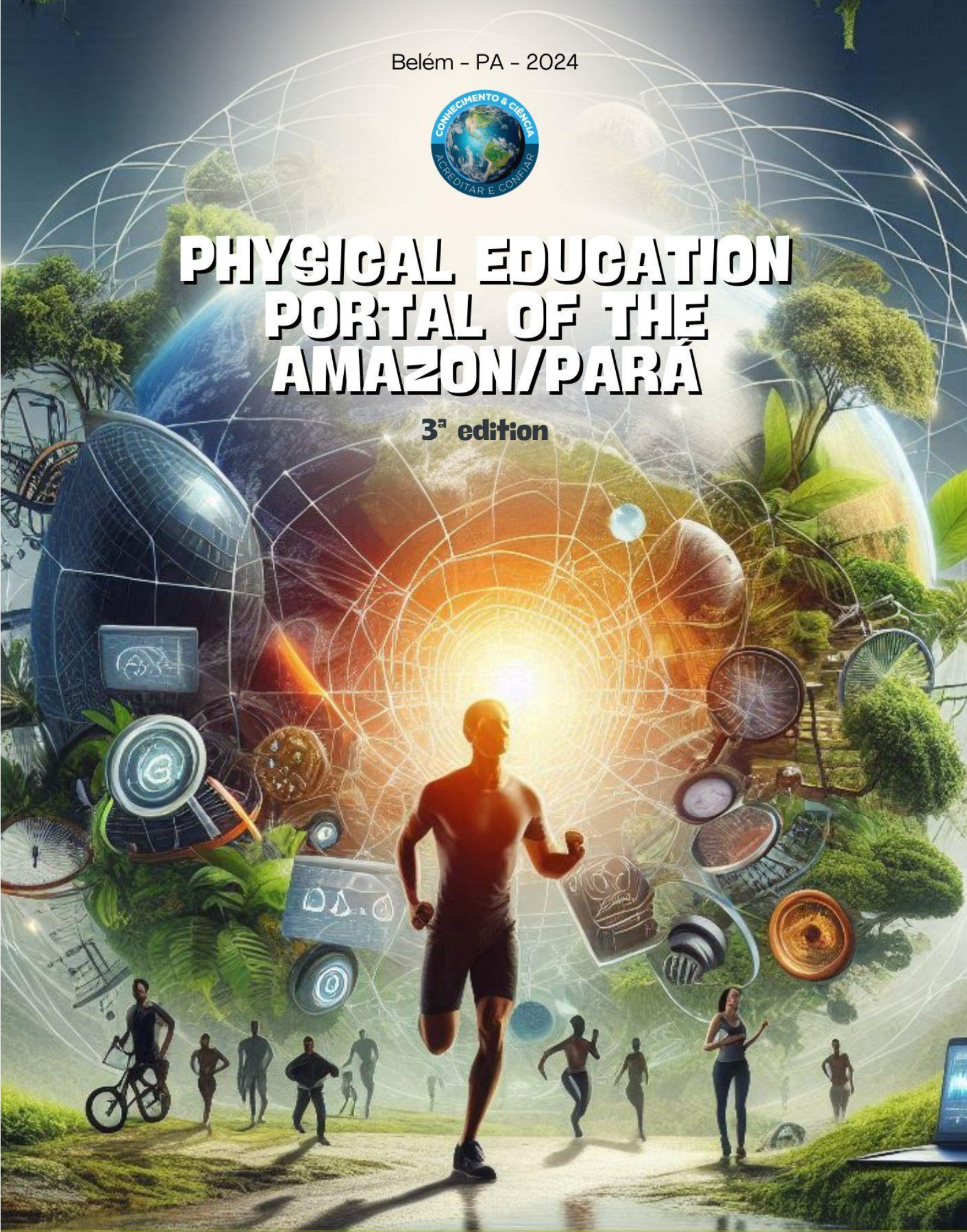
Belém - PA - 2024

PHYSICAL EDUCATION PORTAL OF THE AMAZON/PARÁ

3ª edition



Éder do Vale Palheta

SCIENTIFIC COUNCIL

CATALOG CARD

PALHETA, ÉDER DO VALE
PHYSICAL EDUCATION PORTAL OF THE AMAZON/PARÁ
Advisor: Dr. Ricardo Figueiredo Pinto. Asunción – PY – 2024.

124f.
Thesis (Doctorate), Public Health, Facultad Interamericana de Ciencias Sociales. 3ª ed. 2024.

Keywords: Physical Education; High School; Teacher; Website.

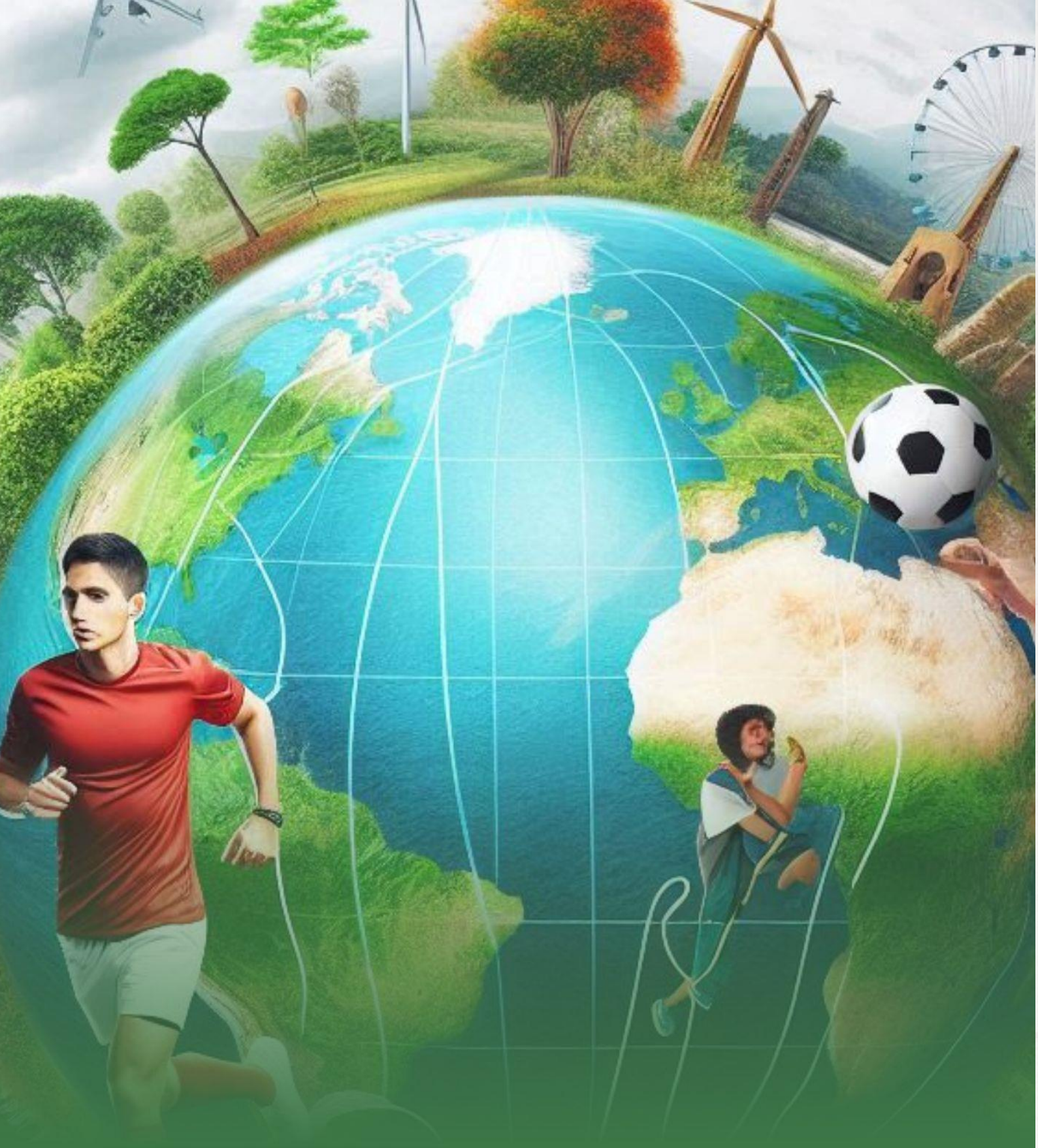
Tradução: Profª Jovanna Gomes Ramos
Image created using Microsoft Copilot

ISBN: 978-65-867-8599-9
DOI: 10.29327/5448984

ABOUT THE AUTOR

ÉDER DO VALE PALHETA

The author has a degree in Physical Education from the higher School of Physical Education of the State of Pará (1989) and specialized in Physical Education, Sport and Leisure: Teaching, Research and Evaluation - UEPA (1998), specialist in School Administration, Supervision and Guidance - Leonardo da Vinci University Center - UNIASSELVI (2023). Master's degree in science of education - FICs (2020), has experience in Physical Education, such as School Physical Education - SEDUC - PA and Altamir de Paiva Adventist School, Labor Gymnastics, futsal coach and management experience, namely: Executive Manager of Culture, Sport and Leisure, promoter of culture, sport and leisure events.



DEDICATORY

I dedicate this study to my family, who have always supported and encouraged me, especially my partner Karimi Paiva.

ACKNOWLEDGEMENTS

To my friend in memoriam Marcos Francisco de Oliveira Saraiva for his affection, support and encouragement on my journey. My eternal thanks.

To my friend Shirley Dias for her great and excellent contributions to my studies. My eternal gratitude.

To my advisor Prof. Post Doctor Ricardo Figueiredo Pinto for his patience, unparalleled dedication and for trusting and believing in our potential in teaching. I would like to thank him for the challenge and development of the research topic, which really touched us, in the sense of contributing to a learning process and technical and scientific knowledge regarding the use of information and communication technology tools to strengthen basic education in Pará. Thus, the portalefamazonia.com.br tool arise to serve society.

To my friends who are physical education professionals and who contributed greatly to our field research, thank you very much.

To the students from the state schools who responded to the field research, thank you very much.
To my Sesian work colleagues who have contributed greatly to my growth, development and personal and professional evolution. My gratitude.

To my mother and father and brothers in memoriam (Maria de Nazaré do Vale Palheta and Manoel dos Santos Palheta), (brothers Raimundo do Vale Palheta, Edmilson do Vale Palheta, Manoel de Jesus do Vale Palheta, João do Vale Palheta, Edson do Vale Palheta and Januário dos Santos Palheta) my sisters and brother Maria Auxiliadora do Vale Palheta, Aurea Maria do Vale Palheta and Walter do Vale Palheta and my sons Éder do Vale Palheta Junior, Bruno de Almeida Garcia Palheta, Lucas Roberto Fonseca Palheta, Gustavo Paiva Palheta and Caio Paiva Palheta, who were and are very important in my journey of study and research. My fraternal and eternal gratitude to all of you.

Learning is the only thing of which the mind never tires, is never afraid and never regrets.
Leonardo da Vinci.

ABSTRACT

The aim of this dissertation was to analyze the development of a website on physical education for physical education teachers and students at the Seduc-PA high school as a motivating alternative for facing the challenges and potentialities of the new problems present in society's daily life, through exploratory research and quantitative research. Over the last 10 years, it has become apparent that students in regular physical education classes in Pará state schools have not been interested in taking part in the activities devised by physical education teachers for a number of reasons, namely: the physical facilities of the spaces for the regular practice of activities are inadequate in terms of physical structure, the lack of sports equipment, and students point to the lack of investment in adapting to the new guidelines of the National Curriculum Parameters. Considering the loss of interest among regular high school students in the state of Pará in Physical Education classes, it is necessary to reflect/intervene in the process of perfecting a new model considering the current advent of digital educational technologies, since students at this stage of education have shown great interest in studying and acquiring knowledge through the technologies in question. For there to be a noticeable change in the framework of Physical Education practices in Regular High School in the state network of Pará, it is necessary to readjust the content to be applied in the grades of this stage of education with the use of active methodologies and digital technology equipment so that we can arouse interest and attract students by bringing back to knowledge the studies of Physical Education according to the new BNCC - National Curriculum Base in an interactive and dynamic way.

Keywords: Physical education. High school. Website. Teacher and student.

LIST OF ABBREVIATIONS AND ACRONYMS

BNCC – National Curriculum Base

SPE – Scholar Physical Education

LDB – Law of Directives and Bases

LDBEN - Law of Directives and Bases of National Education

CT – Critical Thinking

PCN's – National Curricular Parameters

PPP – Political-Pegagogical Project

SCIELO - Scientific Electronic Library Online

SEDUC – State Education Department

SIBI - INTEGRATED LIBRARY SYSTEM OF THE UNIVERSITY OF SÃO PAULO

ICT – Information and Communication Technologies

UNESCO - United Nations Educational, Scientific and Cultural Organization.

USP – University of São Paulo

LIST OF FIGURES

LIST OF GRAPHS

LIST OF TABLE

SUMMARY

INTRODUCTION

1. INTRODUCTION

Nowadays, it is notable that Information and Communication Technologies (ICT) are part of many people's daily lives. This is because many activities that were performed in person a short time ago are now solved with just one click. As an example, we can mention the functions performed by cell phones, which operate like miniature computers: ordering transportation, buying food, taking photos, filming, making payments, shopping, interacting via social networks, and countless other functions (RONEY et al., 2017).

Thus, interpersonal relationships, the way people communicate and the way they interact with the world have been transformed by the frequent use of technologies. Conceptually, ICT involves a set of virtual and reais tools/devices whose purpose is to enable and make possible the transfer of information and communication to society, using a variety of means (OSADEBE, 2020).

