## Original Research

# Motivation and likes of high school students towards physical education class． 

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#### Abstract

The experience and knowledge that students have about the teaching process， interaction in the class，and their motivation toward physical education influence their attitude and learning at school．This study investigated the likes，motivation，and attitudes of students toward physical education and the practice of sports outside class．A mixed method research was used to conduct the study，which included qualitative and quantitative techniques．We worked with a sample of 2550 students from ninth and tenth grades of public schools in the nine subregions of the Department of Antioquia（Colombia）．The qualitative data were analyzed through open coding using ATLAS．ti，and the quantitative data were analyzed with SPSS．The results showed that $83.5 \%$ of the respondents really liked physical education．They like the class because of the practice and learning of sports，the possibility of improving their physical condition，the games，the break from other school subjects，the learning of values，and the attitude of the teachers．On the other hand， $88.4 \%$ of the respondents said that they play sports outside class．


Keywords：Student thinking；student attitude；pedagogical research
classroom（Pérez，1992）．In this sense，

## 1．Introduction

The scarce conceptual development and the weakness in the studies about teaching，developed through the process－ product model，allowed the reflection of other investigations from mediational models since they did not allow understanding the reality of what happens in classrooms（Henrique，2004）．Hence，the mediational model poses the teacher and the student directly responsible for life in the
the teacher is an＂active and creative subject whose thinking influences and determines his behavior，consequently having a transcendental impact on teaching＂（Díaz， 2001，p．63）．On the other hand，students＇ knowledge and experiences about teaching， classes，learning，and motivation are fundamental and influence their attitude and performance in school（Lee \＆Solmon， 1992；Wittrock，1990）．In other words，the mediational paradigm admits a relationship
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between the teacher and the student's actions during the teaching and learning process (Coll, 1995). Therefore, the study about the attitudes, beliefs, motivation, and perceptions of students towards the subject of physical education (PE) has been a topic that interests teachers and researchers ( Gaviria \& Castejón, 2016b; Bibik et al., 2007; Carcamo-Oyarzun et al., 2017; Carreiro da Costa, 2008; González et al., 2021; Henrique, 2004; Hernández \& López, 2007; Kawashima, 2008; Moreno, Hellín \& Hellín, 2006; Muñoz et al., 2019; Murcia \& Jaramillo, 2005; Sicilia, 2003; Zueck et al., 2020). Studies like the ones mentioned start from student thinking and help to know and understand the motivation and attitudes that students experience towards PE.

Research has shown that greater satisfaction with PE encourages students to value and give importance to their training, strengthening motivation to practice physical activity (PA) and sports outside of school, and showing a positive attitude toward the PE class (Franco et al., 2016; Gråstén et al., 2012). In this sense, RibeiroSilva, Contreras and Mendes (2020) suggest that a well-planned PE class constitutes a remedy for student inactivity, as long as they feel that they are learning and understand the value of that learning for their life, thus finding the reason and motivation to participate in the subject.

Research on motivation has been a topic of great interest in the school context since it is considered a determining factor for student participation in classes (García \& Baena-Extremera, 2017; Moreno \& Cervelló, 2004; Tapia, 2005). According to Florence (1991), "awakening or reinforcing
motivations for the learning that we want to promote must be considered as true teaching objectives" (p. 26). The author proposes a relationship between motivation and a positive attitude in students. In this sense, "a motivated student is more active and cheerful in classes, perceiving them as more exciting, fun and useful, and attending them with greater interest and a critical spirit" (Cabello et al., 2018, p. 19). Therefore, it is necessary to investigate the factors such as teacher's behavior, the contents, the educational conditions, the classroom environment, the evaluation, the methodology, among other factors that can influence the motivation and positive attitudes of students towards PE class ( Gaviria \& Castejón, 2016a; CarcamoOyarzun et al., 2017; Moral-García et al., 2019; Moreno et al., 2005).

On the other hand, the attitude involves a person's thoughts, beliefs, and feelings concerning people or concrete realities, which lead people to behave in a certain way in the face of concrete facts or life in general. According to Bolívar (1992), attitudes can be indirectly measured, observed, and modified; hence, the importance of knowing and understanding them in the educational context. From an educational point of view, at school, one can modify students' attitudes, bearing in mind that when one wants to consolidate or change these attitudes, one must influence the affective, cognitive, and behavioral elements (Prat \& Soler, 2003). That is why, from how students perceive their daily experiences in class, beliefs, perceptions, or evaluations about the subject will be created, influencing how they assume and live the corporal practices inside
and outside the school (Silverman \& Subramaniam, 1999). According to Hopple and Graham (1995), when students positively value PE classes' experiences, they will have a better disposition for the subject; it may even happen that they seek to repeat that experience, contrary to the negative experiences.

