

# Learning Volleyball of Forearm Pass in Physical Education and Sports: Students Sporting Preferences and Practices

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## Abstract

In this article, we aim to better understand the experiences of students who struggle in volleyball but succeed in other physical activities. We want to know how they experience this situation and what types of obstacles they encounter. 353 middle school students, through their experiences in physical education and sports, are included in this study. A questionnaire combined with semi-structured interviews was used. Data analysis was performed. The content was categorized. Standard statistical indicators (frequencies, percentages) and the chi-square test were used to analyze the observed student attitudes. The results showed that volleyball is among the students' favorite sports, even though only 7.31% of them play it outside of school hours. The forearm pass is preferred by 34.05% of students, but its learning is characterized by difficulties in five technical sub-elements. It is necessary to promote new, relevant, and effective teaching methods.

## Keywords

Representations, Volleyball, Approach, Learning, Forearm Pass

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## 1. Introduction

The starting point in this article is the lack of enthusiasm among Congolese students regarding learning volleyball (VB). If the practice of this Physical and Sports Activity (PSA), formerly forbidden to girls, has been included since 1970 in the teaching programs of Physical and Sports Education (PSE), the fact remains that it is often reduced in collective consciousness to the practice of sport. Of all the

teaching disciplines, only PE is oriented towards motor acquisition. At the physical, mental, social and emotional level of students, it constitutes one of the bases of the education system (Kangalgil et al., 2006).

Numerous studies have shown that the level of motivation towards Physical Activity (PA) and attitudes towards PSE decrease considerably with the age of students (Aicinema, 1991; Chen, 2001). Moreover, positive attitudes (Subramanian & Silverman, 2007) did not characterize all students as some of them refused to participate or did not appreciate the activity (Carlsson, 1995).

Particularly during adolescence, girls show less and less interest in Physical Education (PE), and more generally in sports (Carroll & Loumidis, 2001; Cogérino, 2005). They are, moreover, more often in difficulty than boys in this discipline. This is why the representations that students have are important, because they promote the appropriation of motor skills or, on the contrary, hinder them (Abric, 1987), hence it is fundamental to know and understand them within the framework of our research work which was carried out in Brazzaville. This work allows us to understand the sporting preferences and attitude in the practice of Physical Activity (PA) among middle school students when learning the volleyball forearm pass in PSE. We considered it necessary to also understand the experience of students in difficulty in PE, particularly during the teaching of the volleyball forearm pass by analyzing in a learning situation the relationship to understand the effects of the practices proposed in order to highlight the conflicts that they overcome.

## 2. Theoretical Framework

In this study, Sensevy's (2007) theory of joint action was used. The choice of this model is justified by the fact that the triadic didactic relationship is formed by knowledge, the teacher and the students (Attiklemé et al. 2014). As a result, the didactic relationship reflects a new observable, the joint action of the teacher and students (Sensevy & Mercier, 2007) is characterized by two unique dimensions: teaching and learning (Sensevy, 2007: p. 17). It is a model which immediately establishes the need to think together as a couple, the action of the teacher and the students in didactic terms. This model allows us to understand the concepts: didactic contract and the environment; mesogenesis; chronogenesis and topogenesis; definition, devolution; regulation and institutionalization. These different concepts, in fact, make it possible to highlight the elements of genericity and specificity in teaching/learning of volleyball.

## 3. Methodology

### 3.1. Type, Framework and Sampling of the Study

To carry out this exploratory work we are interested in 3rd third grade students, with an average age of 15.50 years old from four middle schools in Brazzaville. During the school year, we made contact with the heads of establishments who agreed to receive us and presented our objectives to them. Once the students were chosen, we agreed to conduct our study during the volleyball cycle.

We first carried out systematic random sampling which consisted of repeating at random (drawing lots) the subjects who make up the sample. Subsequently, we defined the sample size of each class retained for the study by calculating the percentage of classes in relation to the reference population. At the end of this process, 353 students were selected, including 204 boys (57.79%) and 149 girls (42.21%). The inclusion criteria for the study were: parental and individual consent of the student; regularity in PSE lessons, having answered all the questions and returning the questionnaire.

Were excluded from our study:

- any student who has not responded and returned the questionnaire;
- all students not enrolled in 3rd third grade.