In addition, according to the author, it involves various technological tools, including video games, cell phones, social networks, videos, cameras, tablets, notebooks and computers, which fall into the three classifications emphasized by Osadebe (2020): information technology, telecommunications and electronic media.

Thus, these digital technologies have become popular, experiencing an unprecedented relationship between quantity, speed and methods of creating and disseminating information, achieving countless exchanges, social and cultural changes, promoting the emergence of new ways of thinking, feeling, acting and living together. The existence of these technologies in people's daily lives has always been a factor in changing and forming new habits (JALÚ; SCHÜTZ; MAYER et al., 2020).

We are living in a time of digital transformation, in which the speed of technology use is influencing people's way of life. The communication and consumption of social media, apps that are taking over companies and schools through management systems, relationships with customers and suppliers, not to mention smart homes and time management apps. Finally, it is easy to understand that education is also undergoing a change, which will determine the new teaching and learning processes (SILVA; PETRY; UGGIONI, 2020).

It is understood that the big change began with the development of the internet in the 1990s, through media such as newspapers, radio and television, as it was known. However, along the process, a new technology was introduced that defines the process of integrating all these methods. In other words, we are living in a time of cultural, digital and media convergence, with a huge increase in the flow of content on various digital platforms and ultimately a great

migration and differentiation of the media (JALÚ; SCHÜTZ; MAYER et al., 2020).

This process refers to a cultural transformation as teachers, the consumers of this new way of teaching, are encouraged to search for information and thus create new connections with this media content, since over the last few years, there has been a growing demand for Information Technology (IT). In other words, society is increasingly making use of technologies that evolve and sometimes revolutionize the structures of existing relationships, whether in the personal, relational, educational, marketing or other spheres (FERREIRA; DARIDO, 2014).

It is notorious that the increasingly intimate relationship between informatics and education shows that the large-scale spread of computers in strategic sectors of society imposes a radical change in the formation of new technical and practical skills for the school community. This means that information has a clear contribution to make to building a new society (BELONI, 2019).

Moreover, cyberspace is a very different tool from classic media, as it involves two phenomena: the potential plasticity of all messages, and the fact that these messages are posted on the network, all occurring concurrently (JALÚ; SCHÜTZ; MAYER et al., 2020).

Thus, over the years it has become clear that the changes being experienced with the use of new technologies in the field of education point in another direction, the virtualization of education, with unknown possibilities and challenges. A revolution in the way we conceive of spaces, relationships, emotions and, above all, the individuals they are part of.

In this new scenario, science has shown that the use of technologies in education, digital culture, digital platforms, has contributed to leveraging educational practice in search of a better quality of teaching, so Physical Education cannot neglect the debate and the insertion of ICT in classes in the school environment (RONEY et al., 2017).

And from a futuristic viewpoint, a certain virtualization, this study intends to make available a website aimed at Physical Education teachers and high school students at SEDUC-PA, because we believe in an education that makes a difference in their lives. In this way, it is understood that reinventing oneself in the educational process is the true meaning of existing.

20

Based on this, it is important to clarify that the production and dissemination of the material will provide a tool to physical education professionals, the academic community and society in general, considering the insertion and penetrability of ICT in today's society, which is manifested by various forms of access to information, provoking, therefore, new styles of

thinking and reasoning, that collaborate directly with the process of knowledge construction, nourishing and enhancing it (GASAYMEH, 2018).

It is known that the accelerated dissemination of information and communication technologies (ICT) in recent decades, especially the Internet, brings with it several challenges and opportunities both at the individual level and at the society level, as new ways of relating to information and knowledge are established (TRUCANO, 2012).

These changes affect, in particular, education, which is faced with the need to deal with various issues triggered by the increasingly intense presence of ICT in daily life: whether it is preparing people to fully and consciously take advantage of the full potential of these technologies, or developing methodologies and practices capable of promoting the incorporation of ICT as a pedagogical tool (SILVA; PETRY; UGGIONI, 2020).

The hypothesis shows that it is extremely important to develop a physical education website for high school students and teachers of SEDUC-PA, to portray the impacts, advantages and results that occurred in front of it, with the use of the means of communication and information.

From the context, the following guiding questions were elaborated:

What is the relevance of developing a physical education web portal for high school students and teachers at SEDUC-PA?

How can the development of a physical education web portal increase the interest of physical education teachers and students in high school at SEDUC-PA?

What is the most relevant information that should be contained in a physical education portal to increase the interest of teachers and students in physical education in high school at SEDUC-PA?

2. OBJECTIVES

2.1 General objective

To analyze the development of a physical education website for physical education teachers and students at high school at SEDUC-PA as a motivating alternative in facing the challenges and potentialities in the face of the new problems present in the daily life of society.

2.2 Specific objectives

a) Describe the importance of digital resources that can be used in physical education.
b) Investigate the most relevant information that should be contained in a Physical Education Site to increase the interest of teachers and students in physical education in high school at SEDUC-PA
c) Identify the relevance of developing a website in physical education for high school students and teachers at SEDUC-PA.
d) Evaluate how the development of a website in physical education can increase the interest of physical education teachers and students at high school at SEDUC-PA.

3. Justification

As previously described, even though the adoption of new ICTs occurs very naturally and at great speed in society, it is still a current challenge in education to include the new discoveries to make classes more attractive and, at the same time, to keep up with the changes and improve pedagogical practices, since education changes, it is renewed and accompanies the desires of society, a place where new habits, customs and needs arise (KENSKI, 2012).

In the face of the technological revolution of society and the advancement of ICT, it resulted in new devices that transformed the socio-political, economic, cultural and educational scenario, giving rise to new challenges to Physical Education by presenting an extensive list of knowledge to be worked on and explored that go beyond practice, of doing for the sake of doing (ROHDEN, 2017).

Considering what has been exposed and in view of the technological revolution of society and the challenges of Physical Education that emerge from this scenario, the present research becomes relevant to education, since it is essential to constantly update teachers, regarding following the changes and improving pedagogical practices, as well as the evolution that takes place outside the school. Education is modified, renewed and accompanies the desires of society, a place where new habits, customs and needs arise

The study, in addition to contributing to the knowledge and analysis of the theme, can become an instrument in the school and teacher organization, as it is inserted as an innovative practice, in order to instigate constant changes, both in the pedagogical and social fields, as well as in culture, science, especially in education, which, in this case, has the intention of revolutionizing the forms of communication and relationship between school actors (ROHDEN,

2017).

For the author above, it is notorious that digital resources facilitate and speed up the teacher's work, whether in planning, filling out and delivering class diaries, preparing assessments, monitoring grades, calculating averages and communicating with the work team, in addition to presenting possibilities of use as a pedagogical tool directly in classes and in schools.


THEORETICAL APPROACH

4. THEORETICAL APPROACH

4.1 Current Legislation for Physical Education in Brazilian High School

The reforms in educational policies, which have occurred over the years in Brazil, have gradually produced changes in terms of teaching performance, which have occurred as a result of curricular changes in Physical Education (PE) teacher training courses, as well as changes in educational policies for Basic Education, which directly influence the way this professional works and develops (BRASIL, 1996; 2017).

4.1.2 PCN's in Physical Education for High School

Preliminarily, to understand the function and objectives of Physical Education in school, it is necessary to understand how it is inserted in the Brazilian Educational System through the legal framework that supports it.

From the enactment of the Law of Directives and Bases of National Education – (LDBEN) No. 9.394/96, Physical Education became a curricular component like any other, bringing in its core a series of changes, related to several axes: didactic structure and autonomy given to schools and education systems, and the focus given to the formation of the citizen (BRASIL, 1996).

Regarding High School, the greatest contribution of the current LDB 9394/96 was to confer the identity of Basic Education, explaining that it is its "final stage" (BRASIL, 1996). It is pertinent to mention that in articles 35 and 36, the LDB outlines the general guidelines for the curricular organization in High School, defining as its purposes:

> I – the consolidation and deepening of the knowledge acquired in Elementary School, enabling the continuation of studies;
> II – the basic presentation for the work and citizenship of the student, to continue learning to be able to adapt flexibly to new conditions of occupation and subsequent improvement;
> III – the improvement of the student as a human person, including ethical training and the development of intellectual autonomy and critical thinking;
> IV – the understanding of the scientific-technological foundations of the production processes, relating theory to practice, in the teaching of each subject (BRASIL, 1996, p.156).

In addition to the Legislation mentioned above, another document that regulates and supports Education and its disciplines are the National Curriculum Parameters (PCNs), in which it states that High School, as a stage of a general education, must be in tune with the construction

of competencies that situate the student "as a subject who produces knowledge and participates in the world of work" (BRASIL, 1998, p.22).

And specifically, in relation to Physical Education in High School, it is inserted in the area of languages, codes and their technologies with the disciplines Portuguese Language, Arts, Informatics, Literature and Modern Foreign Language, whose insertion occurs through the following understanding: "Language is considered here as a human capacity to articulate collective meanings in arbitrary systems of representation, that are shared and that vary according to the needs and experiences of life in society" (BRASIL, 2002, p.19)

Thus, the PCNs establish some proposals for their development with guidelines, in an objective way, to professionals in the discipline in vogue so that they have competence and can work in a playful and educational way, in order to allow the student to learn different contents, thus becoming a citizen capable of solving different situations of daily life, since it aims to add and deepen knowledge, and not applying already known fundamentals about sports and games.

Therefore, it is inevitable to make a comparison with other areas of study, since they are dedicated to deepening other knowledge: using diversified methodologies, videos, reading texts, group discussions of current topics, making the student know how to solve the problem during classes, making them more attractive in their day-to-day school, and Physical Education classes, which become repetitive and tiring for the student, since they continue to reproduce the contents and models already experienced in elementary school, causing them to progressively stop practicing classes in the courts, in the courtyard and in school spaces to attend clubs, gyms, parks, parties, among other places (NAZÁRIO; SAINTS; FERREIRA NETO, 2018).

The PCNs also describe that "Physical Education needs to search its identity as a fundamental area of study for the understanding and comprehension of the human being, as a producer of culture" (BRASIL, 1998, p. 156). To this end, teachers must have a plan of activities in accordance with the school and the pedagogical team, using their knowledge and developing projects, added to classes that meet the interests and needs of the students, because,

> A Physical Education attentive to the problems of the present cannot fail to choose, as one of its central orientations, that of health education. If it intends to provide services to the social education of students and contribute to a productive, creative and successful life, Physical Education finds, in the orientation of health education, a means of achieving its intentions (BRASIL, 1998, p.156)

It is worth noting that the Physical Education teacher must rethink his role in the school in the face of the changes that have occurred, especially related to health. To this end, it must search an interaction with the work developed in the school's pedagogical proposal,

emphasizing the importance of its curricular component, to be seen at the same level of seriousness and commitment to the formation of the student, developing its role as mediator, adopting the position of interlocutor of information and messages, showing its students that in that school space they learn to understand and accept the bodily and behavioral differences between individuals.

The PCNs (BRASIL, 1998, p.164) emphasize the main competencies and skills to be developed in Physical Education in High School:

> It is expected that, during High School, in Physical Education, the following skills will be developed by students:
> Understand the functioning of the human organism, in order to recognize and modify bodily activities, valuing them as resources for the improvement of their physical abilities;
> Develop the conceptual notions of effort, intensity and frequency, applying them in their body practices;
> Reflect on the specific information of body culture, being able to discern and reinterpret it on a scientific basis, adopting an autonomous posture in the selection of activities and procedures for the maintenance or acquisition of health;
> Assume an active posture, in the practice of physical activities, and aware of their importance in the life of the citizen;
> Understand the different manifestations of body culture, recognizing and valuing differences in performance, language and expression;
> Participate in activities in large and small groups, understanding individual differences and search to collaborate so that the group can achieve the goals it has proposed;
> Recognize in coexistence and peaceful practices, effective ways of collective growth, dialoguing, reflecting and adopting a democratic posture on the different points of view proposed in debates;
> To be interested in the emergence of multiple variations of physical activity, as an object of research, areas of great social interest and a promising job market;
> Demonstrate autonomy in the elaboration of body activities, as well as the ability to discuss and modify rules, bringing together elements of various manifestations of movement and establishing a better use of the knowledge acquired about body culture (BRASIL, 1998, p. 164)

However, to achieve such objectives, diversified strategies must be used, ranging from teaching and experiencing sports, to experimenting with languages such as games, dance, and circus, among others. According to the PCN, "the curricular contents of Basic Education will also observe the following guidelines: promotion of educational sports and support for non-formal sports practices" (BRASIL, 1998, p. 158).

It is understood that the PCN of Physical Education values the teaching of physical activities without restricting it to the universe of motor skills and the fundamentals of sports. It goes further, with the inclusion of conceptual content of rules, tactics and some factual historical data of modalities, added to reflections on the concepts of ethics, aesthetics, performance, satisfaction, efficiency, among others. All of this is based on the concrete experience of the students, which makes it possible to build a posture of responsibility towards both students. In

this way, the student will acquire greater autonomy to learn how to learn (CURY, 2019).

In line with this thought, it is essential that the physical education teacher reflects and considers the quality and quantity of learning experiences offered by the school, in relation to the sociocultural environment lived by the student outside it, in which he is bombarded by the mass industry of culture and leisure with false consumption needs, loaded with myths of health, performance and beauty, pseudoscientific information and fallacies. In short, a society that promises for many and makes it possible for few (FRAIHA, 2017).

