

PHYSICAL EDUCATION IN HIGH SCHOOL AND STANDARDIZED EXAMS: AN ANALYSIS OF THE ISSUES IN ENEM

A EDUCAÇÃO FÍSICA NO ENSINO MÉDIO E OS EXAMES ESTANDARIZADOS: UMA ANÁLISE DAS QUESTÕES DO ENEM 

EDUCACIÓN FÍSICA EN LA ENSEÑANZA SECUNDARIA Y EXÁMENES ESTANDARIZADOS: UN ANÁLISIS DE LAS PREGUNTAS EN ENEM 

 <https://doi.org/10.22456/1982-8918.113585>

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Abstract: The article analyzes the issues that contain the Physical Education present in Novo Enem, understanding the relationships established by and between the areas of knowledge mediated by competences and abilities. Of the qualitative type, it uses documentary critical analysis as a methodology. The sources are composed of: 49 questions related to Physical Education in the exam (2009 to 2017), the National Guidelines for Secondary Education, the Basic Document of Enem and the Reference Matrix of Enem. The uses and appropriations of the contents of Physical Education, due to its multidisciplinary nature, favors the requirement to elaborate the exam questions aiming at interdisciplinarity by and between the areas of knowledge, exploring the subjects' daily relationships. The interaction between the objectives of the Languages, Codes and their Technologies area, promoted by the exam, allows us to understand Physical Education within a broad context of training, in addition to domain knowledge.

Keywords: Examination questions. Physical Education. Education, primary and secondary. Qualitative research.

Received in: 30 Apr. 2021
Approved in: 18 Nov. 2021
Published in: 28 Dec. 2021



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eISSN: 1982-8918

1 INTRODUCTION

Understanding the complexity of evaluating educational systems in countries like Brazil is a challenge, especially when we consider Physical Education (PE) and its singularities. The so-called standardized exams have proven to be a fundamental element for the development of public policies and strategic actions in the educational scenario (BELTRÃO, 2014; MARQUES; STIEG; SANTOS, 2020).

Cerón and Cruz (2013) show that, specifically in Latin America, in the last two decades, countries such as Chile and Brazil have created national systems to assess the quality of education, which resulted in the installation of several mechanisms to measure the results of standardized exams. According to the authors, these countries are also subject to assessments by international systems, such as the International Association for the Evaluation of Educational Achievement (IEA), Organisation for Economic Co-operation and Development (OECD) and the Programme for International Student Assessment (Pisa).

According to Sudbrack and Cocco (2014), in Brazil, standardized exams intensified in the second half of the 1990s, when the quality of education gained greater importance, becoming an object of federal public regulation. Thus, information about the conditions of education began to be structured based on a national evaluation system.

The Ministry of Education (MEC) has promoted several standardized exams for basic education and higher education, which include different programs, such as: the Basic Education Evaluation System (Saeb), which was consolidated in the second half of the 1990s; the National High School Exam (Enem); the National Examination for the Certification of Youth and Adults (Encceja); the Prova Brasil; the Provinha Brasil; and the National Higher Education Evaluation System (Sinaes).

Among them, we highlight the Enem, which is perceived as a complex evaluation system, with relevant information about student performance and intra- and extra-school contexts. Theoretically, these data are used to improve educational policies towards universalizing the quality of education as a right of all citizens (SILVA, 2010; SUDBRACK; COCCO, 2014; VIANNA, 2014).

This standardized exam aims to act in the formulation of educational policies at different levels. According to the National Institute of Educational Studies and Research Anísio Teixeira (Inep), this process aims to qualify and classify the educational level in public and private schools in Brazil. However, it is necessary to be aware and carry out a critical analysis about this, since this is a complex exam and full of intentionalities.

Since 2009, government measures have encouraged the use of Enem not only as a process for evaluating secondary education but also as a way for students to have access to higher education in Brazil, through government programs such as the Unified Selection System (Sisu) and the University for All Program (Prouni), which unified selection for public universities and made it possible to enter private ones (SILVEIRA; BARBOSA; SILVA, 2015).

Enem was established by MEC Ordinance No. 438/1998 (BRASIL, 1998) as a procedure for evaluating student performance. Decree No. 5.493/2005 (BRASIL,

2005), which regulates the Prouni, required changes in the examination from 2004 onwards, starting its second phase, when it began to function as a selective process by the State, with the purpose of granting scholarships for full and partial studies in private higher education institutions.

The phase called “new Enem” occurred based on Ordinance No. 109, of May 27, 2009 (BRASIL, 2009b). In this case, we note that, in addition to selecting and evaluating, the exam has become a political element of “bargaining chip” between the government’s actions and the opening of new places in private higher education institutions in the country. Here is evidenced the exponential growth of these institutions, both in scholarship supply and financially (GOMES, 2017). If, on the one hand, the Enem served as an instrument for an affirmative policy that aimed to combat inequality of access to higher education, on the other hand, it evidenced the creation of educational conglomerates and the commercialization of the entrance in this formative stage.

Based on such information, we established as a first procedure to gather the guiding documents of the Enem: National Guidelines for Secondary Education (DCENEM) (BRASIL, 1998); Complementary Educational Guidelines to the National Curriculum Parameters (PCN+) (BRASIL, 2006); Basic Document of Enem (BRAZIL, 2002); and Enem Reference Matrix (BRASIL, 2009a), which serves as the basis for the new Enem, intending to understand the theoretical foundation, appropriation and uses of the PE discipline in the exam.

In this context, we realize that PE was inserted in Area Competence 3, which points out, in the Reference Matrix of the exam, that the student must be able to: “Understand and use body language as relevant to their own life, social integrator and identity shaper” (BRASIL, 2009a, p. 2). We highlight that the general organization of the exam is made by large areas of knowledge and each one presents its specific competences. In this case, PE is in the Area of Languages and their Technologies, which has nine area competences.