Studies concerning attitudes in PE have identified determining factors when it comes to forming positive or negative attitudes in students (Gaviria \& Castejón, 2016; Bibik et al., 2007; Cuevasa et al., 2012; Gutiérrez, 2017; Luke \& Sinclair, 1991; Moreno, Hellín \& Hellín, 2006; Zeng, García \& Villalobos, 2011). These investigations have found that the contents, the teacher's behavior, the classroom environment, the relationships between teacher and students, the didactic materials, the physical spaces to practice PE, the characteristics of the student (age, gender, sports ability), the repetition of the curriculum, the social context, among other issues, are determining factors in the beliefs and attitudes of the students towards PE, sports and PA. When students have positive attitudes towards the factors mentioned above of the PE class, this leads them to be intrinsically motivated to participate in PE, sports and PA outside of school (Rubio et al., 2019; Zeng et al., 2011).

Within the problematization of this study, it was intended to inquire about what the liking, motivation and attitudes of students towards PE class were, what they liked the most and what they did not like about the subject, to know their sports practices outside of school and its relationship with the liking for PE. It is important to note that Colombia does not
have a national law that determines an official curriculum for all areas in educational institutions. In this sense, it is crucial to study this issue, given that in the country, there are few studies related to research from the approach of student thinking in primary, secondary, and media education (Gaviria \& Castejón, 2016, 2018; Hurtado \& Jaramillo, 2008; Jaramillo \& Hurtado, 2006; Murcia \& Jaramillo, 2005). Thus, it is relevant to gather information about the contribution of teaching research from students' thinking, its contributions to the improvement and transformation of the teaching practice, PE curricula and programs, and student participation in the subject.

## 2. Materials and Methods

Participants and Setting - This research was carried out with 2550 students from ninth and tenth grades of public schools of the nine subregions of the Department of Antioquia, Colombia, during the second semester of 2019. A total of 1472 students voluntarily responded to all the data collection instruments, without the use of probabilistic sampling. (57.5\%) were girls with a median age of 15.0 (IQR 1.0) years and 1078 ( $43.3 \%$ ) were boys with a median age of 16.0 (IQR 1.0) years. The total population of ninth and tenth grades in Antioquia in this period was 62980 students. The selection of students in these grades obeys to qualitative criteria (Goetz \& LeCompte, 1988), which are justified in the time of experience of compulsory attendance in the PE class (two hours a week, according to the educational system in Colombia. Ninth grade corresponds to
the last year of Basic Secondary education; tenth grade corresponds to the first of the two years that make up the Media education, which ends with the High School Graduate diploma. Likewise, given the characteristics of these students, it can be thought that they have sufficient capacity for discernment, mastery of ideas and language to express their thoughts, opinions and experiences without difficulty, regarding the topics of interest for this research.

The Research Ethics Committee at the University of Antioquia's Institute of Physical Education and Sports granted endorsement to the project through Minutes 054 , dated February 19, 2019. The students were contacted through their teachers and voluntarily agreed to participate after receiving authorization for the directors of each educational institution and with the consent of their parents, who reviewed and granted permission for the students to participate in the study, once the objectives of the research, the right to confidentiality and the treatment of individual data, among other ethical aspects expressed in the Informed Consent, were understood.

Design and Data Collection - This study used qualitative and quantitative methods for the design, collection and analysis of the information; therefore, it is conceived as a mixed-research design of a convergent parallel type, which - by including both types of data - achieves a greater understanding of the phenomenon under study (Creswell, 2012). The information on the liking for the PE subject, the practice of sports or PA outside of school, the type of sports activities carried out outside the PE
class and the weekly time invested in them was collected through structured multiplechoice questions. In addition, the factors that intervene in attitudes, liking, and motivation towards the PE subject by students were investigated, which were addressed through open questions included within the questionnaire proposed and validated by Gonçalves (1998), which contained the previously mentioned aspects and other issues that will be discussed in another article. This questionnaire was drawn up in Google Forms and sent to the teachers in charge of each educational institution, who took their students to the computer rooms to fill out the survey; in other cases, the printed surveys were sent by mailed to the subregions that reported having connectivity difficulties. It was confirmed that each student completed all the requested information only once. For the quantitative analysis, the IBM SPSS Version 25 program was used. The results are shown in frequencies and proportions discriminated by sex, and whether or not they did sports or physical activity outside of school The chi-squared test ( $\chi 2$ ) and Cramér's V were used, establishing statistically significant differences ( $\mathrm{p}<0.05$; $\mathrm{p}<0.01$ ). To describe the age variable, the median and IQR were used, given that when evaluating its distribution with the Kolmogorov-Smirnov test the result was non-normal ( $\mathrm{p}<0.05$ ) in both sexes. The determination of the age difference by sex was carried out with the Mann-Whitney U test. To correlate the age variable with the liking for the PE class, the Spearman's Rho test was used.