According to the author above, there is a need to identify the values, prejudices, and stereotypes present in the environment, which are the determining background for the generation of students' interests and motivations. In this context, the educator must promote the social function of the school as a space of experiences in which a large portion of the population can have access to the practice and reflection of the body culture of movement.

In addition, for the PCN, the teacher must search ways to ensure the practical experience of the bodily experience, including the student in the elaboration of teaching and learning proposals, based on their social and personal reality, their perception of themselves and the other, their doubts and needs to understand this same reality. Only in this way can a meaningful learning environment be constituted, which makes sense to the student, in which he has the possibility of making choices, exchanging information, establishing questions and constructing hypotheses to answer them (BRASIL, 1998).

In view of this reasoning, according to LDB 9394/96, sport, preferably non-formal, of an educational nature, must also be present in the school reality. This means that the moments of this practice should serve all students, respecting their differences and encouraging them to have a greater knowledge of themselves and their potentialities (BRASIL, 1996).

This is because every human being learns to make use of body expressions, demonstrating through movements a meaning according to the context present at that moment. During Physical Education classes, it is possible to observe the emotions and movements of students, which can provide different messages emitted through body expression. However, these movements often do not seem so significant to some teachers, going unnoticed and not being observed and considered as very important bodily information to capture the senses and feelings passed on by the student (FRAIHA, 2017).

As the PCN points out:

> "Right" or "wrong" body movements are socially determined, indicating proper behavior. The establishment of cultural patterns of movement happens as if it were a natural phenomenon. The way of walking, the body posture, the way of gesticulating,

> the look, the hearing, in short, the motor behavior appears as a purely biological action. The apprehension of a certain phenomenon depends on the signic instruments available. These instruments will shape the internal and external actions of the individual and will, therefore, influence the relationships between people (BRASIL, 1998, p. 162)

In high school, the possibility of developing body language is not only in sports, but in an interaction between conventional subjects, such as arts, biology, Portuguese, etc., developed together with activities and projects involving games, dances, fights and other sports. With these works, the educator can stimulate the students, allowing them to question and solve situations, gradually acquiring behaviors and values pertinent to the group and to themselves. Thus, the individual learns to make use of body expressions, according to the environment in which he develops as a person, in short, all movement has a meaning according to a context (FRAIHA, 2017).

The National Curriculum Base in physical education for high school The National Curriculum Base – BNCC (BRASIL, 2017, 2018) is a normative document provided for in the 1988 Constitution (BRASIL, 1988), in LDB No. 9.394/1996 (BRASIL, 1996) and in the National Education Plan (PNE) (BRASIL, 2014), in which it is prepared by specialists from various areas, being a plural document, current, because it proposes a set of knowledge, which should be developed in Basic Education (early childhood education, elementary and high school).

> The BNCC is a document that clearly establishes the set of essential and indispensable learning to which all students, children, young people and adults, are entitled. With it, public and private school systems and institutions now have a mandatory national reference for the elaboration or adaptation of their curricula and pedagogical proposals. This reference is the point to which one wants to reach at each stage of Basic Education, while the curricula trace the path to get there (BRASIL, 2018, p. 5).

Thus, the BNCC presents an organic and progressive set of learning, pointed out as essential, for students to develop in Basic Education, thus, they will be assured the right to learning and development.

From the document in theory, public and private education networks and school institutions now have a national and mandatory reference to elaborate/and adapt their pedagogical proposals and curricula (BRASIL, 2017, 2018). The initial idea was to prepare a document consistent with the reality of Brazilian schools and that to achieve this goal it would be necessary to promote debates that involved education professionals and the entire civil society. However, the recently published BNCC (BRASIL, 2017, 2018) has suffered and continues to suffer much criticism and instigates theoretical analyses by education professionals, especially in physical education.

Physical Education in high school is included:

> In the area of Languages and their Technologies, Physical Education allows students to explore movement and gestures in body practices of different cultural groups and to analyze the discourses and values associated with them, as well as the processes of negotiation of meanings that are at stake in their appreciation and production. In this sense, it stimulates the development of intellectual curiosity, research, and the ability to argue (BRASIL, 2018, p. 483).

The BNCC, by situating Physical Education in the area of Languages, advances in relation to the National Curriculum Parameters of Education by inserting it, in addition to High School, in Elementary Education together with the Portuguese Language, Arts and Modern Foreign Language, corresponding to the different forms of languages and expressions and the various social practices, which result in the interaction of the self with the other and with myself, and they become knowledge, values and cultural attitudes that must be passed on to new generations This knowledge, in view of moving in Physical Education, goes beyond the organic body itself (CALLAI, 2019).

Reflecting, briefly, on the role of school education from the point of view of human formation, which is to enable students to have the historical-cultural knowledge produced by humanity and the social changes that have been occurring during history and how this influences their daily lives, their rights and duties as a citizen, that it is possible to position themselves critically in the world in which they live. Thus, Physical Education aims to teach the body culture of movement, in which body practices promote a particular and significant type of knowledge that makes sense to different students and social groups (FRAIHA, 2017).

The BNCC brings dimensions that include experimentation, use and appropriation, fruition, reflection on action, construction of values, analysis, understanding and community protagonism. Allied to this, other skills are specific to each body practice, namely: **experience**: understood as livingness; **use and appropriation**: to carry out autonomously; **fruition**: appreciating the aesthetics of sensible experiences; **reflection on action:** observation and analysis; **construction of values**: knowledge arising from discussions and experiences; **analysis:** understanding of characteristics and functioning – knowing about; **comprehension:** conceptual knowledge; **community protagonism:** attitudes or actions.

These dimensions direct the work of the teacher, who must promote an integral education to his students and based on them, search to have an advance in the same knowledge from one year to the next, as each block already provides for what should be minimally proposed in the Physical Education curricular component.

In this logic, Fraiha (2017) explains about this relationship between body, culture and movement:

> […] Moving is understood as a form of communication with the world that is constituent and constructor of culture, but also made possible by it. It is a language, with specificity, of course, but which, as a culture, inhabits the world of the symbolic. The naturalization of the PE object, on the other hand, whether by allocating it to the biological or psychological plane, removes its historical character and with it its social imprint. Now, what qualifies movement as human is the sense/meaning of moving, a sense/meaning symbolically mediated and that places it on the plane of culture (FRAIHA, 2017, p. 45).

By the characteristics of the skills, it is possible to perceive that Physical Education is a privileged area for being able to work on the various capacities of the human being, in addition to the possibility of making people critical and autonomous. There are several issues that are presented in the subject, in addition to basic knowledge, topics such as prejudice, stereotypes, ethics, violence, the environment are subjects that must be present in school planning, so that this individual has an ethical and respectful position (CALLAI, 2019).

And as a discipline you should explore what is most valuable, "moving". According to Kunz and Trebels (2016), human movement, as a "moving", is a relational phenomenon of "human-world" and is always concretized as a kind of dialogue. It makes children and young people experience not only the technique, but also have a relationship of sensitivity and affection with their peers and with nature.

In addition to the document providing for new training horizons, to contemplate the new generations that have media and electronic access, it also shows the concern with the adequacy of teachers in relation to this subject, bringing knowledge that enables this action and requesting debates during the teaching work (initial, continuing and/or in-service training). Remembering that proposals for curriculum modifications must be carried out according to the needs of each institution, which must be debated with the entire school community through the reorganization of planning, such as the Pedagogical Political Project (PPP) (CALLAI, 2019).

4.1.3 Socioemotional competences in the BNCC

Amid a reality of rapid and constant transformations, it is recognized that to achieve success, individuals must go far beyond cognitive knowledge. Increasingly, personal and professional fulfillment requires people who can solve problems creatively, live ethically, and face challenges with resilience. In other words, more than preparing students only for assessments, it is the role of education to train young people in a dimension that goes far beyond mastering the content presented (MENEZES, 2019). These skills must go beyond the cognitive

dimension and involve much deeper forms that are the emotional and psychological side of the human being, that is, socio emotional.

Conceptually, socio-emotional competencies are individual capacities related to the way of thinking, feeling, and relating to oneself and others, putting into practice the best attitudes and skills to control emotions, achieve goals, demonstrate empathy, maintain positive social relationships, and make decisions responsibly, among others (MENEZES, 2019).

Based on the above, it is understood that the BNCC also covers socio-emotional competencies. Therefore, educators must guide their work and adapt their pedagogical practices searching for the integral development of students, helping them to go beyond the domain of content. To this end, it is necessary to incorporate socio-emotional skills into school subjects and activities without, however, treating them as just another curricular component. It is interesting that the socio-emotional dimension is worked on in a transversal way, linking these competencies with cognitive development (MENEZES, 2019).

Therefore, the BNCC determines a set of socio-emotional competencies from which it develops its line of research, which are:

> 1. Creativity – Development of ideas and products that are innovative and useful for a social context from the interaction between aptitude, process and environment
> 2. Critical Thinking – Decision-making and learning of new concepts from the critical analysis of information and statements with which the individual is confronted. Evaluation of problems, solutions and proposed approaches using logic and reasoning to identify strengths and weaknesses of each scenario.
> 3. Communication – Listening, understanding, passing on and providing information through the use of speech or other media.
> 4. Collaboration – Coordination of activities in a coordinated and synchronized way, sharing tasks and problems.
> 5. Mindfulness – Perception focused on the present and its various perspectives.
> 6. Curiosity – Cultivation of a mindset that always search to learn, understand the world, and explore new ideas.
> 7. Courage – Defense of one's own will to achieve goals, taking a position and, if necessary, confronting the other.
> 8. Resilience – Ability to deal appropriately with challenges and changes, without forgo their identity and learning.
> 9. Ethics – Moral principles that guide the way people live and make decisions, worrying about what is good for society.
> 10. Leadership – Formation of ethical relationships between people concerned with achieving change together.
> 11. Metacognition – Recognition of one's own skills, attitudes, values, knowledge and learning, establishing personal goals and strategies and adapting based on the results achieved.
> 12. Growth mindset – Conviction that effort leads to progress and that obstacles consist of opportunities for personal growth (BRASIL, 2017, p. 65).

As these are aspects that must be worked on in school, it is essential that socio-emotional competencies are contemplated by the curricula at all stages of education, in order to formalize and systematize the institution's commitment to working on these competencies with students

throughout their training, especially in Physical Education.

4.1.4 State Legislation on Physical Education for High School

In order to understand how state legislation can contribute to the effective practice of Physical Education, this topic presents the official documents that regulate the discipline of School Physical Education at the state scope, in order to identify the influences of legislation on the pedagogical practice of high school teachers, specifically Physical Education, searching common points or divergences with national legislation, since the objective of this subject is to contextualize corporeality in a socio-historical-cultural approach to the game, sport, gymnastics, body expression, which includes dance, and body fights, among other similar manifestations (IVO, 2018).

Initially, since the approval of Law No. 13,415/2017, the Departments of Education of the States and the Federal District have been working to build pedagogical proposals consistent with the challenges that high school can contribute to the formation of stronger and more participatory youth.

Thus, it is pertinent to clarify that this process in Pará is taking place in public hearings for the organization of the BNCC of the new High School and that the national guidelines are regulating this level of education.

Thereby, based on the National Guidelines, the Pará State Department of Education built a preliminary proposal with the name of Support Program for the implementation of the Brazilian National Curriculum (ProBNCC), which aims to present the curricular proposal aligned with the challenges of the so-called "New High School", whose main characteristic is in the organization of the stage, based on three structuring axes, namely:

a) the need to implement the National Common Curriculum Base (BNCC);

b) the need for curricular flexibility, through Training Itineraries; and

c) the expansion of the minimum workload of high school to 3,000 hours (PARÁ, 2020).

In view of the premises, the theoretical-methodological guidelines were defined that start from a Conception of Socio-Historical Education, having as a high school perspective the Integral Human Formation of young people in their pluridiversities and territorialities, from an Integrated Curriculum, which search historically and dialectically to integrate the propaedeutic basis of the areas of curricular knowledge (Languages and their Technologies, Mathematics

and their technologies, Natural Sciences and their Technologies and Applied Human and Social Sciences) with the technical and professional dimension, which Professional and Technical Education (EPT) will provide to the high school curriculum, as well as, in its articulation with the four areas of knowledge, will make it possible to build a training process more aligned not only with the interests of young people but also with the demands of the society in which they live (PARÁ, 2020).

Thus, due to the multiplicity of aspects, the proposal of Curricular Architecture of Teaching is also added, organized in two formative nuclei: Basic General Formation (FGB), aimed at consolidating learning related to the four areas of curricular knowledge, that is, the common core of the curriculum; and for the Formation for the World of Work (FWW), responsible for deepening and expanding the learning built by students in the four areas of curricular knowledge and also in articulation with EPT, consisting of the diversified and flexible core that will take place through itinerancies (training itineraries) (PARÁ, 2020).

It is understood, therefore, that the option of an integrated curriculum and nucleated by the areas of knowledge, expands the possibilities of new curricular arrangements in high school, as well as enhances educational, pedagogical and teaching practices, for the construction of more interdisciplinary and contextualized knowledge, in view of the epistemological principle of curricular integration, which required a new organization of the structure of the stage, now arranged in new curricular units: fields of knowledge and practices of teaching, fields of knowledge and elective practices, integrated projects of areas and/or EPT and the life project as a mandatory curricular unit in high school (PARÁ, 2020).