### 3.2. Tools and Data Collection

The questionnaire and the interview were the instruments used. This was an anonymous questionnaire, which was used to record or produce the relevant data necessary to verify our hypotheses. It included 6 sections, divided into 3 types of questions: dichotomous or closed, open and multiple choice questions. Section I related to the socio-demographic characteristics of the respondent, section II on sporting preferences and practices, considering that students' attitudes and their involvement in learning PSA programmed in PE are influenced by their sporting preferences (Arabaci, 2009) and PSA practiced extra-curricular (Gil-Madrona et al., 2012). The items on the sports preferences of the students surveyed were inspired by Zeng et al. (2011). Responses to these items were based on a 5-point Likert-type descriptive-numerical scale: 1, strongly disapproved choice to 5, strongly approved, i.e. a total score ranging from 5 to 25 points. A score of 5 indicated a completely unwanted choice, and 21 - 25 a strongly desired choice. The preferred sports were also classified by type of practice in accordance with the classification by certain authors such as Shton (2009). Section III concerned participation in PSE lessons, while section IV concerned the place of the forearm pass in the teaching of volleyball. Section V was devoted to students' knowledge and opinions on the factors for successful execution of the forearm pass. Finally, Section VI focused on the strategies for teaching the headline forearm pass.

The questionnaire was administered within the premises of each selected establishment, during the PSE class (hours devoted to PSE). They then had 15 minutes (estimated time necessary, checked during the pre survey), to complete the distributed questionnaire sheet. For them, it was a matter of answering all the questions asked. Communication between students was prohibited. We explained to the students that it was anonymous, and that they should not hesitate to check off an item that they felt/did not feel they/did not understand.

We used semi-structured interviews in accordance with the recommendations of Creswell (2009) on surveys with adolescents in order to analyze the students' representations in more depth and to be able to formulate an explanatory hypothesis. The objective was to identify the processes which structure the representa-

tions of the students in the context of learning the forearm pass during the volleyball cycle and which give meaning to the situations experienced by the students. We questioned the students about how they experienced the volleyball lessons and interpreted the situations proposed. We have distinguished 4 main sections: 1) the relationship with oneself (What would you like to do during the forearm pass lesson? What do you know how to do?); 2) the relationship to knowledge (What is there to learn? What have you learned?); 3) the relationship to learning (How do you learn? ...) and 4) the relationship to the proposed tasks (Under what conditions did you learn?). After a simple draw from a class within an establishment where volleyball was taught, the meeting with all the students in the class took place before the volleyball cycle began. Thus, the interviews were carried out after the cycle carried out with 12 students to whom the forearm pass had been taught in the volleyball cycle. This selection was based on a non-probabilistic approach. The technique used was then that of reasoned choice. As the students were minors, parental consent was obtained.

### 3.3. Statistical Analyzes

Data entry and statistical analysis were performed using the Statistical Package for the Social Sciences Program (SPSS), version 16.0 (Chicago. IL). Data were presented using means and standard deviations, frequencies and percentages according to the type of variable. The chi-square test was used to compare the categorical variables studied between middle school students, with p values less than 0.05 to indicate statistically significant differences.

## 4. Results (Tables 1-5)

**Table 1.** Frequencies and ranks of the main PSA preferred by students.

PSA	Frequency	Percentage	Rank
	n	%	
Football	97	50.08	1
Basketball	45	22.06	4
Volleyball	60	35.01	2
Handball	32	17.49	5
Judo	13	6.91	6
Boxing, Karate	7	3.62	8
Taekwondo	6	2.94	9
Gymnastics	44	29.16	3
Sprint Running	7	4.10	7
Swimming	2	1.19	10

**Abbreviations:** PSA, Physical and Sports Activity.

**Table 2.** Frequencies and ranks of the main PSA practiced by the students.

PSA	Fréquency	Percentage	Rank
	n	%	
Football	42	38.53	3
Handball	34	48.3	1
Volleyball	13	14.62	4
Judo	8	8.24	7
Basketball	10	10.08	6
Karate	11	10.10	5
Athletics	7	7.32	8
Gymnastics	27	45.52	2
Taekwondo	5	4.56	9
Judo	1	1.82	10

1) Volleyball occupies second position among respondents in terms of preferred PSA (35.01%). 2) Among the PSA practiced extracurricularly, volleyball ranks 4th (14.62%).

**Table 3.** Distribution of student responses according to age group to the question “in volleyball, what is the move you like to make the most?”

