowed us to collect such data. We then examined the evolution in the errors of observation made by the student observers with help of the expert sheet (we compared the observations of the student and expert observers). Last, we filmed each coaching sequence to categorise them into three classes: unrealised coaching, emotional coaching (only an overall reaction subsequent to the match result, such as 'You played well' or 'You played badly'), or adapted coaching (in which the coach reviewed the points scored in each zone and tried to give the player advice accordingly).

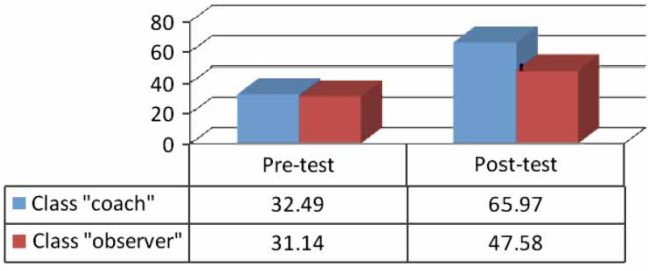
Data analysis

We compared the results of the two classes using the Mann-Whitney U test for independent samples (nonparametric test) during the pre-test and post-test sessions. We compared the evolution in each class with the Wilcoxon test.

Main results

Results on the motor level (Figure 1)

During the pre-test and post-test for the 'coach' class, the nature of 477 and 523 points scored was identified. For the 'observer' class, 472 and 496 points scored were respectively identified.



	Pre-test	Post-test
Class "coach"	32.49	65.97
Class "observer"	31.14	47.58

Figure 1. Distribution of points scored in danger zones (%).

In the pre-test, the two classes had similar results concerning averages and standard deviations (4.07 for the 'coach' class and 3.31 for the 'observer' class). We compared the results of the two classes using the Mann-Whitney U test for independent samples (non-parametric test) during the pre-test and post-test. At pre-test, the test rejected the alternative hypothesis for a threshold alpha of 0.05. During the post-test, the test accepted the alternative hypothesis for a threshold alpha of 0.05. We used the Wilcoxon test for matched samples to determine whether the difference between pre-test and post-test in each class was significant (this was the alternative hypothesis, the null hypothesis being that there would be no difference between pre-test and post-test). The alternative hypothesis was accepted for each class, with the difference significant at the threshold of 0.05. We therefore concluded that both classes scored more points in the danger zones at the end of the six-lesson sequence than in the beginning but that, although their initial results were similar, the progress in the 'coach' class was greater than in the 'observer' class.

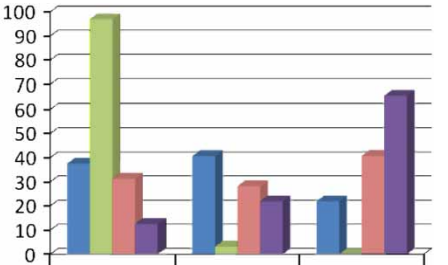
Results on the non-motor level

The results at the non-motor level fell into three categories: change in the type of strategic project, the number of observation errors, and the nature of the coaching sequences.

Change in the type of strategic project (Figure 2)

For each class, 32 strategic projects made by students were categorised for pre-test and 32 for post-test.

Contrary to the motor results, in which we observed great similarity in the students of the two classes during the pre-test, differences in strategic projects were noted from the start. The 'observer' class students had a higher rate of no declared projects than the 'coach' class students (40.63% versus 21.87%). This trend was confirmed in the post-test, as in two thirds of the cases the students in the 'observer' class did not declare strategic projects, whereas all of the 'coach' class students did. For the latter, almost all the declarations were strategically relevant in the post-test, although relevance remained very low for the 'observer' class (12.5% of declarations). The Wilcoxon test for matched samples was used for each class and each item. For the 'coach' class, the test accepted the alternative hypothesis, with the 0.05 threshold (i.e. a significant difference between pre-test and post-test): the number of relevant projects increased and irrelevant or no declared projects decreased. For the 'observer' class, the alternative hypothesis was rejected by the test every time. We therefore concluded that the strategic projects of the 'coach' class students evolved to become mostly relevant, contrary to the projects of the 'observer' class students.