Based on the three guiding curricular principles of basic education in Pará – respect for the various Amazonian cultures and their interrelations in space and time, education for environmental, social and economic sustainability, and interdisciplinarity and contextualization in the teaching-learning process, the proposal for the new high school in Pará aims to contribute to the formation of youth and other subjects of Pará high school, committed to their integrated human formation, as well as to the society in which they are inserted, so that they critically reflect the local, national, regional and global contexts, so that they can act as agents of social transformation.

Therefore, the bet of the Department of Education is on youth protagonism as a power of this pedagogical project, as it is understood that, with the group of engaged and mobilized students, there are great opportunities not only to guarantee the rights to education of these actors, as determined by the current legislation, but mainly the social guarantee of students' learning, with regard to more equitable processes of access, permanence and successful completion in

the final stage of Basic Education. In view of this, the Life Project gained a consubstantial expression in this proposal, to the extent that, in addition to becoming a mandatory unit throughout high school, it came to be understood as an element of integration between the nuclei of FGB and FWW, therefore, of the curriculum, to the extent that, through it, important issues such as identity, territory and social mobilization will be debated with students (PARÁ, 2020).

Thus, the perception that one has of this fact is that the reorganization of High School in the State of Pará is taking place in order to respond to the historical and social need to contemplate, in the breadth of the Pará Amazon, the different youths, who need to have their needs and expectations met, as well as to safeguard their identities and promote youth protagonism in their different contexts (PARÁ, 2020).

Based on the above, the Curricular Organization of Formation for the World of Work has as curricular principles guiding basic education in Pará: Respect for the Various Amazonian Cultures and Their Interrelations in Space and Time; Education for Environmental, Social and Economic Sustainability; Interdisciplinarity and Contextualization in the Teaching-Learning Process, which specifically provide direction for the elaboration of the pedagogical proposal of Physical Education teachers.

4.2 PEDAGOGICAL PROJECT

4.2.1 Pedagogical Project at School

The organization of educational work is related to systematized knowledge that involves questions such as "how much", "when", "what" and "how" to teach, translating into planning related to the curriculum, which are concretely presented in the forms of selection, organization and seriation of teaching contents, as well as the pedagogical practices required for the implementation of such decisions (SAVIANI, 2016).

This leads us to discuss the function of the school in an illustrative character, since it is the reflection of the desires of society, since this institution constitutes a space in which the subject aware of his rights and duties must be formed, in which social values and attitudes are affirmed. In addition to the primary functions of the school, are to transmit technical and scientific knowledge and provide access to multiple cultural manifestations; and producing and reproducing culture, as well as building learning about social participation (SAVIANI, 2016).

The subject above refers to emphasize the democratic management in public education, which is provided for in item VIII of article 3 of Law No. 9,394/96, which must be the articulator to enable the school community to discuss the education it wishes to build, with the adoption of strategies that promote its participation in the administration of the school. This implies the development of processes that favor the joint action of the subjects in decisions and in their formation, such as the Pedagogical Political Project (PPP) (VEIGA, 2016).

Thus, to speak of PPP is to consider a guiding document for school actions that must be prepared by the entire school community with the objective of guiding educational practices throughout the school year. In addition to expressing teaching for all, situating the school in a universe of identities, conflicts, diverse knowledge and problematization of social issues in a process of participatory construction, in which all subjects must assist in the elaboration, implementation and evaluation of the project, aiming at training for citizenship (VIEIRA, 2015).

Regarding the stage of construction of the PPP, it is worth emphasizing its complexity, since it presupposes the articulation between different ideals and cultures, as well as conflicts and contradictions (VEIGA, 2010). Therefore, it is necessary to "[...] eliminate competitive, corporate, and authoritarian relationships, breaking with the routine of personal and rationalized command of bureaucracy and allowing horizontal relationships within the school" (VEIGA, 2016, p. 1). Therefore, it is necessary to gather visions of reality from different perspectives, to make it possible to meet the needs of the segments and achieve legitimacy for the implementation of the planned actions.

In the view of Gadotti (2016), a project cannot be built without a political direction, since it is a set of proposals for concrete actions that will be executed in each time aligned with the social function of the school. Therefore, every pedagogical project is also political and always an inconclusive process, a step towards a goal that remains as a horizon, since it needs to be evaluated to achieve this horizon, as well as requiring a continuous process of planning, implementation and evaluation of school work, so that the PPP should not be seen as something closed, but open and unfinished, aiming to reach the collectively defined north.

In this way, the pedagogical project is characterized by the set of guidelines and strategies that express and guide the practice of all those involved with the dynamics of any course. It is not restricted to the mere organization of curricular components, but to the adoption, by the actors involved (school principal, coordinators and teachers), of an effective scientific and technological positioning (VEIGA, 2016).

This position should be centered on an epistemological unity and on monitoring the state of the art of the various areas of knowledge of the course, always compatible with its objectives

with the principles, mission and conditions of the educational institution, also considering the educational policy in force in the country and its legal framework. It requires from these actors a continuous process of reflection on the identity of the course and the commitment to the quality and effectiveness of their actions (LIBÂNEO, 2015).

For the author in question, (2015), the pedagogical project refers both to the expression of the school's organizational culture and its educational practice and development. In addition, it must be adjusted to the beliefs, values, meanings, ways of thinking and acting of the people who elaborate it, to become a set of principles and practices that reflect and recreate this culture, with a view to intervening and transforming reality (VEIGA, 2016).

In this sense, the PPP, therefore, goes beyond the dimension of guiding the practice of producing a reality, as the present reality is known, reflects on it and outlines the goals/coordinates for the construction of a new reality, proposing the most appropriate ways to meet the social and individual needs of the students.

Consequently, it is perceived that the pedagogical project should be understood as an instrument and process of school organization, because it considers what is already instituted (legislation, curricula, contents, methods, organizational forms of the school), but it also has an instituting characteristic, whose meaning goes through the indicative of establishing, creating objectives, procedures, instruments, ways of acting, structures, habits, values, that is, it institutes an organizational culture. In general, it synthesizes the interests, wishes, desires, and proposals of the educators who work in the school (LIBÂNEO, 2015).

It is reiterated that the project should be evaluated throughout the school year to verify if the actions are corresponding to what was planned, if the goals need to be changed due to unexpected facts, to correct deviations, make new decisions and replan the course of the work. The project is a guide for action, because it foresees, gives a political and pedagogical direction to schoolwork, formulates goals, institutes procedures and instruments of action (VEIGA, 2016).

In pedagogical terms, it is pertinent to mention that it is representative of a conception of education that considers pedagogy as the systematic reflection on educational practices, resulting from this reflection the formulation of objectives and formative means to give direction to the educational process.

Regarding the pedagogical action, there is the understanding that it does not refer only to "how it is done", but, mainly, to "why it is done", through orientations of the educational work for the social and political purposes desired by the group of educators. A critical view of Pedagogy assumes that having a pedagogical attitude is to give a direction of meaning, a

direction, to educational practices, wherever they are carried out (LIBÂNEO, 2015). This attitude has the following characteristics:

> a) It understands education as a social practice of active assimilation of the historically accumulated and culturally organized human experience, therefore, as a mediation of culture;
> b) this practice of cultural mediation is aimed at the development of human capacities, according to the concrete social needs and demands placed on humanization (human emancipation) in each social historical context, a context that is always changing;
> c) Formulates objectives and implements the organizational and methodological conditions for the feasibility of the educational activity (LIBÂNEO, 2015, p. 87)

The pedagogical project concretizes the planning process, so that "planning" is going through the various phases of project elaboration. The process of elaborating the project can begin with a general, schematic plan, formulated by a committee of pedagogues and teachers. This preliminary draft is intended to launch the process and mobilize people for public discussion and project elaboration.

For Gandin (2019, p. 95), the topics that make up a roadmap for the formulation of a pedagogical-curricular project are:

Contextualization and characterization of the school - this aims to characterize the economic and sociocultural context in which the school is inserted, describing the human, physical and material aspects. This information is considered relevant to the project (GANDIN, 2019, p. 95).

Conception of education and school practices - here is a synthesis of the "thinking" of the team of teachers and pedagogues about education and curriculum, based on social demands and needs and on their own beliefs, values, meanings. It is considered that the pedagogical-curricular project reflects expectations of society and educators themselves about the meaning of "educated student" and for what type of society it is educated (GANDIN, 2019, p. 95).

Diagnosis and analysis of problems and needs – corresponds to the socioeconomic and cultural characterization of the context of school action. The diagnosis, carried out from the collection of data, aims to analyze and explain the situation, articulating the problem and its internal and external causes. However, if the school has never made a complete diagnosis, it is good to do it, a first time and redo it from time to time. In this case, a socioeconomic, cultural, and legal characterization, of the physical and material conditions, of the technical and teaching staff, of the school enviroment, type of management, relationship with parents and the community is appropriate (GANDIN, 2019, p. 95).

Problems can be grouped into pedagogical, administrative and financial, in which they

can be raised in a meeting or listed by a committee composed of teachers and pedagogues. For Gandin (2019), among the administrative and pedagogical problems that a school faces, it is possible to emphasize:

a) The lack of communication between the management and the teachers;
b) Lack of definition, of responsibility in the team;
c) Entry and exit of students in a disorderly manner;
d) Excessive verbal aggression or physical violence during the break;
e) Distribution of meals inappropriately with prejudice to the progress of classes;
f) Lack of integration between the teaching plans of the subjects;
g) Lack of criteria for failure of students by the school;
h) Generalized difficulty in reading and interpreting texts by students.

Organizational structure - refers to the description of the operating structure and means of organization and management, responsibilities, ways of streamlining the management process.

Curriculum proposal - specifically aimed at defining the school's role in the teaching and learning process through the curriculum. The curriculum proposal includes the curriculum organization itself and the pedagogical-didactic organization, where its evaluation will be procedural-summative, including the collection of data, the analysis of results, the permanent redefinition of objectives and means. This evaluation should provide the necessary data to intervene to correct coherence (relationship between the project and the problem), efficiency (management and administration of resources and means) and effectiveness (relationship between action and results) (GANDIN, 2019, p. 97).

Therefore, the curriculum is the core element of the pedagogical project that makes the teaching and learning process possible. It is an unfolding that materializes intentions and orientations foreseen in the project into objectives and content. The curriculum proposal is the practical orientation of action according to a broader plan, it is a level of planning between the pedagogical project and practical action.

4.2.2 Stages in elaboration the political-pedagogical project

a) Elaboration

According to Guedes; Silva and Garcia (2017), at this stage there should be critical reflections on society, the relationships between subjects, the school reality and the actions developed by the educational institution, in order to raise awareness of the role of each segment. At this stage, subjects need to be made aware of the importance of the participation of professionals, students, parents and the community. In this regard, Garcia and Queiroz (2019, p. 119) state that:

> [...] in constructing their project, the subjects not only define the rules that govern the collective and its identity, but also reconstruct their relationships and school practices, which makes them aware of the group's possibilities and capacity to carry out a collective education project.

Although the PPP is designed to be implemented in the medium term, it needs to be updated annually so that it can guide the necessary changes to promote the ideal of collective education. For this reason, Veiga (2016, p. 8) states that it should be drawn up,

> [...] requires in-depth reflection on the aims of the school, as well as an explanation of its social role and a clear definition of the paths, operational forms and actions to be taken by all those involved in the educational process. Its construction process will bring together the beliefs, convictions and knowledge of the school community, the social and scientific context, constituting a collective political and pedagogical commitment. It needs to be conceived based on the differences between its authors, be they teachers, administrative staff, parents, students and representatives of the local community. It is therefore the fruit of reflection and research.

In this regard, Veiga (2016, p. 157) also points out that drawing up the PPP is the first stage to be developed, and should be based on the definition of a:

> [...] a conception of society, education and schooling aimed at human emancipation. When it is clearly delineated, discussed and assumed collectively, it is constituted as a process. And by constituting itself as a process, the political-pedagogical project reinforces the integrated and organized work of the school team, emphasizing its primary function of coordinating the school's educational action so that it achieves its political-pedagogical objective.

The PPP is designed to constitute and institute decisions and actions for the future steps that will make the collectively defined school, society and citizenship project a reality. Therefore, an instrument of this magnitude cannot just be drawn up by a small group or by professionals unaware of the culture and daily life of the institution, but needs to be the result of dialogue, debate and plural participation, so that practices of this kind can constitute the

culture of the school organization (LIBÂNEO, 2015).

In the meantime, it is up to the management team to articulate and mobilize the subjects for these discussions and coordinate the school's work, together with the council, but it must not lose sight of its commitment to the diversity of opinions at all stages of the PPP. Because it is in building consensus, leading subjects to reflect, position themselves and define actions, that they can incorporate conceptions of citizenship into the culture of the school organization.

b) Implementation of the school's pedagogical proposal

In this phase of implementing the PPP, care must be taken to ensure the principle of participation and the constant resumption of dialog, as well as the others. Garcia and Queiroz (2019, p. 123) consider that "[...] implementing the political-pedagogical project, with democratic management as a principle, requires professionals to build spaces for dialog, investigation of reality, collective work and ongoing training."

Given this context, to put the plan into practice, it is necessary to assign responsibilities to the actors and monitor how the actions are being carried out. Otherwise, without due attention, this will lead to losses and possibly the plan not being implemented in the desired way and within the desired timeframe, so that, as Libâneo, Oliveira and Toschi (2016) analyze, it is necessary to manage participation so that the results of the established actions are not lost.