For qualitative analyses, the ATLAS.ti Version 7 program was used, which allowed the data to be grouped, and the categories and subcategories identified based on open coding or inductive analysis. According to the research objectives, categories were considered in relation to educational conditions, personal thoughts about the subject (didactic process, liking, learnings) and perception about the PE teachers. Codes were used to identify the testimonies of the students and guarantee their confidentiality. The letter C refers to the instrument used, the letter E to the student, the letter G to the analysis category.

## 3. Results and discussion

For a better understanding of the information found in the study, it was considered useful to show the results, the analysis and the discussion together, to better verify what we have achieved and how it differs from or equals the research reviewed for the study.

Regarding the liking for the PE class according to sex, statistically significant differences can be observed between boys and girls ( $\chi 2=32.676 ; \mathrm{df}=4 ; \mathrm{p}<0.01$ ) with a small association (Cramér's $\mathrm{V}=0.113$; $\mathrm{p}<0.01$ ) in the categories "I like a lot", "I like it", and
"I like the PE class more or less" ( $\mathrm{p}<0.05$ ), where there are greater proportions in girls than in boys for the categories "I like it" (702 vs. $425-47.7 \%$ vs. $39.4 \%$, respectively), and "I like it more or less" (192 vs. 112 - 13.0\% vs. $10.4 \%$, respectively). In the joint analyses of boys and girls, 2,129 (83.5\%) describe that they like the PE class a lot (including the category "I like it"); 71 (2.8\%) say they like it a little bit and 46 (1.8\%) do not like it the PE class (Table 1). When grouping the categories "I really like the PE class" and "I like the PE class", it was possible to identify that $917(85.0 \%)$ of boys agree with these statements and, in the case of girls, 1,212 ( $82.3 \%$ ), with no differences between sexes ( $\mathrm{p}=0.07$; Confidence Interval (CI) 95\% -0.00 to 0.06). When investigating the reasons for liking PE class, the students stated that they like the practice and learning of sports; the possibility of improving their physical condition; knowing their body; games, rest, recreation and fun fostered within the school monotony; the scenarios or practice spaces; the learning of values, such as integration, teamwork and sharing with classmates; the class climate; the methodology and the teaching of the teachers. In this sense, some testimonies from the students can be seen in Table 2.

Table 1. Liking the PE class according to sex.

|  | Boys, n (\%) | Girls, n (\%) | Difference \% (CI 95\%) | Total, n (\%) |
| :--- | :--- | :--- | :--- | :--- |
| I like it a lot | $492(45.6)$ | $510(34.6)$ | $11.0(0.07-0.14)^{*}$ | $1,002(39.3)$ |
| I like it | $425(39.4)$ | $702(47.7)$ | $8.3(0.04-0.12)^{*}$ | $1,127(44.2)$ |
| I like it more or less | $112(10.4)$ | $192(13.0)$ | $2.6(0.00-0.05)^{*}$ | $304(11.9)$ |
| I like it a little bit | $31(2.9)$ | $40(2.7)$ | $0.2(-0.01-0.01)$ | $71(2.8)$ |
| I don't like it | $18(1.7)$ | $28(1.9)$ | $0.2(-0.01-0.00)$ | $46(1.8)$ |
| Total | $1,078(100)$ | $1,472(100)$ |  |  |

[^0]Table 2. Determinants for liking the PE class.