PSA	Frequency	Percentage	Rank
	n	%	
Football	42	38.53	3
Handball	34	48.3	1
Volleyball	13	14.62	4
Judo	8	8.24	7
Basketball	10	10.08	6
Karaté	11	10.10	5
Athlétics	7	7.32	8
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Taekwondo	5	4.56	9
Judo	1	1.82	10

The forearm pass was the preferred technical gesture in volleyball for 31.86% of boys and 36.24% of girls, a frequency which varied negatively with age.

**Table 4.** Logistic analysis of the interaction Sports practice x difficulties in learning of the forearm pass among boys involved in sports during the volleyball cycle.

	B	SE	exp(B)	P	IC (95%) for exp(B)	
					Terminal lower.	Terminal Upper.
Team sports	0.524	0.318	1.812	06	0.512	2.180
Individual sports	1.240	0.412	4.520	0.06	1.321	5.312

**Continued**

Duel and combat sports	1.127	0.689	3.087	0.001	2.415	9.106
Difficulties learning of the forearm pass	2.185	0.689	8.893	0.002	2.402	11.176
Sports practice × difficulties learning of the forearm pass	0.630	0.259	0.533	0.015	1.693	4.273

**Abbreviations** B, SE, exp (B), P, IC.

Boys who played team sports were less prone to learning difficulties than the others [ $\exp(B) = 1.812$ ;  $B = 0.524$ ;  $p > 0.05$ ]. This observation was not found among girls: it rather emerged that girls who were fond of recreational physical activities were more prone to difficulties when learning to use the forearm pass.

**Table 5.** Logistic analysis of the interaction Sports practice x difficulties in learning the forearm pass among sports-loving girls during the volleyball cycle.

	B	SE	exp(B)	P	IC (95%) for exp(B)	
					Terminal lower.	Terminal Upper.
Team sports	0.397	0.286	1.487	0.165	0.849	2.605
Individual sports	-0.163	0.223	0.849	0.464	0.549	1.315
Duel and combat sports	-1.012	0.540	0.363	0.061	0.136	1.047
Recreational physical activities	0.626	0.318	1.871	0.049	1.003	3.490
Difficulties learning the forearm pass	0.794	0.366	2.213	0.030	1.053	2.647
Sports practice × difficulties learning the forearm pass	-0.630	0.259	0.512	0.012	0.393	1.816

**Abbreviations:** B, SE, Exp (B), P, IC.

### Content of Students' Speeches

Deciphering the interviews with the students reveals the conflicts they faced while learning of the forearm pass. The data also highlights the processes that were at play in the failure of these students.

What emerges from the reality of the experience of twelve students having difficulty learning volleyball is firstly the conflicts to be overcome. Here we only paint a portrait of the reality of the experience of two students in volleyball (participant 1 and 2). To illustrate the conflicts or dilemmas they face, we cite a few extracts from the self-confrontation interviews. What they did not know how to do, it emerges from the experience of these students that it was the fact that they were convinced that they were bad at volleyball:

*I'm bad and I don't like it, so... (participant 1),*

and that they could, therefore, not do what was expected of them:

*I missed it, but I couldn't have done otherwise, I can't do it (participant 2).*

Thus, playing volleyball meant for them having to do what they did not know how to do and therefore being faced with the impossibility of succeeding. The meaning of this type of behavior can be found in the theory of didactic transposition, notably developed by Chevallard, to analyze how a teacher manages classroom space and knowledge. Thus, for the teaching/learning of the forearm pass in volleyball, the didactic analysis via mesogenesis, topogenesis and chronogenesis is very relevant, because the success of this technical gesture depends a lot on the adaptation of the environment and the management of roles and the temporal progression of knowledge.

When it came to what they couldn't stop doing, having been in difficulty for a very long time, they felt incompetent and above all incapable of considering other possibilities. Without any control over their activity, they did what they could not help doing: standing still without moving or blocking a ball, for example. Everything happened as if reality imposed itself on them and they acted without wanting to:

*Well, I can't, it's systematic, I can't... as soon as there's a ball coming at me, I stop it straight away, I... I don't try to throw it back. Well, for me it's... it comes by itself, it's... it's systematic (participant 2).*

Since they would never succeed in doing so, we understood that it would be in vain for them to try to change the course of things. Nothing and no one could achieve this, not even their teacher. It was, therefore, useless to persist:

*The PSE teacher also annoys me. He always forces me to do something that I don't want to do or that I can't do instead. Because if I don't succeed, too bad, I can't do it, that's... I'm not going to beat myself up. I have already tried many times with my father to play volleyball but I never succeeded, so it discourages me and then, well too bad... (participant 1).*

Having given up on progress, they had resigned themselves to being what they thought they were: incompetent volleyball students, who there was no point in asking to do what they would never be able to do:

In any

*case, on my own, I wouldn't have succeeded either, so... (participant 1).*

As for what they would never do like the others, this characteristic that characterized them made them students different from the others. At least, that's how they saw themselves. They couldn't manage to do like the others:

*Actually, I don't throw the ball very well. But I never do it like them, I mostly do it like that (participant 2)*

Playing volleyball, for them, also means accepting that they can't be like the others:

*Me, I can't at all [...] get (the ball) on my fingertips there. There are plenty who manage, but I can't do it at all (participant 1).*

Because of what they did to avoid being seen, almost ashamed of their incompetence, they had the greatest difficulty facing the gaze of others and therefore did everything to avoid being seen:

*I m often on the ends of the court so that people don't see me because I m not very... so if they also show me... (participant 2).*

From this arose in them a feeling of exclusion that was likely very painful, especially since it was accompanied by the feeling of not being loved, of not being accepted. The students thus repeatedly and forcefully expressed the difficulty they had in enduring the gaze of others, their criticism, their mockery, especially that of the boys, and the pretenses they said they were subjected to:

*When I played, they didn't like it because I lost or things like that... and then when the teacher came, they would say: oh yes, but we like participant 1 when he plays! All that..., but they're real hypocrites (participant 1).*

As for what they would like to do elsewhere without others, it was a matter of hiding, seeking to eliminate the leads to isolation and avoidance of others, and imagining other possibilities. The students dreamed of what they could do elsewhere, without others. This is what Gloire expressed, for example, when he saw himself being left out, playing alone with his ball, while the others played collectively:

*I was thinking about something else, so well, it's better than being with the others, as long as I was alone, I was calm (participant 1).*

Regarding what they would like not to have to do, they repeated that it was playing volleyball. Ultimately, for these students, having to do what they didn't want to do:

*I didn't want to play (participant 2);*

*I didn't find it interesting (participant 1);*

*I would have preferred to be excused, [...] I would have liked not to be there (participant 1).*

Regarding how the students experienced the volleyball lessons and interpreted the situations presented by the teacher, the interviews revealed that 11 out of 12 students (91.7%) felt they had not progressed during the lessons because they felt incapable due to their low aptitude. Furthermore, for 83.3% of the subjects (n = 10), relationships with their classmates were not good regarding their performance, which made them the laughingstock of others. Finally, according to the overall responses, they did not really know what there was to learn during the lessons.

## 5. Discussion

This study was initiated, firstly, to examine how Congolese middle school students engage in learning the game of volleyball during volleyball instruction, and secondly, to identify and analyze their representations, attitudes, and the overall meanings around which their learning is organized. The results obtained essentially show that students' engagement in volleyball was related to their preferences

and their extracurricular sports experiences, for some of them.

### **Preferences, Sports Practices, and Student Representations**

In view of the results on sports preferences, we can say that the selection of football, basketball, volleyball, handball and judo by our boys studied among the flagship sports disciplines is consistent with the observations of other studies (Zeng et al., 2011; Hill & Hannon, 2008; Hill & Clevon, 2005). Regarding the APS practiced by our students, it appears that team sports were practiced more by boys than by girls, even if the trend remained. In the United States of America, Song et al. (2015), based on data from the Nutrition Youth Physical Activity and Nutrition Survey (NYPANS) conducted in 2010, examined the sports practiced by 1300 students aged 12 - 15 years in secondary school. They noted the predominance of team sports, with 7 favorite sports: for boys, basketball, football, baseball, soccer, volleyball, frisbee and tennis; for girls, basketball, volleyball, soccer, softball, tennis, rollerblading and football. They practiced them extracurricularly in the evenings and on weekends. This craze is linked to the sociocultural characteristics of team sports (Coakley, 2017). In another study including 5000 middle and high school students from an urban area in the United States, the preferred sports practiced were also team sports, followed by fitness maintenance and fitness sports, individual sports, dance, cooperative games and swimming (Couturier et al., 2005). In the same vein, Hill & Clevon (2005) noted among students from 6 middle schools in southern California a predominance of the practice of 4 team sports: basketball, football, volleyball and baseball. The reasons for choosing these activities in the aforementioned American studies are multiple. Indeed, these activities are considered common in American society and students may have chosen them because they are more familiar with them (Coakley, 2014). Students may also have chosen them because of the availability of equipment, facilities, instruction and previous participation.