Based on these propositions, especially for Area Competence 3, the tests started to have questions with the skills and abilities related to the PE curriculum component, developed in dialogue with other members of the area, since the reading established is about the area as a whole and not about a specific discipline.

Thus, we ask: what are the curricular components that dialogue with PE, aiming to establish interdisciplinarity¹ by and between the areas of knowledge? What are the most used PE objects of knowledge in exam questions?

Thus, this article aimed to analyze the new Enem questions that present PE objects of knowledge, understanding the relationships established by and between the areas of knowledge mediated by skills and abilities. In this way, we capture the uses and appropriations (CERTEAU, 2012), the relationships with knowledge (CHARLOT, 2000) and the foundations that support them.

1 In dialogue with the National Curriculum Guidelines for Secondary Education (DCNEMs), in general terms, we point out that interdisciplinarity is configured as the permanent dialogue that all knowledge maintains with other knowledges from different areas, in a theoretical and methodological approach of integrative work, open and dialogued. Thus, it presupposes the transfer of methods from one discipline to another (BRASIL, 2013).

2 METHODOLOGY

This research is qualitative in nature (FLICK, 2004) and is anchored in the precepts of documental criticism (BLOCH, 2001). The sources are the guiding documents of Enem, as well as the new Enem tests applied between 2009 and 2017. In this case, the periodization established in this work is justified by the fact that 2009 is the year of insertion of PE in the new Enem and 2017 for being the last exam applied in the period in which we perform the immersion, classification and categorization of sources.

According to Bloch (2001), the sources of this research model are historical testimonies. Their diversity is almost infinite, as they are basically made up of everything that man writes, says, manufactures, touches, everything that can and should bring information about him.

We are, in this respect, in the situation of the investigator who strives to reconstruct a crime he did not witness; of the physicist, who, trapped in his room by the flu, only knew the results of his experiments thanks to the reports of a laboratory worker. In short, in contrast to knowledge of the present, knowledge of the past would necessarily be 'indirect' (BLOCH, 2001, p. 69).

In this way, observation and critical analysis of Enem documents can be carried out indirectly and subjectively, in the past, and directly, in the present. Bloch (2001) also emphasizes the importance of not making assertions without first being able to verify them. For him, documental criticism consists of questioning the sources and making them speak, having as its main guiding axis the cultural understanding of the events.

We also dialogued with Italian microhistory, through Carlo Ginzburg (2002) and the Evidential Paradigm to establish our theoretical-methodological framework. For him, reality must be perceived starting from the microaspects and investigating what is on the periphery. Thus, it demonstrates that, when analyzing the facts, we need to work with the idea of verisimilitude², and, therefore, always remain attentive to details, to the "unsaid", to the unofficial, to probabilities and possibilities, as the object is like a large rug woven of various threads that intertwine to form a weft. In an instrument like the Enem, this movement is no different. "Microhistorical analysis is, therefore, two-pronged. On the one hand, it moves on a reduced scale [...]. On the other hand, it proposes to investigate the invisible structures within which that lived is articulated" (GINZBURG, 1989, p.177-178).

In our case, both documental criticism (BLOCH, 2001) and microhistory (GINZBURG, 1989, 2002) are fundamental, as they help us to understand the Enem not only as an exam, but also as a broad, intentional, and strategic cultural tool, constituted by those in power. Thus, it is important to ask the right questions to the sources and establish, as a common thread for the analyses, the dialogue between these authors, since both start from a historical as well as a cultural perspective.

The interpretations and knowledge built under an object like this are characterized by human actions in time and are constituted in the traces (documents) left. In this sense, it is knowledge that is always changing in everyday life.

² According to Ginzburg (2002), the verisimilar is what seems true because it does not contradict the truth, it is what is possible or probable.

By treating the Enem with this focus, we are proposing, through documental criticism to understand the relationships established between the macro (test questions and general content), starting from the analysis and understanding of the microcontexts (specific skills and abilities of PE and their interdisciplinary dialogues), so that we can perceive the construction of established relationships and the outcomes that occurred in this standardized Brazilian exam. Thus, the apprehension of singularities, clues, signs and indications helps us to (re)build a reality forming a web of meanings to understand the insertion and role of PE in the Enem and, consequently, in high school itself.

The first step in the composition of the database was to download the tests in PDF from the Inep website and separate those related to the area of Languages and their Technologies. Then, we performed the full reading of each statement, which enabled us to map 49 questions related to the PE curriculum component.

This allowed us to identify two distinct ways in the use of objects of knowledge in the PE discipline in the nine editions of the new Enem (2009-2017), namely: a) as an end, understood as the act of using the specificity of the PE curriculum component to achieve the purposes attributed to different bodily practices; and b) as a means, understood as the act of using the specificity (theoretical aspects) of the PE curricular component as a means to relate to and between areas of knowledge in the exam. We emphasize that this categorization also came from the reading and initial dialogue established with the Enem Guiding Documents, as pointed out in the introduction to the study.

The second step was to submit, through a notepad file, the document corpus referring to the questions to the software *Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires* (Iramuteq).³ Thus, a Descending Hierarchical Classification (Figure 1) and a Word Cloud (Figure 2) were generated, elements that helped us in the analyses.

We highlight the importance of using this type of software more and more in the analysis of research of this nature, especially in the PE field, in which works with a qualitative approach that use this tool are still scarce. As highlighted by Mello *et al.* (2018) and Paula *et al.* (2020), Iramuteq is important because it refines the textual matrix data and gives them their due amplitude.

By providing us with different forms of classification/categorization, this resource allows us to work with the details of a broad documental corpus like ours (49 questions), without losing its main and more general characteristics.