In this sense, the authors consider that "[...] participation implies management processes, ways of doing things, the coordination and collection of work and, decisively, the fulfillment of shared responsibilities, according to a minimum division of tasks and a high degree of professionalism on everyone's part" (LIBÂNEO; OLIVEIRA; TOSCHI, 2016, p. 458).

As a result of the above, the construction of the PPP is complex, since the school is part of a diverse social and cultural context, rich in identities. Thus, the challenge lies in managing this diversity and building its own identity and culture that unite and guide the relationships between subjects. Therefore, plurality, both of identities and ideas, strengthens the proposal for an education that respects Human Rights (HR), because once differences are valued, it undoubtedly becomes fundamental for the PPP to become a learning process for the exercise of citizenship.

In this way, the collective implementation of the PPP requires the continuity of the actions defined by the subjects. In this sense, it implies that the school's management plays an essential role, since the project's implementation time goes beyond the term of office of the

manager, who generally only holds the position for two years. These assumptions allow for continuity of purpose beyond the permanence of the management team, which is responsible for mobilizing and bringing together the subjects. Building actions with a view to valuing education as a right requires continuous practices, not restricted to one administration, so that values and concepts are shared and incorporated by the subjects as they experience the various phases of the project. Veiga (2016, p. 14) states that:

> [...] in a school organization that wants to be democratic, in which participation is an inherent element in the achievement of goals, in which collective and individual practices are sought and desired, based on decisions taken and assumed by the school group, leadership and a firm will to coordinate, direct and command the decision-making process as such, and its implementation, are required of the management team, which is part of this group.

It should also be pointed out that managers play a fundamental role in implementing the project, which must be based on data from the school's reality, obtained through continuous evaluation of the actions undertaken. The democratic nature of the school requires this process to be carried out collectively. In this sense, according to Vasconcellos (2016, p. 62),

> management involves strategies, where communication plays a fundamental role, as a starting point for everyone to understand each other. It is therefore important for the manager to discuss possible solutions and promote negotiations, to take responsibility and let others take responsibility too; to be heard, but also to listen, to value the positive aspects of the group, making clear their intentions for the school and to ensure total transparency in all actions.

Thus, the institutional evaluation process cannot be understood in terms of management models centered on authoritarianism and discontinuous actions with little commitment to the community. On the contrary, the implementation of the PPP must be a continuous action that requires planning, execution and evaluation of integrated actions based on data from the school's reality. Finally, evaluation is an important stage in understanding this reality and ensuring that the horizon of education is not lost.

c) Evaluation of the pedagogical project

This stage of evaluating the process and the product of the work is a dimension that allows the subjects to identify and overcome existing problems and to (re)direct actions so as not to deviate from what was planned. Analyzing the information obtained enables learning to take place to avoid repeating mistakes.

In this deduction, the evaluation of the institution has a formative nature, although it

goes beyond the control of actions and the reproduction of reality, because it supports the improvement of this work. In this way, “[...] evaluating the school's political-pedagogical project makes it possible to increase the quality of schoolwork, as well as strengthening the participation and autonomy of the subjects [...]” (GARCIA; QUEIROZ, 2019, p. 126). Evaluation is therefore an important tool for school management, as it provides fundamental information for improving the quality of teaching, searching to overcome difficulties and find new paths. According to Garcia and Queiroz (2019, p. 126), the

> [...] evaluation supports school development in all its dimensions and encompasses all school subjects, contributing to the development of both the student and the educator. It is based on a process of reflection on learning, whether by school professionals in the implementation of the educational project, or by teachers and students in the classroom, considering the objectives set, the current situation and group or individual progress in various circumstances.

Evaluating in this way means being open to the challenges of reality and prioritizing the involvement of the entire school community, not aiming to punish culprits or rank subjects according to their performance. This would be the kind of summative assessment that prioritizes results, comparisons, measurements, classifications and ranking of people and their actions.

Because of this potentiality, “[...] evaluation is then reduced to verifying that the planned actions have been carried out in accordance with the guidelines, constituting an authoritarian exercise of power” (GARCIA; QUEIROZ, 2019, p. 125). It should be noted that the PPP should serve as a reference for institutional evaluation, because it is the PPP that provides the data for updating actions, given that the data obtained guides their replanning. In this sense, Fernandes (2016, p. 58) points out that:

> [...] the pedagogical project and institutional evaluation are closely related. The absence of one of these processes, or their separation, will damage the school itself. Without a pedagogical project that delimits the intentionality of educational action and offers horizons for the school to project its future, the reference for all the work and its basic conceptions will always be lacking. Evaluation, on the other hand, is a guiding process for understanding and redirecting the Pedagogical Project. Without it, this project is lost, because it doesn't know to what extent its actions have had the desired effect and what they are leading to [...].

According to the author above, this process of a close relationship between the PPP and institutional evaluation has a positive impact on the quality of work. However, it is necessary to monitor whether the proposal for human rights education is being consolidated as planned.

This means analyzing whether the values, attitudes and practices that express this training are also those that guide the relationship between the subjects within the schools, and evaluating which actions need to be reinforced and which problems need to be solved.

Collecting data of this nature therefore requires extensive consultation with the subjects, with a view to improving the process of implementing the project itself. As actions are developed, implemented and evaluated, it is possible to get closer to the ideal of education proposed collectively to guarantee the right to quality education for all. That's why it's important:

> [...] to base the political pedagogical project on the principles, values and objectives of human rights education, which should cut across all the actions in which the curriculum materialized. It is therefore proposed that the school curriculum should include content on the social, environmental, political and cultural reality, dialoguing with issues that are close to the reality of these students (BRASIL, 1998, p. 14).

It can be seen that schoolwork needs to be thought out in a planned and articulated way and this is only possible with work guided by a collectively built instrument such as the PPP, whose instrument makes it possible to build an education based on the principles of coexistence, conflicts and the search for solutions, important values for healthy coexistence in the school context. Just as human rights education allows for the construction of a participatory and experienced PPP, a political-pedagogical project that portrays reality can also be evaluated as a plan based on the realization of human rights at school.

4.2.3 Pedagogical Project and the Physical Education for High School

4.2.3.1 The New High School

Regarding secondary education, the approval of Law No. 9.394/1996 (Law of Guidelines and Bases of Education) recognized this level of education as the final stage of basic education. Likewise, it was aligned with the policies designed by the World Bank, as can be seen in Art. 35, item II: “[...] basic preparation for work and citizenship, to continue learning, so as to be able to adapt flexibly to new conditions of occupation or further improvement” (BRASIL, 1996, p. 48).

There is an emphasis on the curricular change made up of training itineraries: languages and their technologies; mathematics and their technologies; natural sciences and their technologies; applied human and social sciences; technical and professional training, representing 40% of the curriculum's workload and leaving it up to young people to choose one of these itineraries. The other 60% of the curriculum, as already provided for in the BNCC (2018), is for the common curriculum, with Portuguese and Mathematics being compulsory subjects.

Thus, the current reform expressed in Law 13,415 of February 16, 2017, states that the other subjects are diluted into areas of knowledge, in other hands, they lose their autonomy and specificity. It is important to note Taffarel and Beltrão's (2019, p. 08) assertion when analyzing the technical and professional training itinerary brought about by the law, in which they state: "[...] the new high school tends to promote early specialization under a precarious/reduced base (general training), in other words, they point to radicalized unilateral training".

This formulation aims, on the one hand, to reduce the number of subjects that students will take during high school and, on the other, to make each training itinerary attractive, established, theoretically, according to the personal interests of each student, assuming that such measures would make this stage of basic education less likely to fail (FERRETI, 2018).

Based on this assertion, it is worth stating that curricular reforms are increasingly adapting to the logic of the demands engendered by organizational changes in the market and the world of work, emphasizing that, when used in the world of work, the notion of competences defines the particular contents of each function in the organization of work, resulting in the redefinition of contents according to the demands of technological innovations (RAMOS, 2017), thus transferring human formation to the school, which gives rise to the named pedagogy of competences.

Another point worth emphasis, both in the reform of high school and in the BNCC for this stage of education, concerns the emphasis on youth protagonism in school, which also harks back to the dusty old discourse of the 1990s, as expressed by Ramos (2018).

Ferretti, Zibas and Tartuce (2014, p. 417), when analyzing the presence of youth protagonism in high school reform, define youth protagonism as intertwined with resilience, understood as "[...] the ability of people to resist adversity, using the experience thus acquired to build new skills and behaviors that allow them to overcome adverse conditions and achieve a better quality of life". Thus, poor young people who are committed to overcoming individual and family adversity and young people from the middle classes who, sensitized, can carry out "voluntary" actions in favor of the impoverished sectors of society are called upon to live out their protagonism.

It is worth mentioning that the BNCC emphasizes acting in a resilient, autonomous, responsible, flexible and determined way as one of the competencies to be developed in the basic education training process: "Acting personally and collectively with autonomy, responsibility, flexibility, resilience and determination, making decisions based on ethical, democratic, inclusive, sustainable and solidarity principles" (BRASIL, 2018, p. 10).

The discourse of competence, flexibility and skills is therefore "[...] covered with the

mantle of humanist, solidarity and citizen values" (TONET, 2020, p. 06). The BNCC affirms the need for secondary education to provide experiences that enable young people to "[...] prepare for work and citizenship" (BNCC, 2018, p. 465). However, it is worth remembering that, according to Tonet (2020, p. 07), modern citizenship is constituted by capitalist labor relations and is therefore bound by their determinations.

In addition to the notion of citizenship, the BNCC is based on humanist values and solidarity, as can be seen in the emphasis that the purpose of high school is to search "a more just, ethical, democratic, inclusive, sustainable and supportive society" and that in order to achieve this, the school must become a space for learning to respect oneself and others; understanding and valuing Brazil's cultural and ethnic-racial diversity; non-violence and dialogue; combating stereotypes, discrimination and violations of the rights of people or social groups; political and social participation; and building "personal and collective projects based on freedom, social justice, solidarity, cooperation and sustainability" (BRASIL, 2018, p. 466-44). 466-467).

4.2.3.2 Physical Education in High School

Over the course of its constitution, Scholar Physical Education has undergone different changes in its legitimate discourses and legal landmarks, something that requires it to move from a space for activities ("exercising") to a field of thematization capable of pedagogically dealing with themes related to the body culture of movement and producing knowledge about these themes (ALMEIDA; FENSTERSEIFER, 2018).

In Brazil, scholar physical education has been legally supported since the Couto Ferraz Reform of 1851, during the Empire. Nowadays, with the promulgation of LDBEN, Law No. 9.394/1996, this subject is now a curricular component of basic education integrated into the school's pedagogical proposal, adjusted to the age groups and conditions of the school population (BRASIL, 1996).

Therefore, it should not be seen in isolation, but as part of the pedagogical proposal of the school where it is inserted. In turn, this pedagogical proposal must be subsidized and supported theoretically; and protected and appropriate to the purposes indicated in the LDB itself.

Thus, understanding the daily routine of Physical Education in High School involves considering that the teacher's pedagogical action is influenced by organizational, socio-political and cultural factors, so that the act of teaching does not occur in isolation from the

characteristics of the society in which the school is inserted (CAPARROZ, 2017).

Converging on this point are the PCNs, in their volume on Physical Education, which point out that it is the PCN's task to guarantee students' access to body culture practices, contribute to the construction of a personal style of experiencing them and offer instruments for a critical appreciation of these experiences (BRASIL, 1998). Allied to the promotion of these practices and their critical appreciation, they must consider the daily lives of students, teachers, the local reality and the values that are present there.

In this same sense, both the LDB and the PCN give autonomy to an integrated pedagogical proposal for education, in which Physical Education is included, with attributions and responsibilities for the school and its teachers regarding the elaboration and implementation of educational action appropriate to the different realities and social demands described in the PPP. Given this autonomy, every teacher, especially the Physical Education teacher, must bear in mind the need to master the syllabus; to know their students, their school and their community; to develop an appropriate pedagogical proposal that has meaning for their own group (DAOLIO, 2017).

Physical Educatiom (PE), as a compulsory curricular componente of basic education (BRASIL, 1996) has the task of dealinng pedagogically with knowlegde of na area of human culture that can be called Body Culture (BC).

This knowledge represents and materializes the collection of immaterial goods produced historically and externalized by bodily action as a synthesis of ideological, political, philosophical and social experiences, in playful, agonistic, competitive senses, among others, in the form of games, fights, dances, sports, gymnastics and other bodily manifestations (ESCOBAR, 2017).

This theoretical-methodological conception of school PE refers to the understanding of Pedagogical Work as:

> [...] a social practice with form and content, expressing, within its objective possibilities, the dominant political and ideological determinations in a society, or even search to explain how these determinations can be overcome (FRIZZO; RIBAS; FERREIRA, 2013, p. 556).

The teacher's pedagogical work is based on the category of work (MARX, 2010), on the essentially human activity that, in this case, takes shape and expression in dealing with school knowledge.

In these terms, the teacher's social practice, and consequently their pedagogical work, requires the choice of a theoretical-pedagogical proposal that dialogues dialectically with everyday social practices, elevated to a more elaborate scientific level. Therefore, it is through

the mediation carried out by the teacher between pedagogical theory, knowledge and the student that praxis is produced as an objectified social practice in its entirety, enabling an activity that transforms the concrete social reality of these subjects (PRADO; LIMA, 2016).