The low ranking of handball among team sports in our study may be due to a lack of exposure to them, as they were not included in any of the PE programs in the selected schools. Furthermore, it is interesting to note that in the United States, students from mixed classes are more numerous in recreational activities such as swimming, skating, table tennis and volleyball. Each of these activities is non-contact and social in nature. These results suggest that students may find recreational activities more enjoyable and socially stimulating when both sexes participate (Hill & Clevon, 2005). Given the importance of recreational activities as activities associated with healthy living, the results of these studies seem to highlight the benefits of mixed grouping in these activities. Furthermore, a majority of girls choose volleyball and gymnastics, while fewer boys opt for these activities. This may be justified by the fact that these activities are perceived by boys as being of a female (Kovar, 1996). Furthermore, none of these activities involve physical contact. Sports that are chosen by a higher percentage of boys (soccer, hockey, and fencing) involve physical contact and are inherently competitive in nature (Kovar

et al., 2001; Napper-Owen et al., 1999; Prusak & Darst, 2002).

In our sample, it is interesting to note that boys are more likely to choose soccer than girls, even though it is considered a competitive sport. The low appeal of soccer to girls may be related to sociological factors, as interest in soccer is traditionally followed by that of other women's team sports such as handball and basketball. The popularity of football among boys is certainly due to the high participation rates of such subjects in men's football in mwana foot tournaments (cadet division) and the high media coverage of Champions League and Europa League football matches. As for girls, they are likely to choose skipping rope and aerobic dancing. These activities have the natural advantage of working on balance and aerobic endurance, which could be implemented by PE teachers and educators from kindergarten onwards (Faucette et al., 1995). The absence of mentions of aerobic gymnastics among girls' favorite sports is surprising. Indeed, its choice should correspond to that of women who attend fitness clubs, as noted by Moulongo et al. (2019). This activity is offered in our settings in a cooperative format; therefore, it can be considered primarily social in nature (Lirgg, 1994).

However, we can deplore a limited range of choices of favorite sports (team sports: football, handball, basketball, volleyball, and soccer; individual sports: gymnastics, swimming, athletics; combat sports: judo, karate, taekwondo, boxing).

Team sports are the participants' first choice, individual sports the second while combat sports occupy the third place. The low percentages of response in the practice of combat sports among boys can be attributed to their absence in the cyclical programming of PSA within the establishments selected in the study. Indeed, if judo appears in the book-program of PE teaching in Congo, no establishment includes it in its annual activities for reasons inherent to the equipment, infrastructure and the lack of qualification of teachers in the discipline.

Recreational activities (ndzango) occupy the third place among girls. These results suggest that our subjects engage in this practice with appetite for socialization reasons. This activity is rather perceived as feminizing by boys, thus explaining its rejection in the male juvenile environment. However, in the didactic transposition of Congolese culture, ndzango could move from the neighborhood to the schoolyard; at the moment, the teacher defines formal evaluation criteria for a historically informal practice.

As for volleyball, it occupies third place among boys and girls. No plausible explanation can be provided to justify this trend in the present work; However, one would be tempted to blame the search for competition as Prusak & Darst (2002) suggest. Our findings could also be attributed to the influence of three factors: a) the state of the colleges' facilities and equipment; b) the college's tradition and the teachers' skills; and c) boys' preference. This corroborates Sensevy's (2007) theory that the learning situation corresponds to the environment. It is necessary to ensure that the environment is conducive to fostering learning or engagement with learning.

According to informal interviews with the principals of these colleges, not all of these establishments had facilities and equipment for team sports (except for a makeshift football pitch), and equipment for individual sports. Moreover, no principal claimed to have at least one team sports team within the establishment. Recreational physical activities include ndzango; no notification is made to dance. Talking about informal interviews with the heads of PE departments in these middle schools, the preferences of these students could be attributed to the disinterest of the departmental PE authorities, the traditional activities of the middle school, the influence of the expertise and preferences of PE teachers, the classroom environment and the socioeconomic background of the student. For example, children from disadvantaged backgrounds like and are good at team sports and combat sports (Loufoua-Lemay & Massamba, 2014), advantaged children enjoy and are good at ball sports.