Thus, it is possible to analyze and compare elements that would go unnoticed just by reading the tests and questions in full. However, still concerning the software, “[...] the user must keep in mind that the automatic analysis presents generic results that indicate paths to be explored and interpreted manually” (SALVIATI, 2017, p. 5).

We understand that, with the documental corpus submitted to Iramuteq, it is possible to understand the continuities, discontinuities and projections for the

³ A software that performs statistical analyses with qualitative variables from texts that have a basic lexical field. It works with both simplified analyses, such as word frequency calculation, and multivariate analytical operations, such as descending hierarchical classification and similarity analysis. The data presentation can be done through word clouds (CAMARGO; JUSTO, 2013).

production of the exam that is used as a selective process for accessing higher education places in the Brazilian educational system. In order to understand the similarities and differences presented in the two groups of questions, a careful and instituted comparison between the facts allows us to discern the influences exerted on each other.

As for the sources, we were not interested in judging them, but in questioning them, understanding them as culturally constructed artifacts and full of intentionalities (BLOCH, 2001). Thus, when exploring the documents, we analyze the traces and signs left in the clues (GINZBURG, 1989, 2002) of production and materialization of what is the largest and most important standardized examination of Brazilian basic education.

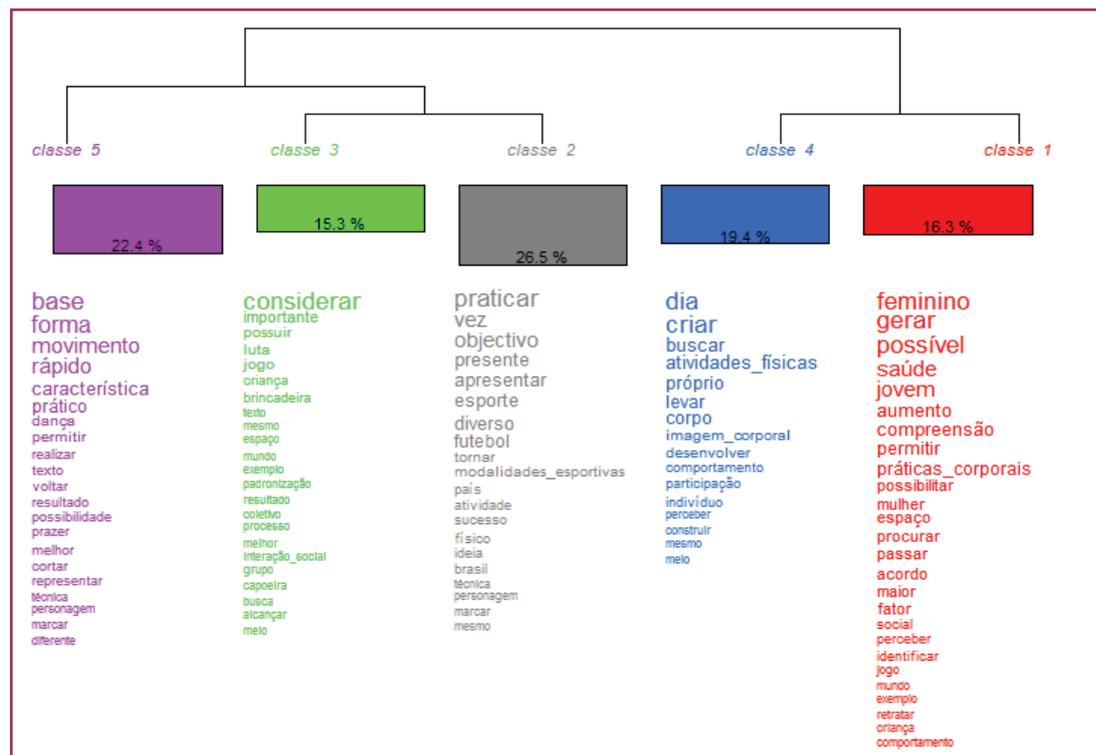
3 DESCENDING HIERARCHICAL CLASSIFICATION OF THE TERMS PRESENT IN THE PE QUESTIONS IN THE NOVO ENEM

Figure 1 shows the Descending Hierarchical Classification (DHC) of the most frequent terms in the textual corpora analyzed. In this organization, the text segments are correlated, forming an ordered representation of a class of words that are grouped and branched according to the divergences and thematic approaches between the identified classes. In our case, the analyzed content generated five classes of words, called clusters, which are derived from two initial branches.⁴

We emphasize that the clusters graphically and quantitatively expose the arrangement and order of the terms, and the software is only responsible for managing the information (SALVIATI, 2017). In this sense, at all times we retrieve the questions and turn to them in the original manner, since the role of critically interpreting them is the responsibility of the researcher.

The first branch isolates class 5 into a block and subdivides another with classes 3 and 2. The second branch is composed of two branches, one with class 4 and one with 1. The semantic function expressed in each branch of Figure 1 is distanced with each subdivision it undergoes and as it “descends” in the word hierarchy tree.

⁴ According to data extracted from Iramuteq's “statistics” tool, the volume of information submitted produced a total of 137 text segments with a 71.53% utilization rate (98). There were 5,169 occurrences (words, forms or vocabularies): 1,963 distinct forms, 1,672 with only one occurrence (hapax) and a total of 1,534 active forms with frequency greater than or equal to three. The analyzed content generated five word classes (clusters) that are derived from two initial branches, as shown in Figure 1.

Figure 1 - Descending hierarchical classification: terminologies used in questions with objects of knowledge of Physical Education in the new Enem

Source: Research data.

Class 5 gathers 22.4% of the text segments considered by Iramuteq to be analyzed. In this class, the words that form an undivided branching cluster are represented. The analysis indicates the presence of the word “dance”, which, in the study design, is presented as one of the categories, together with the terms sport, health, fights, games and play, which serve as a basis to indicate the objects of knowledge of the PE that will be used in the composition of the exam questions.