The practice of Physical Education at school can encourage students' autonomy in monitoring their own activities, regulating their efforts, setting goals, knowing their potential and limitations, and being able to distinguish between situations where physical work can be harmful to their health. For this reason, it must be integrated into all education plans, whether in the Pedagogical Political Plan, in planning and other school projects, and no longer treated just as an “extra” activity with no importance or foundation, since the school currently has the task of developing students' skills so that they can fully integrate and live in society, and among these skills is the development of psychomotor skills (KUNZ, 2018).

Physical Education, at the current juncture of major debates about the curriculum and pedagogical work in secondary education, is a curricular component that, in its particularity, concretely concretely expresses the historical disputes and debates about school education at this level, increasingly conditioned to the demands of the world of work, to the detriment of a broader training process, focused on the appropriation and learning of science, art, philosophy and body culture, which can effectively contribute to promoting the general development of adolescents at this level of education (DIAS JÚNIOR & ROSA, 2021).

In this way, the organization of the study activity for Physical Education through study tasks and their corresponding actions and operations, allows students to assimilate and convert school content, synthesized in the form of scientific concepts, into theoretical thinking. It should be emphasized that the pedagogical work with Physical Education, at any stage of Basic Education, cannot be guided by the explanation and direct demonstration of body culture activities by the teacher, a pedagogical practice that is still predominant in the school teaching of this subject (DIAS JÚNIOR & ROSA, 2021).

4.2.3.3 Pedagogical Project and Physical Education in High School at SEDUC-PA

It is well known that today's society requires schools to educate students who are participative, critical and creative, as is the legal basis for education. Therefore, a pedagogical proposal is seen only as a starting point in a tangled list of functions in the education system, in other words, it is the beginning of a long journey, completely dependent on the teachers, students and other subjects who will use it in educational institutions.

In the pedagogical project, the content of Physical Education is historically constituted

of bodily materiality and should be organized by the theoretical foundations of Body Culture and by the Structuring Contents - Games, Sports, Dances, Fights and Gymnastics - which traditionally make up school curricula and identify the discipline as a field of knowledge, as well as allowing the teacher to develop a quality educational process, providing students with learning not only of movement or sporting gesture, but also developing social and cognitive aspects, as well as quality of life (ZAGO, 2014).

Thus, the PPP and Physical Education in High School must be geared towards the reality of the students, the social context, to resize the activities, welcoming the needs and specificities of the students, the family contexts, the school community and daily life, reaffirming how much this institutional theoretical-pedagogical trajectory enhances reflection and educational practice, the proposal being a document that needs to be constantly rethought and revisited (PACHECO, 2018).

In this sense, to project the individual's integral formation, it is necessary for the curriculum to go beyond the definition of the formal in order to understand it and take it on in the informal dimension, especially in the aspects of human relations and socio-cultural contexts. Thus, in the General National Curriculum Guidelines for Basic Education - CNE/CEB Opinion 07/2010 (p. 18), the school curriculum is defined as “[...] a set of values and practices that provide the production and socialization of meanings in the social space and that contribute intensely to the construction of students' social and cultural identities”.

In this way, it is understood that to direct this intentionality, it is necessary to comply with what the LDB establishes in all its amendments. In this regard, Law 12.796 of 2013, which amends LDB 9.394/96, in Art. 26 defines that the curricula of early childhood education, primary education and secondary education must dialogue with the BNCC, to be complemented, in each education system and in each school, by a diversified part, required by the regional and local characteristics of society, culture, economy and students. In addition, the curricula must cover the study of Portuguese and mathematics, knowledge of the physical and natural world and social and political reality, especially in Brazil.

The educational process is systematic and intentional. For this reason, the curriculum must include knowledge, experiences and pedagogical practices to be experienced by the school. It is the core element, in which the teaching and learning process is made possible and, according to (LIBÂNEO, 2015), the school's intentions have materialized, in this case, from the perspective of the integral formation of the person.

Physical Education, therefore, integrated into the pedagogical proposal of the school and SEDUC/PA, is a compulsory curricular component of basic education, and its practice is

optional for students, according to Law 10.793/2003 and Decree-Law 1.044/69.

4.3 DIGITAL RESOURCES USED IN EDUCATION

About this topic, the United Nations Educational, Scientific and Cultural Organization (UNESCO) proposes important regulatory guidelines with regard to the formulation of public policy strategies for formal and non-formal education, in order to achieve the following benefits: (1) greater active and democratic participation; (2) greater awareness of the ethical responsibilities of global citizenship; (3) attention to diversity; (4) openness to dialogue; and (5) promotion of tolerance (UNESCO, 2016).

Thus, although it is not the pinnacle of the communication/education/digital technology tripod, it implies that in terms of importance in the teaching-learning process, technology is a necessity for the development of education in these new times.

Therefore, Information and Communication Technologies (ICTs), according to Kenski (2017, p. 23), are more than support or reinforcement, as “they interfere in our way of thinking, feeling, acting, relating socially and acquiring knowledge. They create a culture and a new model of society”.

Accordingly, the ICT’s make it possible to develop collaboration between those who teach and those who learn at all levels and in different teaching dynamics and methodologies. Thus, it can be inferred that the teacher can be the mediator by making direct use of these tools, digital media and electronic devices in their classes or indirectly by planning, organizing and structuring teaching content and their pedagogical practice.

It is undeniable that ICTs, on the one hand, have influenced and transformed social interactions and, on the other, have enriched teaching methods in all teaching modalities and in the composition of the most varied contents, as well as providing the great growth of the Distance Education (DE) modality. This is due to the great progressive advance of the technological revolution through the computerized network, whose possibilities offer rapid communication between people in different locations and the expansion of different teaching modalities, such as Distance Learning Courses, which have expanded and evolved in increasing order all the time through this revolution, which has the purpose of bringing formal education to the poorest and most distant points of the country's capitals, where it was not possible before, contributing to a more just, ethical and egalitarian society (KENSKI, 2017).

In this way, it is understood that the technologies used in education can transform

teaching in contemporary society, as well as the stagnant forms of traditional education. This is the case with some types of education, such as Special Education, whose technologies facilitate learning and the social inclusion of people with disabilities, with the possibility of a comprehensive education and often alleviating their physical needs through technological devices and appropriate programs (MARTINS, 2015).

It is common knowledge that to be a professional who is more adept at using digital resources to achieve new knowledge, the Physical Education teacher must be aware of the new practices that involve the profession, as well as the courses that add new knowledge to their daily lives.

Understanding the importance of digital resources used in education, and training teachers to integrate the objectives of advancing the universe of students is fundamental to benefiting the teaching and learning process (ALEGRIA, 2017)

Thus, in contemporary times, with technological advances mediated by informatics and microelectronics, along with the significant popularization of computers, through smartphones and tablets, which have brought new skills and behavioral requirements to the school environment and, consequently, to the work of the teacher, given that it has been increasingly imposed on this professional to acquire greater autonomy to use the resources and technological tools available, with creativity and in order to streamline and enrich the teaching and learning process. In this context, Physical Education is included as part of the curriculum component of Basic Education, as it is not outside this educational panorama, whose functions of the teacher of this discipline permeate the task of relating the universe of knowledge worked on at school to the universe of the student, mediated by digital technologies (MARTINS, 2015).

In view of the transformations that have been taking place in society, it is possible to consider that we are living in times of discussion that allow us to reflect on information and communication technologies in the context of Physical Education.

To this end, the media have emerged as disseminators and promoters, taking on the role of information and communication. In the school environment in particular, their contribution is relevant to the point of providing the interrelationship needed to form a holistic view of learning. It is worth remembering that regarding the diversities that will appear, these should promote a perception beyond what is required, in its totality a moment of acceptance or not of diverse cultures will be formed, in which equality should emerge as a right and prejudice as a negative point that denounces a dualistic society (ALEGRIA, 2017).

Along these lines, it should be noted that these new technologies and teaching techniques, combined with modern studies on learning processes, make more effective

resources available to assist and motivate those involved in the teaching-learning process, since educating “for” and “in” the planetary era consists of considering man in all his complexity, circumscribed on planet Earth and, therefore, in communication with all other living beings in nature. This includes children and young people, regardless of whether they are considered “digital natives” - since the term is quite controversial - as they already live in the age of the web, of connections between everyone and between information and people (MORIN, CURANA; MOTA, 2016).

In this sense, it is an observation of reality, which shows the emergence of a new generation of human beings, who have the digital world as a key source of information and communication. From this context, these digital technologies are identified as great methodological didactic potentials (PONTES, 2016).

4.3.1 Websites and Databases used in Physical Education

Nowadays, the world of communication - magazines, radio, TV and cinema - involves and dominates man and tells him about his desires and what it wants him to have as objects of desire. The interactions made with media communications open up the horizons of thought, create fantasies, involve and seduce emotionally, for example: the mix between images, movements, colors and provocative texts mobilizes feelings and creative thoughts, transmits new forms of languages in which thinking and feeling are present; the audiovisual culture that gives rise to a new language, assumed by contemporary society; the language present in classrooms - with or without the use of media equipment and technologies - and which contributes to the appearance in didactic work (ALEGRIA, 2017).

Technological advances have therefore reoriented reading at school towards other texts and images. As a result, the act of reading is historically transformed, as there is no longer just the obligatory reading of heavy classic science compendiums or closed texts, full of varied cultures, some of which are incomprehensible to their young readers. In contrast to short texts, posters interspersed with images, drawings, films, literature and conversations mediate between classic texts and digital hypertexts. In the meantime, schools need to invest in training readers in different ways and languages to broaden their conceptions of language, reading and writing to incorporate the textual mediations made by digital technologies (CASTELLS, 2020).

Certainly, for many primary school students, researching on the internet can be reduced to Google searches. However, teachers can help expand understanding of how to use the web for learning and building knowledge by introducing academic search tools. These portals,

websites, databases and digital platforms bring together theses, dissertations, scientific journals, articles, book chapters and other content produced by universities and researchers that can be accessed free of charge.

The following are some of the sites and databases used in education: Virtual Health Library, Scielo, Google Scholar, Microsoft Academic, Electronic Journals, E-Books.

53

a) VIRTUAL HEALTH LIBRARY - This is an initiative of the Brazilian Institute of Information in Science and Technology, which brings together theses and dissertations produced throughout the country or by Brazilians who research and publish abroad.
b) SCIELO - The Scientific Electronic Library Online is a database that collects scientific articles developed in Brazil and Latin America and makes the full content available.
c) GOOGLE ACADEMIC - Academic works, school literature, university journals, book chapters and various articles are all part of the database of this search engine, whose Portuguese version was launched in 2006. Each item shown is accompanied by important information, such as the type of material, authors, publication and number of citations.
d) MICROSOFT ACADEMIC - Free search mechanism that offers access to more than 38 million academic publications in several languages, as well as graphics and images.
e) ELETRONIC JOURNALS - Access to full texts of national and international journals.
f) E-BOOKS - Access to full texts of national and international books.
g) THE ELETRONIC TEXT - The electronic text is characterized by presenting a new form of language, synthesis and mediation between the oral, the written, the imagetic and the digital, the hypertext.

> (...) it is a different verbal product, a product of a new time, conveyed by a new medium that also affects both the nature and appearance of the texts and the processes of appropriation and signification by readers. It is a hybrid text that, while “written”, makes use of oral resources and icons to become closer to natural conversation (ROCCO, 2016, p. 65).

Based on this statement, this new language mixes the functions of reading and writing, since “the browser therefore participates in the writing of the text they read” (ROCCO, 2016, p. 57). In this interactive participation in the structuring of a text, it is only up to the browser to choose which pre-existing links will be used, but to create new links that will make sense to them, and which will not have been thought of by the creator of the hyperdocument.

BROWSER - The browser (program through which you enter and browse web pages) interacts with the text and the reader. It makes it possible to relate the block of information in a

document to other texts that the browser has already read, and which are stored in the computer's memory. It can also link to new texts on the web, to other explanations of the same topic, or to other topics.

It is explained that readers can interact not only by modifying the links, but also by adding or modifying the nodes (texts, images), in addition to connecting one hyperdocument to another and thus transforming into a single document two hypertexts that were previously separate or, according to the point of view, drawing hypertextual links between a large number of documents (LÉVY, 1999, p. 57).

According to the author above, it is deduced that the browser interacts with the text and with the reader. That is, it makes it possible to relate the block of information in a document with other texts that the browser has already read and that are stored in the computer's memory. And it can also lead to new texts on the networks, to other explanations on the same theme, or to other themes, that is, as a point of view, to draw hypertextual links between a large number of documents (LÉVY, 1999, p. 57).

4.3.1.1 Portals used in Physical Education

Several digital platforms can be used free of charge by students and education professionals.

> PERIODICALS PORTAL - This portal is maintained by the Coordination for the Improvement of Higher Education Personnel (CAPES), whose platform provides the full content of articles from Brazilian and international scientific journals. In addition, it has integration for research in other academic databases. SIBI - INTEGRATED LIBRARY SYSTEM OF THE UNIVERSITY OF SÃO PAULO - It is a Portal of the University of São Paulo, which covers 250 thousand titles of electronic books and about 20 thousand titles of periodicals, in addition to the contents, available through the Digital Libraries of Rare and Special Works, Theses and Dissertations and in more than 65 databases. WWW.PORTALEDUCAÇÃO.COM.BR - Site that accumulates varied subjects from online courses to book purchases. WWW.HTTPS://BLOGEDUCACAOFISICA.COM.BR - The blog that makes life easier for Physical Education professionals and students.