Our findings are consistent with the observations of Hagger et al. (2002), suggesting that students are likely to become more positive about physical activity if they are in a learning environment that makes them feel comfortable and confident (Hagger et al., 1995). According to sectoral sports inspectors in Brazzaville, since 2012, sectoral PE inspections have provided a wide range of sports and physical activities for which students were likely to make a choice, participate, and induce learning in an environment that can make learners feel comfortable and confident. Regarding the differences noted between boys and girls in preferred sports, our results are consistent with studies reporting that boys have more negative Attitudes Towards Physical Activities and Physical Education than girls (Subramaniam & Silverman, 2007; Koca, Asçi, & Demirhan, 2005; Parkhurst, 2000). These studies suggest that girls' sport preferences are motivated by the aesthetic aspect of the sport characterized in its execution through beautiful and graceful movements (dance and gymnastics), girls demonstrate more positive Attitudes Towards Physical Activities and Physical Education than boys.

The five technical elements that constituted obstacles to learning the overhand pass were, in descending order of importance: adopting the outstretched arm position (80% of mentions), forming the contact plate (77.89%), correct ball orientation during the return (74.74%), receiving the ball on the inside of the forearms (73.68%), leg push (71.58%), and forming the arm-torso angle (68.42%). The frequency of negative mentions increased with age in both sexes. In total, 83.38% of the students surveyed – approximately 4 out of five students – were experiencing learning difficulties; - Executing the ball overhand proved to be quite difficult for 77.25% of students who had received lessons on the ball overhand in PE, an observation more common among girls and younger subjects. Among the latter, the five technical elements cited as difficult were, in descending order of importance: ensuring the ball was correctly oriented when returning the ball, executing the leg push, keeping the arms straight, forming the contact plate, and catching the ball on the inside of the forearms.

In contrast, other studies on children's attitudes toward physical activity have

found more positive attitudes among boys toward difficult physical activities involving risky elements (Smoll & Schutz, 1980).

The regularity of our respondents in PE classes was much higher among boys than among girls. Elsewhere, the situation is worrying, particularly in the Americas. For example, Dwyer et al. (2006) reported that regularity in PE classes in Ontario, Canada, declined from 98% in Grade 9 to 49% in Grade 10. This is similar to the decline observed in the United States, where average weekly PE class attendance declined from 71% in Grade 9 to 36% in Grade 12, while less than 35% participate in PE in all secondary classes in some regions of Brazil (Tassitano et al., 2010). In Canada, a 4% decline in participation among students aged 15 to 19 was reported from 1992 to 2010, while this decline was 17% across all age groups. However, such an assumption deserves to be verified. Indeed, when students talk about volleyball, they provide more specific answers: the teacher wanted to teach them technical and tactical elements: how to adopt the basic stance (Interview with part 3), cushion the ball with the inside of the forearms (participant 1); they also tried to replicate what the teacher demonstrated (participant 2).

Considering the knowledge targeted by the teacher (learning basic technical skills), perhaps ultimately, it is not so much in the misunderstandings as in what there is to learn that we should look for obstacles to learning?

Our results regarding the epistemic dimension of the relationship to knowledge, however, put into perspective the effect of students' relationship to knowledge and learning in physical education on their engagement (Charlot, 1997). We believe, in fact, that for these students, this aspect is not decisive. Even if education through learning volleyball is not essential for them, they still want to succeed. Moreover, they generally understand the teacher's main expectations and know that success requires repetition.

## 6. Conclusion

The problems associated with volleyball teaching have proven alarming and require serious attention to achieve the sole objective of linking sports preferences and practices with the development of students' physical and psychomotor qualities. The study conducted provided insight into the fundamental conflicts faced by students, which affect development and continue to be one of the obstacles to the continued progress of PE teaching. It made it possible to identify some challenges faced by students. Consequently, a preference has been observed among some participants for certain PSA such as football, handball, basketball, etc. It is necessary to create a conducive environment during PE learning among middle school students. Thus, the fact that students practiced PSA and used field knowledge makes learning conducive. Since motivation is a key element in engagement and learning, all the determining factors of the success of the execution of the forearm pass should therefore be taken into account to achieve higher levels of student participation and achievement. Further studies on student engagement in PE and learning the forearm pass should be undertaken, as they are necessary.

Also, it is important to include all secondary school students (middle and high school students).

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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