We emphasize that the dance category contributed with eight questions in the new Enem. When reviewing these questions, we realized that they include the highlighted words in order in class 5 (base, shapes, movement, fast, characteristic and practical). In this sense, we show that dance is influenced by rapid cultural changes, resulting in various rhythmic manifestations (forró, maxixe, xote and frevo). These influences serve as the basis for the transformations that, over time, give rise to different rhythms, which have as characteristics their own movements outlined by practice (Question 108, 2010).

The words with less emphasis in class 5 characterize the *uses* and *appropriations* that happen through the practice of dance, which can be performed with the aim of learning technical movements, for pleasure, aiming at results related to body aesthetics (weight loss), in addition to presenting different modalities and not being restricted to a particular social group. In this sense, its uses are associated with integration, socialization, entertainment and respect for customs and traditions (Question 107, 2014).

When the dance questions address aspects related to technical movements, rhythm and result, they establish a relationship with the uses that are made of the

contents of the PE curriculum component, focused on performance (competitive or professional sport), thus differentiating themselves from the guidelines and bases that establish its curricular use at school.

In this case, dance is understood as a content of artistic expression that provides the “[...] experimentation of different improvisations and choreographic compositions, based on different sources (orientations, games, movement elements, sounds and silence, stories, etc.)” (BRASIL, 2006, p. 194).

These considerations lead us to the “dispute” between the PE and Arts curriculum components on dance. According to Gonçalves (2017), the school’s everyday life is a space/time of negotiations and senses of (re)creation and (re)invention of knowledge/ doings, values and emotions. Thus, it is not neutral, and in it several external and internal factors influence the way curricula are designed/practiced and put together.

When dealing with dance as a PE content, authors such as Pellegrini (1988) indicate that it establishes a close relationship with human movement, its historical and socio-cultural aspects. On the other hand, Strazzacappa (2014) emphasizes that the curricular component Art has as a visual, theatrical, and musical language of dance for learning. For the author, dance goes beyond step repetitions. It is the learning of an entire cultural context.

We also show that, in the Enem Reference Matrix (BRASIL, 2009a), in which the areas of knowledge are established, both components are part of the Languages and their Technologies area, having their own skills and abilities, but they interact to accomplish the inter and transdisciplinary aspects required by the document Theoretical Framework of Enem (2009a).

In the first branch, we have a subdivision giving rise to class 3, which comprises 15.3% of the text segments, and class 2, with 26.5%. The relationship established between these clusters allows us to consider that the approximation of the categories sport, fights, games and play happens due to the polymorphic and polysemic way in which they are *used* and *appropriated* in the Enem questions, associating with performance, leisure, school, recreational and participatory sport. When we analyze the questions of these contents in the exam, it is possible to relate them to terms such as “soccer game”, “judo is an Olympic sport”, “soccer is a leisure activity” (Question 132, 2016), which reveals the different meanings attributed to them (Questions 16, 2018; 97, 2014).

Class 2, in which the term sport is included, represents the highest percentage (26.5%) of the text segments considered. Likewise, the number of questions in the new Enem that represents the sports category has greater quantitative relevance, with 16 contributions. The highlighted words in this class (to practice, goal, turn, present, present, diverse and soccer) are used in the sports questions in the composition of terms that express the *uses* that are made of the content.

We understand that sport is a phenomenon with broad social insertion and that it must have specific training fields (GAMA; FERREIRA NETO; SANTOS, 2021). When used in the composition of the new Enem questions, it allowed for dialogue with the social knowledge historically established between the subjects, causing

the possibility of reflections on their influences on socio-cultural formations in Brazil, demarcating the idea, for example, of the “country of soccer”. In this sense, even if the relationship with knowledge is permeated by social interactions, Charlot (2000, p. 68) warns us that “[...] we should not confuse it with a mere social position, since society is not just a set of positions, it is also history”.

When reflecting on the influences on socio-cultural formations in Brazil, the common man acts in the face of a “[...] rationalized, expansionist, centralized and noisy production, producing a different type of consumption, which is characterized by clandestinity and invisibility due to the way in which uses what is imposed” (CERTEAU, 2012, p. 45).

In this sense, we have the indication that the practice of sports, especially soccer, with different objectives, has become increasingly present in the daily lives of subjects, favoring the reductionist thinking of common knowledge that associates PE only with sporting practices and sidelines contents, such as health, dance, fights, gymnastics, games and plays.

In class 3, we have represented the categories of fights and games and games that, together, contributed with ten questions in the exam. The word highlighted in this class (“consider”) appears in questions that refer to fights, precisely problematizing what is understood about this practice in different social contexts (Question 108, 2011).

The fights are addressed to highlight, starting from their past and depending on their context, their violent and marginalized character, in addition to discussing gender issues (male and female) in their practice. However, it indicates that new measures are being created, such as the institutionalization of rules and adequate spaces for men and women, so that these pejorative characteristics can be reversed and the practice spread (Question 128, 2016).

Regarding the violent and marginalized aspect attributed to fights in the school environment, So and Betti (2009) argue that violence is a way of expression and communication by students in reaction to certain social interactions. In relation to the environment, stress, frustration, it cannot be eliminated or subdued by educators.

When we relate the content of fights with the gender issues (male and female) of the exam, we understand that they bring implications on what is taught and what is learned in PE classes. Thus, when carrying out their work, the teacher must be careful not to reproduce the idea that fights are exclusive male practices. In this sense, acknowledging fights as a common bodily practice for both sexes makes it possible to acknowledge that:

[...] the diversity of cultural universes of students within the scope of teaching practices implies not only awareness of the weight of these practices in the success or failure of these students, but also the importance of working to mobilize positive expectations that promote learning for everyone, regardless of race, social class, gender, or cultural patterns (CANEN, 2001, p. 222).