| The practice of different sports; the union of the group when we practice them. C.E.G.180. | Distracting myself from the theoretical class and going to play sports. C.E.G. 1323. |
| :---: | :---: |
| The different sport we play and what they teach us about sports Theory, etc. C.E.G. 243. | The integral and formative development among all my classmates and teacher. C.E.G.697. |
| We do physical activity very attentively; we practice all kinds of sports and, increasingly, we know more about what we did not know. C.E.G.435. | Sharing with my classmates, with my teacher and learning new sports. C.E.G.1154. |
| It helps us with our physical conditioning and our body. C.E.G.96. | The way they teach us to do the exercises. C.E.G. 248 . |
| It creates a recreational, social, communicative environment and that teamwork is usually used a lot, creating friendly bonds. C.E.G.142. | ...the classes do not become monotonous; there are always new activities; you can see the effort of the teacher when it comes to explaining each topic, sport or activity. He always tries to make sure the student learns, knows and has fun. C.E.G.657. |

The different activities are recreational and very playful.
C.E.G.1006.

The recreation we have when we all play together. We always vary activities and we have very dynamic C.E.G.2055. classes. C.E.G.783.
One is not always in the same classroom routine but When we go out for a walk through different parts of the doing something different. C.E.G.2066. municipality. C.E.G.717.

In this same sense, Alcaraz-Muñoz, Alonso, and Yuste, (2017), Chaverra, Moreno and Pèrez (2021); Courturier, Chepko and Coughlin (2005), Jaramillo and Hurtado (2006), and Romero-Chouza, et al. (2021); found in their studies that students liked PE class for the possibility of improving aspects related to health and physical condition; likewise, having fun, getting out of the school routine, changing class space, working outdoors and playing sports are the motivation to have positive attitudes and motivation towards the subject.

It can be said that the motivation and attitude of the students towards the subject is related to the possibility of having fun,
playing, practicing sports and integrating and sharing with classmates. In relation to this last motivational factor, it is important for teachers to generate conscious motor experiences, oriented towards the formation of values; PE as a strategy for the development of human values and capacities in our context can be a change in the way of thinking and doing PE in school, in the way teachers and students, students and students, relate to the environment and with himself. According to Zueck et al. (2020), "teachers must be sensitive to the pleasant and positive emotions of students and propose varied, motivating practices that provide authentic and effective learning" (p. 38).

Regarding fun and satisfaction, they are considered determining aspects in the teaching and learning process, since they motivate young people to continue practicing sports and PA in and out of school. In fact, the enjoyment of PE is considered an important mediating factor in motivating adolescents to do PA (Dishman et al., 2004). Likewise, fun and enjoyment during learning encourages greater satisfaction during their student life (BaenaExtremera et al., 2016; Bibik et al., 2007; Muñoz et al., 2019), since they are more motivated with the class and the school. On the contrary, those students unmotivated by the subject will have a negative attitude towards the class, boredom and demotivation (Gómez, 2013). Proof of this, some students express: We do recreation and have fun while we learn. C.E.G. 302; How we learn by having fun and the moment to share with my classmates. C.E.G. 24; What I like the most about the classes is that one leaves the theoretical environment and can have fun while constantly learning. C.E.G. 721; The classes are so educational and fun. C.E.G. 1347; We can take care of our health in a fun way. C.E.G. 981; Put stress aside and have fun with my friends. C.E.G. 952.

The fact that PE is seen as fun, enjoyment and rest, sometimes makes it not valued by the educational community (Kirk, 1990). In this sense, students' perspective on PE class, identified in this study, contrasts with previous conceptions of teachers about the effectiveness of PE teaching in which it is stated that a teacher is successful in PE. to the extent that his students are busy in class, they are well behaved and happy (Placek, 1983). In general, PE is perceived as the
formal part of extracurricular sports practice, or as something not important within the school curricula, remaining a discredit in relation to other school subjects (Taborda de Oliveira, 2012; Vicente, 2012). It could be evidenced, although in a low proportion, that 117 (4.6\%) of both male and female students express that they like the PE class a little bit or they do not like it (Table 1).