4.3.1.2 Digital Platforms used in Physical Education

> VIVA VIDEO: AVAILABLE ON THE “PLAY STORE” (ANDROID) AND “APPLE STORE” (IOS) - It is a video editing tool that allows you to work with videos and images to create your own production, directly on your Android or IOS device. With this application, teachers and students will be able to create videos and share them on other media as well, such as social networks or blogs. EXPLICAÊ - Distance Education Platform using a VLE (Virtual Learning Environment) with video classes and exercises. Access is possible both by computer and cell phone.

In general, it is undeniable that devices such as smartphones, cell phones, tablets and laptpos can be instruments that have the function of, in addition to helping access to knowledge, can be applied in the development of projects, in dialogue of various natures, in the sharing of perceptions, in the undoing of uncertainties, in the debate of issues, and also, they can contribute to improving the ability to express, either orally or in writing. Thus, these devices can greatly serve as an expedient to promote the motivation of students in the acquisition of knowledge in Physical Education (MORAN, 2017).

And to illustrate the above statement, the professor and researcher of innovation projects at the University of São Paulo – USP, José Manuel Moran, recommends some portals and websites that can help the teacher to develop and use methodologies that employ digital technologies, such as,

> the *Innoveedu.org* portal, the *Inova Escola* material (from the Telefónica Foundation), the free *e-books Education in the 21st Century: Trends, Tools and Projects to inspire and Technologies for the transformation of education: successful experiences and expectations*. These elements not only present revolutionary experiences in the educational area but also practical examples of the application of digital technologies in education (MORAN, 2017, p. 1)

56

In addition, the author above also proposes access to portals to support teachers, students and their families, such as the Portal do Professor, Escola Digital, Educopedia, Dia a dia educação, which provide content, class scripts and experiments in the use of technologies, separated by level and area of education. It also provides guidance for educators and students to take courses they are interested in on platforms such as Coursera, Miriada X, Edx, Udacity, Veduca. There is an emphasis on the purposes of these platforms in which they provide opportunities to reach contemporary issues, educators with a large academic framework, and very interesting videos, which can be used as a didactic resource in the classroom (MORAN, 2017, p. 2).

4.3.1.3 Mastery of Digital Technologies: a indispensable competence for the 21st century teacher

Nowadays, we live in an extremely digital world, where information reaches people from all sides, as well as everyday actions, which today depend solely and exclusively on digital media, done only through technological tools. It is possible to infer this, saying that this technological universe is for better or for worse, as there is no longer any way to live outside this scope (ALEGRIA, 2017).

Considering the above assumptions, it is clear that it is inadmissible in the educational sphere not to use these broad resources of technology. This is because there is a variety and they are currently available to be used in order to learn and teach, not to mention that you can also make use of them at any time and at any time wherever you are, and what makes the distinction in this case is not the existing operating systems, but the purpose for which they are directed and the function to which they can be destined by educators, managers and students (MORAN, 2017).

In view of this scenario, it is pertinent to mention that the United Nations Educational, Scientific and Cultural Organization (UNESCO), in its document 'Education for global citizenship: learning topics and objectives', in 2016, defines seven education objectives, among which it is worth emphasizing:

Develop and apply key citizen competencies such as critical inquiry, information technology, media literacy, critical thinking, decision-making, problem-solving, peacebuilding, and personal and social responsibility (UNESCO, 2016, p. 16. Emphasis added) It is notorious that society is currently immersed in a process of profound transformations, whose changes, consequently, end up reflecting on the school, since it is nothing more than a social space where the search for knowledge is prioritized, an environment that must be conducive and dedicated to the development of activities that lead to teaching-learning.

In this regard, Freire states, among other things, that "teaching requires common sense and apprehension of reality" (FREIRE, 1997, p. 27). For the author, the consequences for the school that does not adapt to the innovations of its time and fails to practice these duties described above, is distanced in such a way that its student will reap consequently unpleasant factor such as lack of interest and motivation, indiscipline in the school environment, dropout and other conditions equally harmful to the good quality of education.

In Moran's view (2017, p. 2) another indisputable benefit of digital technologies in the classroom would be for the application of the Flipped Classroom, whose proposal would be, according to the Carta Educação website, "to provide less expository, more productive and participatory classes, capable of engaging students in the content and better using the teacher's time and knowledge".

It should be noted that most students – and also educators – are accustomed to a paternalistic type of teaching, which limits autonomy and freedom, in spite of which there is a kind of tutelage of the teacher in relation to the student, that is, teacher help and protection, since everything is done from the guidance and guidance of the teacher throughout the teaching-learning process. Still on the flipped classroom methodology, it can contribute to offering a

more emancipatory, more liberating and democratic education, since it allows a more dynamic and effective participation by the student (MORAN, 2017).

Finally, based on the above, it is worth mentioning that there are many benefits that can be enjoyed if today's school chooses to offer a more reality-oriented education, enjoying all the resources that technological modernization can offer. As previously mentioned, there are numerous educational software that can sometimes facilitate the arduous path to knowledge, making this journey much smoother and more pleasurable for both sides – that of the one who teaches and that of the one who learns. However, it is necessary that those who teach first go through the process of learning to use these resources to achieve the desired results, to succeed, because as Paulo Freire wisely guarantees in his Pedagogy of Hope, "no one teaches what he does not know" (FREIRE, 1997, p. 67). There is a great challenge.

a) Elaborating some thoughts on the theme

It is reiterated that the technologies used in education transform teaching in contemporary society, so it is up to teachers to become aware that these digital tools are here to stay and are much more than simple teaching technologies (PONTES, 2016).

In this way, according to the author above, to keep up with the changes that occur in society, teachers should use them as a pedagogical interface that facilitates the assimilation of knowledge in the teaching and learning process and not aiming at technique for technique's sake, in the search for efficiency and effectiveness in absolute and unquestionable truths. However, ICTs are not mere teaching instruments, they do not only enable computerized teaching, but new forms of learning and interaction. As a knowledge network, they favor the democratization of access to information.

Therefore, in fact, public policies should be more consistent regarding technologies in school. Technologies today are not only extracurricular tools and content, which serve as a foundation for other issues, but are tools and pedagogical knowledge necessary in the current curriculum (PONTES, 2016). Therefore, to deny such knowledge to the student is to deny worthy opportunities for participation, transformation and inclusion in a growing social environment of information and rapid interactions, such as cyberculture (LÉVY, 1999).

According to Cruz Junior and Silva (2020, p. 90),

> Cyberspace (also called the network) represents the main stage, in which multiple forms of socialization of individuals online come to fruition and unfold. This phenomenon brings with it the insurgency of a new modality of culture, which permeates intra and interpersonal relationships and is permeated by the resources and

applications characteristic of these technologies, cyberculture.

For this reason, with the use of technologies in education, it is possible for the teacher and the school to make the teaching-learning process dynamic by presenting more creative, motivating classes that awaken, in students, curiosity and the desire to learn, know and make discoveries. For all that has been exposed, the utilities and benefits in the development of different skills make technologies currently an important pedagogical resource. It is important to say that there is no way that the current school can refuse to recognize the influence they exert on modern society and the effects of this tool in the educational area.

In this sense, it is worth noting that School Physical Education (PE) has a range of content, competencies and skills that are as important to be developed as those of other school subjects. It is perceived that it is knowledge that goes beyond simple practice, doing for the sake of doing. Thus, with so many technological resources, they can be enriched in the construction of students' knowledge, with the help of different technologies, such as the computer, radio, television, internet and media with possibilities of use, linked to each other (KENSKI, 2017).

In short, digital resources can be considered possible technologies for the development of this new, transformative and current educational methodology. It is indispensable, on the part of physical education teachers, to reflect on the role they occupy in contemporary education. Using these technologies as allies in physical education should be considered as another didactic and pedagogical tool, because seen in this way, it will be a great step towards an education that overcomes the current conditions of reality, which society needs (ALARCÃO, 2015).

Therefore, integrating digital technologies in educational processes, as well as in physical education classes, combined with the development of their critical and creative appropriation, is of great relevance for human education, since we live in a period of transition, from the analog system to the digital system (PONTES, 2016).

b) The didactic and pedagogical benefits of digital Technologies in physical education

It is considered of great relevance that the insertion of ICTs in the school context is one of the phenomena that has deserved greater attention in contemporary society, either because of the dynamics of production and access to knowledge, or as an instrument that enhances teaching and learning due to its multimedia characteristic, or even because it allows the registration and sharing of teacher/student actions (MEZZAROBA, 2018).

In the school environment, according to the author above, this movement has undergone a growing and complex evolution with the creation and arrival of new equipment. However,

one of the great questions of today is how these technologies have didactically and pedagogically benefited school physical education, since access to different media content has become a tonic in the educational process.

However, for Belloni (2019), it is essential to recognize the importance of these technologies and the urgency of creating mechanisms for their integration into physical education, since it is also necessary to avoid the dazzle that leads to the thoughtless use of technology per se, less for its pedagogical virtues than for its technical characteristics.

In the context of physical education, ICTs can be defined as an important resource for the preparation of various pedagogical actions. The function of the teacher/educator is to constantly problematize situations for a critical awakening about the spectacularization of sports on TV, to develop pedagogical actions in the perspectives pointed out by education for the media, contextualizing them in their classes in order not to produce a stereotype of consumption, routinely subsidizing the students actions on the implicit and explicit meanings of the sports spectacle (SANTOS JR., 2018).

It is pertinent to mention that the school, as an institutionalized space of education, throughout history, has historically assumed specific forms, in order to meet the premises of teaching and learning, being subordinated to the objectives of its time and space. This means that it is institutionalized within parameters of spaces, times, rules, ways of teaching and learning, assuming its own modes of socialization, different from those seen in the family, at home or in other social spaces (VINCENT; LAHIRE; THIN, 2021).

Certainly, understanding the possible and imaginable reverberations of digital technologies in school proposals is the objective of this item, in order to comment on a new didactic-methodological model with technologies as a paradigmatic strategy for change in the context of physical education.

Fantin and Rivoltella (2017) agree that these new technologies keep society in constant contact with information of all kinds and from the most diverse places, so it is unreasonable for the school or the teacher to intend to continue without using its source.

In this regard, Charlot (2016) says that the Brazilian school, especially from 1960 onwards, is placed at the service of development, qualifying for work, configuring an instrumental relationship with knowledge. According to the author, nowadays they have interactive digital whiteboards and other high-tech equipment or state-of-the-art digital technology. However, this technological apparatus that is found in school spaces must ensure the advancement in teaching and learning relations, whose adoption reflects the training proposals with well-designed objectives and methods that lead to the effectiveness and

realization of didactic-pedagogical intentionalities (CHARLOT, 2016).

It is in this sense that the figure of the teacher is found, in which he plays a primordial role, in the reflection, proposition and creation of forms of teaching based on technologies that can go beyond the use of hardware and software, which advance beyond spreadsheets that organize content or presentations of sound and colored content. It is widely discussed that a basic condition for any transformation in the school environment is the training of teachers. In this sense, Souza and Mendes (2014) state that the challenge lies precisely in the training of teachers to intervene in this mediatized reality.

Regarding the initial training of teachers, it is understood that it is up to the various higher education institutions (HEIs) in the country to propose teacher training curricula that pay attention to digital technologies as a reality present in schools in dealing with the media in the field of school Physical Education (BIANCHI; PIRES, 2015).

Thus, based on the ideas of the authors above, the proposals for continuing education should contain technologies as a priority to instrumental perspectives, making teachers more familiar with these technological tools, in the sense of media support, aligned with an emancipatory and critical posture.

> [...] the critical use of a technique requires knowledge of its way of operating, represented by commands and functions, along with its limitations, as well as a deep internalization of its potentialities, in relation to the objectives and desires of teachers (FANTIN; RIVOLTELLA, 2017, p. 200).

From this point of view, the educational project that intends to make use of digital technologies in a perspective of critical, emancipatory education must be attentive to technical issues, and not missing the point of the political and ethical principles, already mentioned above.

Especially because for Aquino (2016), education is a historical and social phenomenon, whose premise is indispensable to think about didactics and its role in the organization of teaching-learning processes considering technologies. Thus, it is necessary to start from a concept of didactics that has as its object the teaching and learning processes and it is up to the teacher to ensure the conditions that will support teaching and learning, linked to their socio-historical space and time linked to a consistent pedagogical proposal.

On this subject, Fantin and Rivoltella (2017) understand that digital technologies are important instruments for formal education, however they warn that they cannot enter the classrooms without being inserted in a collective planning of the school, because "[...] the use of a media, no matter how rich, engaging and motivating it may be, never dispenses with the work of planning for its use" (FANTIN; RIVOLTELLA, 2012, p. 332).

It is emphasized that in the teaching performance itself, through the didactic action itself, when the physical education teacher proposes to use technologies, he starts to reflect on the teaching exercise itself, modifying it and reflecting it again.

Therefore, regarding the use of the internet as an interference in physical education classes, Schwartz (2017) states that, in this field, there is a growing number of experiences that use the virtual environment for their feasibility, emerging new options every day, as well as new meanings and interests, meeting the heterogeneity of users. That is, it is possible to access the experiences of different subjects and groups that discuss, in the virtual space, about school Physical Education classes and topics related to body culture, being a source of research to be explored by this area.

As exposed in this work, it can be noted how much ICTs are present in our daily lives both inside the school and outside it, even so there is still no vast knowledge about their application in education, and particularly physical education.