We believe that, due to the lack of appropriate space for playing, school becomes the privileged place for the recovery of these contents to be systematized

in the curriculum or stimulated during recreational breaks. We also realize that the objects of knowledge related to fights, games and play allow subjects to experience historically established social knowledge.

In the dialogue with Charlot (2000), it is necessary to understand that, in this case, PE's specificities are shown in appropriations, above all, in the figures of learning⁵ present in domain knowledge and relational knowledge, inscribed and learned in/with the body. However, we emphasize that object-knowledges are also part of PE knowledge and learning objects since the body is understood by us as a subject-body, where there is no separation between the physical and the intellect (CHARLOT, 2000; SANTOS *et al.*, 2020).

The second branch leads to class 4, with 19.4% of the text segments, and class 1, with 16.3%. In the class 1 cluster, we have the health category, which contributed 15 questions to the new Enem. Class 4 stands out from the others for not presenting a word corresponding to the categories analyzed in the studies. However, when we analyze health issues, we realize that they are complementary, justifying their connection with class 1.

In the words highlighted in class 1, the terms "female" and "young people" call our attention. When we return to health issues, we realize that these subjects are evidenced as groups in need of public policies that aim to encourage the performance of their bodily practices, aiming to combat practices considered illegal and even harmful to health (trend diets and use of medications) (Question 134, 2009).

In this case, we have the word "create" in cluster 4 and "generate" in cluster 1, presenting the meaning of providing and ensuring for the female sex access to physical activity and leisure without restriction in relation to the male sex (Question 99, 2011) and, at the same time, carry out information campaigns about the dangers of extreme diets, beauty standards imposed by the media and the search for the perfect body under any circumstances (Question 114, 2014). For young people, initiatives that contribute to the cultural accumulation of experiences of bodily practices and the understanding of the role of the body in the world of production should be sought (Question 132, 2006).

The less prominent words in classes 1 and 4 (develop, identify, allow, enable, search) reinforce the existing characteristic in the exam questions of connecting subjects with everyday problems, in this case, in relation to the information conveyed in the media (magazines, social networks, television, radio) about the idea that there is an idealized body image that leads people to seek harmful alternatives for their health (Question 14, 2009).

When we refer to games and play, the word "consider" connects with the less prominent ones (child, space, social interaction) to highlight and compare problems that have been plaguing today, such as the lack of space to play and the market for leisure that is not within the reach of the poorest layers of society (Question 29, 2017).

5 According to Charlot (2000), the figures of learning are forms of learning that occur through the appropriation of knowledges that present themselves to the subject in three possible forms: 1) object knowledge (knowledge contained in empirical objects, such as a book, a newspaper, or written language, etc.); 2) relational knowledge (knowledge embedded in relationships, in contact with others); 3) domain knowledge (knowledge inscribed in the body, in practices and in activities to be mastered).

Children do not relate socially, as in the past, due to the scarcity of appropriate places for social interaction mediated by games and play (Question 35, 2009).

The linking of terms in classes 1 and 4 in the same branch to represent the health category, in questions related to the new Enem, proved to be the most complex. We believe that this link can be justified based on the analysis of health content in the new Enem. We found that 12 of the 15 questions are used as a means to achieve the PE objectives.

If we compare with sport, for example, the category that has the highest number of questions on the exam, out of 16, only three are as a means to achieve the objectives of the curricular component. We emphasize that the descending hierarchical classification indicates the presence of a nucleus of words that maintain a constant relationship, while others are only related within their own class.

Considering that the Enem, like all evaluations, is also a training tool, we ask ourselves what kind of student we want to form by giving visibility to the different cultural practices in the questions. Although we are talking about an instrument whose use sometimes highlights our unequal educational system, the content used to compose the questions demonstrates the regional differences in Brazil.

The facts allow us to understand the Enem as an evaluation that, theoretically, should be used as a formative instrument. However, the exam ends up becoming a strategic tool, full of intentionalities by the subjects who are in places of power to guide the paths of Brazilian education in the sense of establishing a standard of student we want to form and standard of basic and higher education.

Thus, understanding the concept of strategies in this context is fundamental, as it shows us that they are conceived “[...] as a calculation (or manipulation) of the relations of forces that becomes possible from the moment a subject of will and power (a company, an army, a city, a scientific institution) can be isolated” (CERTEAU, 2012, p. 99-100). Thus, the subjects that govern education in the country and also the exam itself are consolidated as strategies that have their impact on Brazilian educational policies.

These considerations lead us to reflect on the different uses and appropriations of the relationships that can be established between the objects of knowledge of the PE curriculum component in the new Enem questions. Its multidisciplinary nature (Education, Health, Sociology, Philosophy) favors the requirement of the exam, which advocates that the questions are elaborated based on interdisciplinarity by and between the areas of knowledge and explore the daily relationships of subjects.