	Relevant project	Non relevant project	No-declared project
Class "coach" (pre-test)	37.5	40.63	21.87
Class "coach" (post-test)	96.88	3.12	0
Class "observer" (pre-test)	31.25	28.12	40.63
Class "observer (post-test)	12.5	21.87	65.63

Figure 2. Comparison of strategic projects (%).

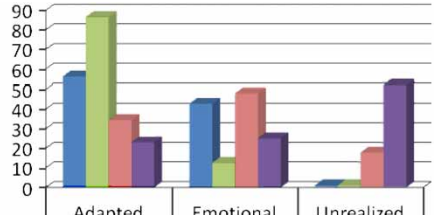
Changes in the number of observation errors

Regarding the changes in the number of observation errors, it was not possible to compare the two classes because in the pre-test, five students of the 'observer' class did not fill out the worksheet correctly by the identifying the zones. This occurred again during the post-test, when nine students did not complete the worksheet. In the 'coach' class, all the sheets were correctly filled out and the average number of errors by the observing student was virtually reduced by a factor of three between pre-test and post-test (21.87 to 8.5). The standard deviation was very high in the pre-test (13.41) but was significantly reduced during the post-test (3.35).

Changes in the nature of the coaching sequences (Figure 3)

During pre-test and post-test, the nature of 96 coaching sequences was analysed for both classes.

During the pre-test, the 'coach' class students were already producing mostly adapted coaching sequences (56.25%), which was not the case for the students of the 'observer'



	Adapted coaching	Emotional coaching	Unrealized coaching
Class "coach" (pre-test)	56.25	42.71	1.04
Class "coach" (post-test)	86.46	12.5	1.04
Class "observer" (pre-test)	34.37	47.92	17.71
Class "observer" (post-test)	22.92	25	52.08

Figure 3. Coaching sequences (%).

class, who displayed a predominantly emotional coaching style. This class also displayed a higher proportion of unrealised coaching than in the 'coach' class (17.71% and 1.04%, respectively). During the post-test, the trend for the 'coach' class was confirmed (the Wilcoxon test accepted the 0.05 threshold for the alternative hypothesis for items 'emotional coaching' and 'adapted coaching': emotional coaching decreased and adapted coaching increased). For the 'observer' class, the Wilcoxon test rejected the alternative hypothesis for emotional coaching and adapted coaching: no significant difference was observed between pre-test and post-test for this class. In consequence, the test accepted the alternative hypothesis for unrealised coaching, which was therefore significantly greater in post-test than pre-test. We can thus conclude that the type of coaching in the 'coach' class was less emotional and more adapted in the post-test than the pre-test, whereas it remained stable for these two items in the 'observer' class, and that the students from the 'observer' class carried out far fewer coaching sequences than the students in the 'coach' class.

Conclusion on motor and non-motor results

The results confirmed our initial hypothesis on the motor level: a dyad in which badminton players cooperate allowed for greater acquisition of motor skills (more frequent strokes hit to the danger zones) for those students who experienced a genuinely collaborative relationship between player and observer. The hypothesis on the non-motor level was also confirmed: this form of practice encouraged greater investment and the development of methodological skills (strategic projects, the quality of observations, carrying out coaching sequences). Thus, the alternative hypothesis H1 was verified: the difference between pre-test and post-test for both motor and methodological levels was greater and more meaningful for the 'coach' class than for the 'observer' class.

Discussion

We developed an original, scholastic form of practice in badminton in order to study the influence of a particular form of grouping on failing students' motor and methodological learning. As all the students had academic difficulties, cooperative learning was initiated in order to help the players to develop and apply strategies and to allow the coaches to play better when they swapped roles for the following match. One problem that we anticipated was that dyad work might be rejected from the start by these so-called difficult students, who would find it pointless to invest in this type of activity in an individual opposition sport. Our results have enabled us to build some knowledge about this.