Regarding the question "Do you practice sports or PA outside of school," 2,253 (88.4\%) said yes, and 297 (11.6\%) said no. Discriminated by sex, 967 (37.9\%) of boys and 1,286 (50.4\%) of girls answered yes; vs. 111 (4.3\%) and 186 (7.3\%), respectively, who stated that they did not ( $p>0.05$ ). When students who practice sports or PA outside the class are related to the likes for PE class, a statistically significant association was found ( $\chi 2=67.888 ; \mathrm{df}=4 ; \mathrm{p}<0.01$ ) with a small association (Cramér's $\mathrm{V}=0.163$; $\mathrm{p}<0.01$ ). Regarding with the statement "I like it a lot", it is observed that 837 ( $83.5 \%$ ) of those who agree with this statement do sports or PA outside of school, compared to 165 (16.5\%) who agree but do not practice sports or PA outside of school ( $p=00.00 ; C I 95 \% 0.64$ to 0.70 ). It should be noted that a significant proportion of students ( $28-60.9 \%$ ) declare that they do not like PE class but do sports or PA outside of school, compared to 18 (39.1\%) who state, in the same way, that they do not like the PE class, although they do not practice sports or PA outside of school ( $\mathrm{p}=$ 0.03 ; CI $95 \% 0.02$ to 0.41 ). The sports or PA that students do the most outside of school are soccer ( $646-25.3 \%$ ), running/jogging (301-11.8\%), gym (253-9.9\%), volleyball, (215-8.4\%), cycling (212-8.3\%), basketball
(184-7.2\%), dancing/aerobics (157-6.2\%), swimming ( $54-2.1 \%$ ). A total of 297 students (11.6\%) state that they do not practice any PA, and the remaining $231(9,2 \%)$ are distributed in other sports and PA. Based on the most performed sports or PA, some differences could be identified according to sex; showing a higher proportion of boys who play soccer compared to girls ( 474 vs. $172-18.6 \%$ vs. $6.8 \%$, respectively). However, in other activities, girls showed higher proportions compared to men: running ( 223 vs. $78-8.8 \%$ vs. $3.0 \%$ ), gym ( 177 vs. $76-7.0 \%$ vs. $3.0 \%$, respectively), volleyball ( $165 \mathrm{vs} .50-6.5 \%$ vs. $2.0 \%$, respectively), basketball ( 105 vs. 79 - $4.1 \%$ vs. $3.1 \%$ respectively), dance/aerobics ( 150 vs. $7-6.0 \%$ vs. $0.3 \%$, respectively), and swimming ( 41 vs. 13 $1.6 \%$ vs. $0.5 \%$, respectively). It should be noted that riding a bicycle did not show differences between the sexes ( 107 vs. 105 $4.2 \%$ vs. $4.1 \%$, respectively). The results found are related to those found by Bibik et al. (2007) in that young people who practice PA or sports outside of school is correlated with having a good attitude towards PE class.

When relating the age variable to the preference that students have for PE class, both in men (rho=-0.002) and in women (rho=-0.050), there was no relationship or statistically significant association ( $p>0.05$ ), so it can be inferred that age is not a determining variable of preference for PE class in the group of adolescents investigated.

Regarding the contents and activities carried out within the PE class, the ones with the greatest motivation and pleasure for the
students were collective sports, such as soccer, volleyball and basketball. It is important to consider that students perceive a technical or traditional approach to PE, where sports such as those above are the traditional ones in the secondary education curriculum in our context (Kirk, 2001), coinciding with the studies by Tannehill and Zakrajsek (1993), and Zeng et al (2011), where students say they like team sports more. This situation may be due to the fact that students in PE programs do not live or experience other content different from the area (Bibik et al., 2007), the physical spaces of educational institutions, the experience and competence of the teacher (professional training based on these sports). However, the sports they practice in the PE class they like the least are soccer ( $489-19.2 \%$ girls vs. $173-6.8 \%$ boys), basketball ( $260-10.2 \%$ girls vs. $156-6.1 \%$ boys), volleyball (176 $6.9 \%$ girls vs. $137-5.4 \%$ boys), and athletics ( $184-7.2 \%$ girls vs. $131-5.1 \%$ boys). This shows the treatment of content, monotony and the lack of diversity in PE curricula being a factor of negative attitudes and demotivation in students, results also found by Rikard y Banville (2006).

On the other hand, the students like the PE class because of the methodology implemented by the teachers; they highlight the practical way in which the class is oriented, the diversity of activities and games, the space where it takes place and the free time offered by the teacher at the end of the class. Some testimonies can be seen in Table 3. In this sense, Bibik et al. (2007) found in their study that schools that have good and adequate spaces for practice can be beneficial for students, since they can
have varied options for the development of the subject, with teachers having greater learning options for the students. BaenaExtremera et al. (2016) and Rubio et al. (2019) conclude in their studies the importance of teachers presenting diverse and varied activities to students, motivating them to participate and have a positive
attitude towards the subject; likewise, to listen and have a teaching style where the student body is the protagonist and giving greater autonomy to this improves the classroom environment and increases the interest of the student towards physical sports activities.