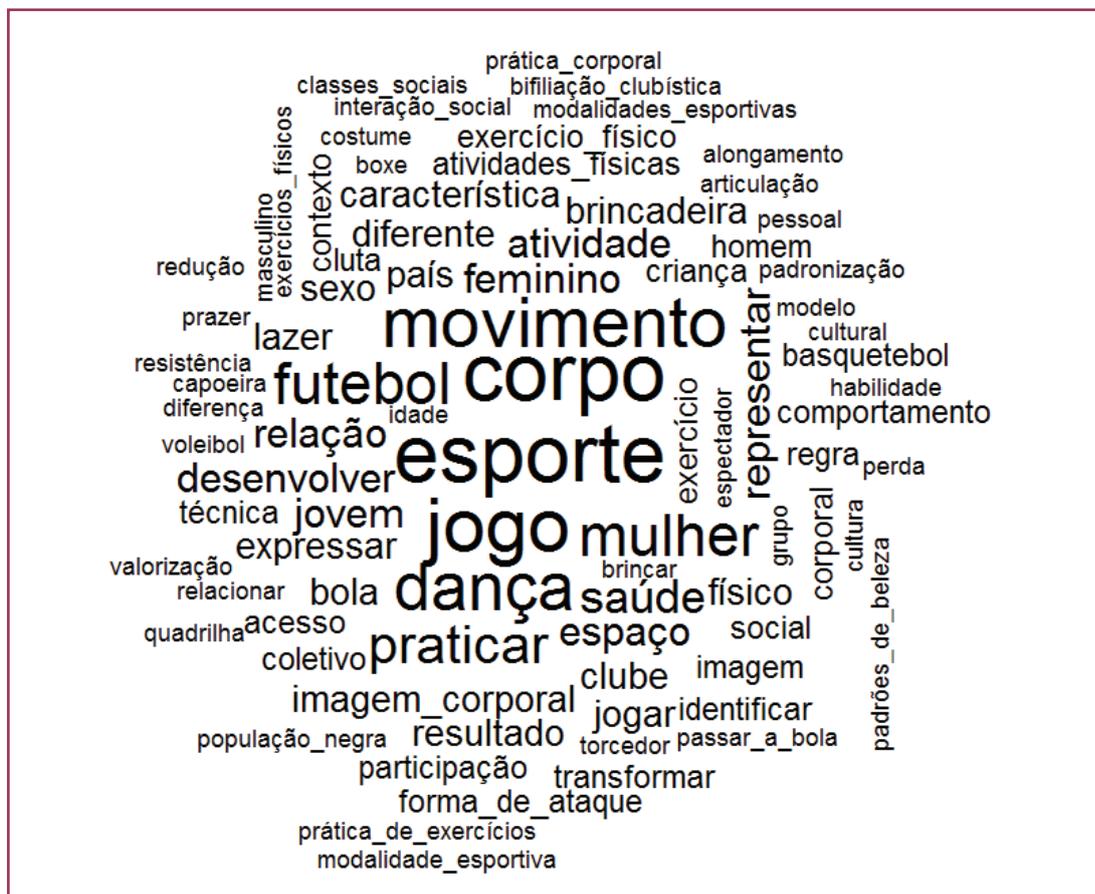
3.1 CLOUD OF THE MOST FREQUENT WORDS IN THE QUESTIONS REFERRING TO THE PE CURRICULAR COMPONENT IN THE NOVO ENEM

Analyzing the recurrence and uses of PE in the new Enem questions allowed us to understand the different interdisciplinary relationships by areas of knowledge, their curricular components and, consequently, their objects of knowledge.

The different uses attributed to these PE objects proposed by the new Enem also lead us to reflect on the following questions: what are the main terms used to

represent the curricular component in the exam? What are the intentions in using certain terminologies? What influences contribute to emphasizing the highlighted terms? Thus, we created, through Iramuteq, a word cloud with the questions from our database, as shown in Figure 2.

Figure 2 – Word cloud of the questions referring to the objects of knowledge of PE in the Enem



Source: Research data.

In Figure 2, the words with the highest recurrence are larger and central, while the peripheral words are those that appeared less in the text *corpus*. We emphasize that the cloud does not express correlation between words, only recurrence. In our case, the minimum recurrence for inclusion was \geq to three.

A first analysis demonstrates that these terms represent the knowledge that characterizes the multidisciplinary nature of PE. They justify, in the questions of the new Enem, the use of their objects of knowledge as an end, in order to highlight the different bodily practices; and as a means, in an interdisciplinary way by and between the areas of knowledge. In this sense, we have the area of Languages and their Technologies dialoguing with the curricular components Portuguese and Literature, emphasizing the following objective: studies of bodily practices with text studies.

When interdisciplinarity is established between the areas of knowledge, we have, through the questions, relationship between Languages and their Technologies (PE, Portuguese, Literature), Humanities (History and Sociology) and Natural Sciences (Biology) (Questions 115, 2012; 16, 2014; 124, 2015).

Gravitating in the center of Figure 2, we have the words: “sport”, “game” and “dance” representing the two categories, use as an end and use as a means. Thus, the words are meeting the requirements when addressing the objectives of PE and the interdisciplinary aspects, as determined by the documents Enem Reference Matrix (BRASIL, 2009a) and PCN+ (BRASIL, 2006), standing out in relation to the contents of health and struggles.

By highlighting the PE objectives and the interdisciplinary aspects, the objects of knowledge address, according to Charlot (2000, p. 58), “[...] the practice of knowledge and the knowledge of practices”. According to the author, the practice of knowledge is, above all, a practice that leads to problem-solving, to the construction of concepts, that is, to producing knowledge effects, building new knowledge based on already acquired knowledge. The knowledge of practice, on the other hand, refers to the set of knowledge made available by practice, or by research carried out on practices (CHARLOT, 2000).

We understand the relationships between the different pieces of knowledge and, therefore, we point out the highlighting of some categories over others in the polymorphic and polysemic aspects of words, in addition to the use of sub-contents in the formulation of questions. For example, when the discussion about health is related to disease prevention (obesity, diabetes, bulimia, bigorexia and anorexia) (Questions: 114, 2014; 125, 2016); body care through food, lifestyle habits considered healthy or not (Question 103, 2009); the practice of physical exercises and exaggerated search (disease) for the standards of body shape socially imposed (Question 134, 2009).

This also happens with the fights content, whose questions mainly emphasize the sub-contents: capoeira (Question 109, 2014) and boxing (Question 97, 2014), moving the main theme away from the words highlighted in the center.

Specifically, the cloud presented us with eight words with high recurrence, allowing us to group them into four groups: a) sport and soccer; b) body and woman; c) game and dance; d) movement and practice.