Investment in the dyad as a condition of non-motor acquisitions in badminton

Many studies have demonstrated the impact of dyad work on cognitive acquisition, under certain conditions. But this still requires that the subjects accept it! The results of our work showed that investment in dyad work in an individual opposition sport like badminton depended on the nature of the dyad. When placed in a dyad with a future opponent, many of the students did not invest in the beginning of the learning cycle. This trend was reinforced by the sixth lesson. But the impact of this type of dyad went beyond issues of investment: it also had an impact on the students' methodological acquisitions. In contrast, when the dyad work allowed both individuals to benefit (as in the 'coach' class), the results showed that the initial investment of the students was greater during the pre-test, and that this investment persisted. The post-test results indicated that the

students in this class acquired methodological skills in terms of strategic thinking, reading the game, and coaching. These developments were significant compared with the results of the pre-test. Similar studies on the impact of the nature of the dyad work are needed in other sports and for other types of class to determine whether our results can be replicated. In any case, it seems clear that the development of a scholastic form of practice in individual opposition sports like badminton in the context of physical education requires reflection on the nature of the dyad. This seems particularly so for failing students. According to Dyson and Grineski (2001, 28), 'Although many physical educators use some form of cooperative learning in their programs, they may not be aware of the elements of cooperative learning that should be considered when designing these activities or of the cooperative learning structures that can assist them in this design'.

The importance of context in relation to the artefact used in badminton

The context was also important in relation to the material artefact used by the students, which was the worksheet on which they transcribed the information on the zones reached by their teammates. The two classes involved in the study used the same material artefact and had the same teacher during the same period of the year. However, the results showed a difference between them concerning their relation to the artefact. For the 'observer' class, the material artefact was rejected early in the pre-test by five students out of sixteen, a trend that was confirmed during the post-test, with nine students who rejected it. All the students in the 'coach' class used it during the pre-test, but with a high number of observation errors and a high standard deviation, which reflected a difference in the quality of the data collection between students. This scholastic form of practice thus facilitated the initial acceptance of the artefact but did not ensure its proper operation. During the post-test, the number of observation errors greatly declined and the standard deviation was reduced, which suggests that the use of the worksheet was generally integrated by the students of this class. The quality of the material artefact is an essential element for an accurate reading of the students' motor activity, but in physical education this artefact cannot be separated from the conditions of its implementation, as we have seen in badminton. Future studies can test this conclusion in other sports or with students without academic difficulties, so as to see possible differences and convergences.

The relationship of motor acquisitions/non-motor acquisitions in badminton

The value that the students attributed to the material artefact seemed to be a condition for its becoming a cognitive artefact. Based on the findings of Norman (1993), Uhlrich (2005) maintained that when the informational and operative structure of an artefact is coupled with both the task and the individual's informational and operative plan, the cognitive abilities of the global human-task-artefact system are increased and improved. Would this improvement in cognitive abilities have an influence on students' motor skills? We found a significant difference between the two classes during the post-test, although this difference was not observed during the pre-test. Our results do not allow us to state with certainty that an increase in methodological skills in the 'coach' class caused this difference, because Sport is a recognised component of Culture, a complex productive activity (Vérillon 2005). We nevertheless believe that this trend should be considered. The motor results of the 'coach' class indicated the students' initial investment and their acquisition of methodological skills by the sixth lesson, which was not the case for the 'observer' class, even though they followed the same lessons. The worksheet used by the students

in the 'coach' class perhaps became a cognitive artefact and thus tended to direct their motor activity, which might explain the difference in results between the two classes regarding motor skills. One of the characteristics of the sport education model (Siedentop 1994) is team affiliation: students become members of teams for the duration of the season and assume the roles of coach, manager, and so on, as well as being players. Our study took advantage of this characteristic in order to increase the effectiveness of the coaching role. In these conditions, we agree with Hastie (1998, 26): 'For students, the benefits of sport education participation include an increased investment in Physical Education, an increased level of learning in games units, and increased opportunities for potentially marginalized students'.

Conclusion

For failing students, the nature of the dyad has an influence on the acquisition of motor and methodological skills in an individual opposition sport like badminton. We demonstrated that adding together the results of a player and a coach has a real influence on their activity and, in particular, on their investment and learning. But these results may also influence the work of physical education teachers as they develop new scholastic forms of practice: in order to ensure that students invest in the observation task, it is necessary to go beyond the form of work often used in physical education ('a player – an observer'). The meaning of observation and dyad work has to be built in physical education, especially for failing students, because it is not something that can be taught, but rather it is a relationship built by the individual (Rochex 1996). This construction can be carried out provided it is guided by the teacher via the development of a scholastic form of practice that creates the conditions for student interactions, in order to 'educate students to be players in the fullest sense, and to help them develop as competent, literate and enthusiastic sportspeople' (Siedentop 1994, 3).

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