Table 3. Methodology as a determining factor for liking the PE class.
The way in which the various activities are applied to us The classes are varied and teach us various sports and
by the teacher, which does not allow it to be routine. that they are fun. C.E.G.565.
C.E.G.70.

When we leave school to go on walks. C.E.G. 932. They give us time to play what we like. C.E.G.574.
What I like about the class is that we can be in an outdoor When we have the class for free activities. C.E.G.1298.
space and we can be in a place for recreation. C.E.G.119.

Similarly, Lewis (2014) found that many students said they were not very committed to PA and PE, due to the scarce offer of activities offered in the subject and the excessive control of the teacher; they prefer to be less controlled and have more autonomy in classes. For Zueck et al. (2020), PE with active methodologies that enhance values and capacities for life is required. The reality is that, in addition to the content, the methodologies with which the classes are oriented affect the values that are entrenched in young people.

In relation to values, the students in this study like the class for the learning of values that the subject fosters, highlighting companionship, friendship, teamwork and integration with classmates, as can be seen in their testimonies in Table 4. They also allude to the class climate as a factor that encourages positive attitudes and a liking
for the class. Similar results were found in the studies by Gaviria and Castejón (2016b), where cooperation, companionship, friendship, respect, competition, and conflict were the most evident values in PE class. Indeed, PE must be more than physical, technical, motor skills and competence; its purpose goes beyond these issues. Sports, games, exercise, dance, the natural environment, as PE means can make a great contribution to the formation of human capacities in students. The PE class as a setting for socialization can provide meaningful experiences for life, provide habits and values that help improve people's quality of life (Flores \& Zamora, 2009). According to Cuevasa et al. (2012), Flores, et al. (2008), Ruiz-Mira, et al. (2021), with a positive climate and interactions for students, they will be more likely to be motivated to participate in the PE class.

Finally, the students say that they like the PE class because of the attitude of the teachers and their way of teaching: The teacher is not the same as the others, let me explain: He is more fun, patient, calm and friendly with the students That makes it unique and different from the rest of the teachers and from the different subjects. C.E.G. 1547. The way the teacher teaches and makes his training reach the students. C.E.G.337.... It is something positive how the teacher shows that liking for this area... C.E.G. 733. ... I like the teacher's attitude
always in the classes, he tries to help us. C.E.G. 837. Hernández y López (2007) also identified that the teacher's preparation and the security and attitude shown in the classes are important factors for the students. They also add that these characteristics positively influence the students and personality traits, such as Authoritarianism and being unsociable with students, negatively influence the students' perception towards the subject.

Table 4. Values as a determining factor for liking the PE class.

| ...we enjoy playing and sharing with our classmates. | The moments in which we share with our classmates. <br> C.E.G. 1196. |
| :--- | :--- |
| We all integrate and play respectfully. C.E.G. 251. | Generally, teamwork is used a lot, creating friendly <br> bonds. C.E.G.142. |
| Sharing in union with the classmates. C.E.G. 1148. | ..everything I can learn is very useful for my personal <br> growth. C.E.G. 1168. |

According to the students, the teachers must know how to teach their training area, have a positive attitude and be close to the students. It can be said that the relationships that occur in the class depend on the teacher's style, the way in which he guides the class and his pedagogical ability. The teaching staff is a determining factor of attitudes in students towards the subject. They are the ones who influence on many occasions the participation of young people in physical sports activities.

Finally, it is important to take advantage of the students' liking for the subject; their voice and thoughts can be of help to improve teaching and their learning at school, so we believe that teachers can do
better planning and construction of PE, PA and sports programs and projects, generating changes in the purposes, purposes, content, methodologies, evaluation and means of PE.

## 4. Conclusions

The results show that, in general, the PE subject is well valued by the students; this student motivation and liking toward PE class is related to the contents that are oriented in the practices, being the collective sports the most liked and those related to improving physical condition. The methodology of the activities is another determining factor of motivation and attitude towards the subject. Fun, practice
and not theory, leaving school, free time to play games and activities independently are key to success for the student body. The possibility of strengthening values, such as friendship, camaraderie, teamwork and integration, are important when participating in class. A teacher with a positive attitude, who is close to the students and who has knowledge of the area is essential to motivate and promote a good concept of PE for life.

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[^0]:    *Differences between sexes in the category of the variable "Liking for the PE class" $p<0.05$