In the case of the words in group 1, the analysis, based on the new Enem questions, allows us to consider that sport represents the category with the highest number of questions (17), of which 14 are used as an end to achieve the PE goals. In them, the sport presents different uses, depending on the objective to be achieved.

Thus, we have its use associated with terms such as: the Brazilian people’s historical-cultural development process (Question 115, 2012); participation (Question 31, 2017); performance, competition or high performance (Question 100, 2011); consumer product, physical activity and means of social ascension (Question 98, 2011). These characteristics make sport a plural and polysemic phenomenon as it has different meanings for society.

Enem’s questions focus on technical knowledge, on doing with bodily practices, represented by sports, and also on the concomitant process of sociocultural and sporting development of the Brazilian people. These objects of knowledge are in accordance with the practical intervention of the teacher and provide a critical

discussion about the influence of sports in the lives of subjects, which shows us adequacy to what should be taught and what is proposed in the curriculum for high school, stage in which students take the exam.

Of the 14 sports questions, the word “soccer” appears in seven of them, five as the main theme (Questions: 21, 2002; 115, 2012; 16, 2014; 132, 2016; 19, 2017) and two as a complement (Questions: 104, 2014; 31, 2017). In its use, its relationship with the identity of the Brazilian people is highlighted, as we can see in fragments of questions in expressions such as: “Here is the country of soccer” and “Brazil is only soccer” (Question 115, 2012), “Joy of being Brazilian” (Question 21, 2002) and “a means of social interaction” (Question 132, 2016).

We observe that sport, even though it is a PE content that meets the objective proposed by the Enem Reference Matrix (BRASIL, 2009a), studies of bodily practices, when integrated into the area of Languages and their Technologies, starts to be used by others curriculum components to carry out interdisciplinarity by and between areas.

In group 2, we have the word “body” used in three categories (sport, health and dance), but if we take into account its derivations, such as bodily, bodily practice and body image, as evidenced in the cloud, we can affirm its presence in all five categories. The uses of the word body establish relationships with biological (anatomy, functions, health, disease and nutrition) and sociological (cultural, feminine, body beauty and body pattern) aspects.

They show the very understanding of the field, in which a school of PE believes that its objectives should be proposed in the Area of Natural Sciences and their Technologies, establishing a primary dialogue with health, presenting physical activities that aim to promote quality of life and avoid diseases (BAGRICHEVSKY; PALMA; ESTEVÃO, 2003; FARINATTI; FERREIRA, 2006); the other establishes a reading based on the Human and Social Sciences, also enabling a discussion that relates the area to social, political and cultural implications (BETTI, 2009; MURAD, 2009).

The word “woman” is present in two categories, health and fights. In them, the uses related to aspects and discussions of social nature that aim to impose a body standard, mainly influenced by the media and the beauty industry (Question 26, 2017), are evidenced, in addition to gender issues related to the prejudice about women’s participation in bodily practices historically exclusive to men, such as fights (Question 128, 2016).

In group 3, we have the word “game” present in two categories, games and play. They highlight its uses as an instrument of social interaction, its voluntary participation, in addition to the playful character that allows the participation of subjects of all ages and social classes, due to the simplicity of their rules and the possibility of experiencing them in different spaces (Question 97, 2013); and in sport, through characteristic expressions (“starting the game” and “putting the ball into play”), whose meanings refer to situations related to the practice of different sports (Question 120, 2010). Here, the expressions of the sports questions contributed to highlighting the

word “game”, which does not have the same meaning when it is related to the category games and play.

In group 4, we have the words “movement” and “practice” appearing in the sport and dance categories. They represent the purpose, specificity and doing with PE, being able to master an activity or an object (knowing domain), the learning that is not obtained through statements. They are related to the daily actions carried out to achieve physical benefits, through bodily practices and to characterize the different modalities and styles of fights and dances that are representative of the body culture of movement.

Thus, the analyzes make it possible to understand that the objects of knowledge of the PE curriculum component in the exam questions contribute to a broad context of training beyond the knowledge domain (doing), thus promoting the interaction between knowledges (CHARLOT, 2000). By mediating its contents by and between the areas of knowledge, PE interacts with the Enem questions based on its historical, cultural and sociological processes, establishing relationships with other knowledges and, therefore, with the world.

Making a quantitative retrospective of these data, we found that only 3.02% of the questions in the new Enem bring some content related to PE, that is, only 49, in a universe of 1,620, over nine editions. This demonstrates that this is a discipline that still needs to conquer its space in the test and legitimize itself as an “end” object of knowledge, which has its specificities and importance for the integral formation of the subject. In this sense, it is necessary to take a critical look at the object and to question how, when and for what purpose these questions appear, in addition to the emphasis that is given or not to the specificities of PE and also how its interdisciplinary potential is explored.

We also notice that, of the 49 questions analyzed, 24 address the objects of knowledge of PE as an end (understood as the act of using the specificity of PE in order to achieve the purposes attributed to different bodily practices), which corresponds to 48.9 %; the other 25 questions address the objects of knowledge of PE as a means, which corresponds to 51.02% (understood as the act of using the specificity of PE as a means to relate to and between areas of knowledge and curricular components in the exam). This is a necessary overview, as it also helps us to understand how the questions are designed and how they relate to skills and abilities in particular areas.

Although we have analyzed the PE questions related to the area of languages, we have captured its dialogue with objects of knowledge from other areas. For example, we mapped 15 questions that are directly linked to the health theme, addressed in articulation with objects of knowledge from the disciplines Sociology, Philosophy and Biology. These data show the challenges of establishing, in pedagogical practice, the teaching of the PE objects of knowledge in dialogue with school subjects in the knowledge area Languages and their Technologies and among other areas.

Our analyzes corroborate the ideas of Santos *et al.* (2020) and emphasize that PE needs to be reaffirmed in the school environment through the identities that are created for and by it. Thus, the production of meanings about this subject in

high school permeates not only its skills and abilities, but also the way it dialogues with other areas and how it is established in this relationship, which should not be hierarchical, but interdisciplinary in its broadest sense, dialogued and shared.

4 FINAL CONSIDERATIONS

We understand that, in the new Enem, in the area of Languages and their Technologies, the objectives of production and reception of artistic texts, studies of linguistic aspects and argumentative study interact with the studies of bodily practices, so that their uses and appropriations can be materialized in the exam questions, thus meeting the need to relate skills and abilities, as proposed in the new Enem Reference Matrix (BRASIL, 2009a).

When interacting, mediated by the objectives of the Languages and their Technologies area, the exam promotes the interaction between knowledges (CHARLOT, 2000), allowing us to understand PE within a broader context of education.

Regarding the interdisciplinarity between areas of knowledge and their curricular components, we identified the uses of PE in dialogue with Human Sciences and their Technologies and Natural Sciences and their Technologies. The first, mediated by History and Sociology, highlights the sociocultural knowledge that makes it possible to understand the subjects in a broader way, beyond the morphological and physiological aspects. In the second, the interaction of the Biology curricular component is related to the objective of studies of bodily practices, evidencing aspects associated with health, quality of life (leisure, healthy eating, physical activity) and disease prevention (bulimia, obesity and diabetes), considering the incorporation of these practices into the daily lives of subjects.

Finally, we emphasize the contribution of Iramuteq as an aid tool for the data analysis process, allowing us, based on the PE questions in the new Enem, to understand the appropriations and uses of the relationships that are established between knowledges, as well as interdisciplinarity by and between the areas of knowledge.

We also indicate the need for future studies that aim to analyze the practice of professionals (pedagogues and teachers), in order to understand the didactic-pedagogical procedures that are being adopted by education networks, aiming to meet the interdisciplinary aspects by and between the areas of knowledge, during the process of training students to take the exam.

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Resumo: O artigo analisa as questões do Novo Enem que apresentam objetos de conhecimento da Educação Física, compreendendo as relações que se estabelecem por e entre as áreas do conhecimento mediadas pelas competências e habilidades. De natureza qualitativa, utiliza a análise crítico-documental como metodologia. As fontes são compostas por: 49 questões relacionadas com a Educação Física no exame (2009 a 2017), as Diretrizes Nacionais para o Ensino Médio, o Documento Básico do Enem e a Matriz de Referência do Enem. Os usos e apropriações dos objetos de conhecimento da Educação Física, devido à sua natureza multidisciplinar, favorecem a exigência da elaboração das questões do exame visando à interdisciplinaridade por e entre as áreas do conhecimento, explorando as relações cotidianas dos sujeitos. A interação entre os objetivos da área de Linguagens e suas Tecnologias, promovida pelo exame, permite-nos compreender a Educação Física dentro de um contexto amplo de formação, para além do saberes de domínio.

Palavras chave: Questões de prova. Educação Física. Ensino fundamental e médio. Pesquisa qualitativa

Resumen: El estudio analiza las preguntas con objetos de conocimiento de la Educación Física presentes en Novo Enem, entendiendo las relaciones que se establecen por y entre las áreas de conocimiento mediadas por competencias y habilidades. De naturaleza cualitativa, utiliza el análisis crítico documental como metodología. Las fuentes están compuestas por: 49 preguntas relacionadas con Educación Física en el examen (2009 a 2017), los Lineamientos Nacionales de Educación Secundaria, el Documento Básico de Enem y la Matriz de Referencia de Enem. Los usos y apropiaciones de los objetos de conocimientos de Educación Física, por su carácter multidisciplinario, favorece la exigencia de elaborar las preguntas del examen con miras a la interdisciplinariedad por y entre las áreas de conocimiento, explorando las relaciones cotidianas de los sujetos. La interacción entre los objetivos del área de Idiomas, Códigos y sus Tecnologías, promovida por el examen, nos permite comprender la Educación Física dentro de un amplio contexto de formación, además del dominio del conocimiento.

Palabras clave: Preguntas de examen. Educación Física. Enseñanza primaria y secundaria. Investigación cualitativa.

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CONFLICT OF INTERESTS

The authors declare that this work involves no conflict of interest.

AUTHOR CONTRIBUTIONS

Rodrigo Marques: conceptualization, data curation, formal analysis, investigation, methodology, writing, review and editing.

Jean Carlos Freitas Gama: conceptualization, data curation, formal analysis, investigation, methodology, writing, review and editing.

Geraldo Luzia Oliveira Junior: data curation, formal analysis, investigation, methodology and writing.

Amarílio Ferreira Neto: conceptualization, formal analysis, investigation, supervision, writing and review.

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FUNDING

This work was carried out with the support of the Espírito Santo State Research Support Foundation (Fapes) with the granting of a scholarship. It was also funded by the National Council for Scientific and Technological Development (CNPq), under the Notice MCTIC/CNPq No. 28/2018 - Universal/Track B, Process No.: 435310/2018-6.

HOW TO CITE

MARQUES, Rodrigo; GAMA, Jean Carlos Freitas; OLIVEIRA JUNIOR, Geraldo Luzia; FERREIRA NETO, Amarílio; SANTOS, Wagner dos. Physical Education in High School And Standardized Examination: An Analysis Of The Enem Questions. **Movimento (Porto Alegre)**, v. 27, e27076, Jan./Dec. 2021. Available at: <https://seer.ufrgs.br/Movimento/article/view/113585>. Accessed on [day] [abbreviated month]. [year]. DOI: <https://doi.org/10.22456/1982-8918.113585>

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