It is important to consider that ICTs are important teaching devices that can change the context of any class, due to their aspects of great fascination for most of our students. And in physical education, great care must be taken when using the resources that make up the ICTs, since due to the lack of preparation of professionals, the use of this resource can become little pedagogical, because the image that is passed by them regarding sports is not inserted in the reality that we experience in physical education classes within schools.

4.4 CRITICAL AND CONCEPTUAL ANALYSIS ON THE DEVELOPMENT OF CRITICAL THINKING

4.4.1 Assumptions on Critical Thinking

The development of Critical Thinking (CP) has traditionally been defended by educators and philosophers as one of the most important educational goals (LIPMAN, 2008; SIEGEL, 1988). In the genesis of the idea of critical thinking, implicit is the recognition of the ability of subjects to deliberate about their beliefs and actions, modifying and improving them according to the evaluation they make of new information or reasons they receive (GUZO; LIMA, 2018).

Thus, critical thinking as a competence or set of competencies is one of the elements that can help any professional's decision-making. This is because it is characterized as a deliberative judgment focused on results, that is, thought must involve processes of rational interpretation, since it constitutes a primordial element in the rational and reflective process (TSINGOS-LUCAS, 2016).

And yet, the development of critical thinking is based on living with other people who are significant and who help the learning process, enabling the continuity of human knowledge, with this Vygotsky (1987) emphasizes the importance of the mediator in the learning process, making him an indispensable role for the educational formation of the human being.

Thus, the disciplined intellectual process of the individual when performing the actions/stages of conceptualization, application, analysis, synthesis and evaluation of information obtained or generated through observation, experience, reflection, reasoning or communication, has been defined as critical thinking (ENDERS; BRITO; MONTEIRO, 2014).

4.4.2 Definition e Types of Thinking

For Paul and Elder (2018, p. 28) "[...] everyone thinks; it is part of our nature." The act of thinking can sometimes be something arbitrary, distorted. It is possible to define critical thinking as the way of thinking about any subject, content or problem that involves the action of thinking.

Thought and think are, respectively, a form of mental process or faculty of the mental system. The term think allows beings to form their perception of the world, and then deal with it in a concrete way, considering their goals, plans, and desires. Thought, on the other hand, is seen as the most "palpable" expression of the human spirit, because through images and ideas it reveals precisely its will (PECOTCHE, 2015).

Furthermore, thought is fundamental in the learning process, since it is the constructor and constructive of knowledge (PIAGET, 1996), being the main vehicle of the awareness process, because the activity of thinking gives man "wings" to move in the world and "roots" to deepen (PIAGET, 1996, p. 78).

Still for Piaget (1996, p. 56) etymologically, "to think means to evaluate the weight of something. In a broad sense, it is possible to say that thought has the mission of becoming an evaluator of reality".

The following are some types of thinking:

a) Productive Thinking: consequence of the integration of previously unrelated experiences. It uses unrelated experiences in a new way, creating new knowledge (MAX, 1982).

b) Reproductive Thinking: application of previously acquired experiences that lead to a correct solution in a new situation of impasse, with constant adaptations (MAX, 1982).

c) Verification Thinking: its objective is to verify or prove knowledge (MAX, 1982).

d) Intuitive Thinking: uses the individual's intuition (BRUNER, 1986).

e) Analytical Thinking: consists of decomposing the whole, into simpler parts, which are more easily explained or solved (BRUNER, 1986).

f) Synthetic Thinking: it is the reunion of a whole by the conjunction of its parts (BRUNER, 1986).

g) Deductive Thinking: it goes from the general to the particular. It is a form of reasoning in which a conclusion is reached from one or more premises (OLIVEIRA, 2016).

h) Inductive Thinking: it is the inverse process of deductive thinking; it is the one that goes from the particular to the general. The basis is the figuration that if something is certain on some occasions, it will be so on other similar occasions, even if they cannot be observed (OLIVEIRA, 2016).

i) Creative Thinking: that which uses the creation or modification of something, introducing novelties, that is, the production of new ideas to create or modify something existing (BRUNER, 1986).

j) Systemic Thinking: it is a complete view of multiple elements with their various interrelationships. Systemic derives from the word system, which indicates that we should see things in an interrelated way (KASPER, 2015).

k) Critical Thinking: it examines the structure of reasoning and has an analytical and evaluative aspect. It tries to overcome the mechanical aspect of the study of logic (KASPER, 2015).

l) Interrogative Thinking: it is a thought with which one asks questions, identifying what someone is interested in knowing about a certain topic (KASPER, 2015).

Thinking is nothing more than the complex path that directs to reason, speak, inform, formulate and organize, in which they present the thoughts of an individual,

where in every reasoning there is a common thread that leads one thought to another.

4.4.3 Critical Thinking: definitions

Critical thinking is based on effective communication endowed with commitment based on overcoming the natural individualism of human beings. It is argued that he is also self-directed, self-disciplined and self-regulated. In addition to the understanding that it is exposed to the rigor of perfect mastery in its applicability (PAUL; ELDER, 2018).

In the line with the visiono of Paul and Elder (2018), it is understood that the mastery of universally produced intellectual patterns ensures responsible and effective critical thinking, insofar as they use patterns to confirm the quality of the reasoning to be done for the treatment of a problem or fact, which are:

a) clarity (detail in the approach to a problem);

b) accurancy (referencing a fact on a scientific basis);

c) precision (presenting with detail the response to the situation);

d) relevance (response to a situation directly linked to the theme in question);

e) profundity (to what extent the answers respond in detail to the situation);

f) amplitude (response to the situation adressed and various angles); and

g) logic (ordering of ideias for solution of facts) (PAUL; ELDER, 2018).

Thus, the term critical thinking (CT) is understood in various ways. Etymologically, it derives from the Greek Krinein, whose meaning is judgment, criterion, decision, debate, untying a knot. In the Latin form, it originated from the adjective criticu(m). In common sense, criticism is a reproach, an unfavorable judgment (ADORNO; HORKHEIMER, 1985, p. 72). Critical thinking is that which does not remain in appearance but uses discernment criteria that refer to various aspects of an issue, which "untie knots", show aspects that are not evident, not revealed (CIAVATA, 2014).

It is situated as an investigation with the purpose of exploring a situation, phenomenon, question or problem, to arrive at a hypothesis or conclusion, which can gather all the available information, and can, therefore, be convincingly justified (GARRET et al., 1996).

Thus, the CT is a process of reflection on the hypotheses that involve ideas and actions, recognizing how the context changes behaviors, resulting in new alternative ways of thinking

and living. "It is, therefore, a process of political involvement, the development of which is fundamental to creating and maintaining a healthy democracy" (BROOKFIELD, 1987, p. 87). Which means to say, in addition, that it is the rational examination of ideas, inferences, assumptions, principles, arguments, conclusions, problems, statements, beliefs and actions (JACOBS et al., 1997).

In short, the thinkers described the definition of critical thinking as an operation, an intellectual skill, or a disposition, with an emphasis on analyzing arguments, controlling one's thoughts, understanding opposing viewpoints, and reflective thinking and skepticism.

And to further illustrate the theme, the word "criticism" comes to light, which comes from the Greek "kritikos", which means "the ability to make judgments". In the philosophical sense, critical sense is the development of a reflective consciousness based on the "I" (self-criticism) and the world (GUEDES, 2019, p. 19).

Critical sense, according to the author above, is built using reason and therefore goes against common sense, since it does not accept any truth without questioning it, which results in critical thinking because it could evaluate, judge and discern based on balance.

Thus, it is understood that critical thinking is based on doubt and questioning, with consequences for reflection and contestation. In short, critical sense is the ability to question and analyze rationally and intelligently. Because through critical sense, man learns to search the truth by questioning and reflecting deeply on each subject. Which means that someone does not accept the imposition of any tradition, dogma or behavior without first questioning it (GUEDES, 2019).

Today, CT can be defined very directly as the intellectual capacity to conceptualize, apply, analyze, synthesize and quantify information that is gathered through observations, experiences, reflections and communicative exchanges (FRANCO; VIEIRA, 2017). It is also divided into two basic definitions: first, a set of information and beliefs that generate and process diverse skills; and second, a habit of intellectual commitment that will use such skills to guide individual behavior.

It is necessary to mention some skills to be explored through critical thinking. They are:

a) understand the logical connections between ideas;

b) identify, construct and evaluate arguments;

c) detect common inconsistencies in reasoning;

d) solve problems systematically;

e) to identify the relevance of ideas;

f) reflect on the justification of their own beliefs and values (FRANCO; VIEIRA, 2017)

Thus, it is convenient to emphasize that critical thinking is not a matter of accumulating information or that a person with a good memory and who knows many facts is not necessarily good at critical thinking. But a critical thinker can deduce consequences and knows how to use data to solve problems and search relevant sources to inform himself (GUEDES, 2019).

In view of this reasoning, PC can be understood as stratifications that are in dispositions, as mentioned above, to foster intention and will to do something through skills and competencies to perform a certain action with a view to a goal (GUZZO; GUZZO, 2014).

From this perspective, Critical Thinking is understood as:

> a set of dispositions and skills, which imply the way of thinking about any theme, analyzing it, judging it and determining the best interventions for more effective decision-making, based on the situation and the resources available, at that given moment. Thus, thinking critically is fundamental for the development of safe and free actions (CARBOGIM et al., 2017, p. 77)

Furthermore, critical thinking should not be confused with arguing or criticizing other people. While skills can be used to expose fallacies and bad reasoning, they can also play an important role in cooperative reasoning and constructive tasks.

4.4.3.1 Teories of Critical Thinking

It is notorious that critical thinking is not reduced only to the contributions of Marxism and the Frankfurt School. On the contrary, it extends to analyzing new subjects or those that have already been studied. In this way, topics of interest are configured, such as: directed questioning and material conditions of existence; current approach to the existence of the individual; forms of production and consequences arising from them; the role of the State; forms of social control; constitutive elements of the individual and collective subjectivity of society and others, as well as the forms of human expression, that is, linguistics, symbols and others (ADORNO; HORKHEIMER, 1985, p. 72).

In this sense, the CT search, at the same time, to emancipate individuals and promote awareness in a growing way of the need for an increasingly humanized society, where collective interests are preponderant over individual ones, in which men are the masters of their own destiny, collectively writing history. In summary, thinking critically means questioning whether the acts of individuals or organized groups in society mere remedial attitudes are. It is also to inquire about human acts and whether these attitudes are intended to serve the interests of specific groups (MENEGHETTI, 2012).

Therefore, it can be deduced from the author's idea above that critical thinking is a primordial condition for the construction of a more humane society, holder of its own history and aware of its responsibilities and collective attributions, allied to humanism, which is the consolidation of critical thinking.

Thus, the relationship between humanism and critical thinking is dialectical, because it involves the constant transformation of the essences that govern everyday life. In short, critical thinking is composed of the triad of radical thinking, the use of reason and humanism. Which means that it does not follow rules and does not use rigid and immutable schemes, because its fundamental characteristic is to question the existing order, searching to understand reality, but, above all, to modify it for the benefit of the collective (ADORNO; HORKHEIMER, 1985).

> It is presented in the foundation of historical materialism, in which the existing orders are the dialectical analyses of certain facts and events. It cannot be understood as simple theories, because it searches to question and change them, when it perceives their ineffectiveness and limitations. To better understand critical thinking, it is necessary to understand the constitutive elements of its archaeology (JAMESON, 2007, p. 77).

It can be inferred that with each new theme to be studied, the facts have characteristics, in which they deserve to be meticulously analyzed on a case-by-case basis. However, this implies that epistemological methods or specific theoretical knowledge cannot be applied in the analysis, to understand the reality that surrounds such an event. For these reasons, the need to present analytical categories that characterize critical thinking is confirmed, according to Vieira and Vieira (2014). Among them, the following stand out:

Understanding the Existing Contradictions: It means that facts are transformed, but appearances do not always denounce the changes in essence, that is, each historical context presents or hides what is behind certain human actions, economic, political or social organizations. A reality is negated with the passage of time and even theories are insufficient to explain certain contexts or situations. Given the history that oversees corroborating or questioning its validity. Therefore, it is possible, therefore, to understand that it disagrees with the facts, called contradictions, are natural consequences of a society that is built and destroyed, not by adrift, but according to the material conditions of existence and, consequently, of its relations of production (VIEIRA; VIEIRA, 2014).

> In an organization, for example, what seems to be the chance to stand out in the face of competition with other workers, becomes the very mechanism that will intensify its exploitation. A worker who demonstrates competence, quality and agility to perform certain activities in less time will not only be charged in other tasks with the same qualifications with which he performed the first one but will also serve as a model for

> the others, as has been known since Taylorism (VIEIRA; VIEIRA, 2014, p. 32).

Thus, to understand the contradictions, it is not always possible to identify them immediately, only after some time, that the reasons that led a certain social reality to change are evidenced.

Identify the Dominant Ideology: The premise that ideologies are almost always natural consequences of a social "prison" that makes it impossible for all individuals to understand their own historical existence, is what underlies capitalist organizations, based on awards such as: participation in the company's profits, for productivity, year-end bonuses, gifts and treats for commitment and dedication to the company are ways to further induce individuals to work. Thus, workers sell their labor power for a value lower than what is due, so that, if the offer of prizes, benefits and others masks the relationship of exploitation, at the same time ideological discourses must be efficient in depriving workers of the necessary awareness to see such a reality (VIEIRA; VIEIRA, 2014).

Through these "awards" a false ideology emerges that makes the consciousness of individuals partial in relation to the social whole, since it fragments the understanding of reality, where individuals see another reality that does not correspond to the real fact.

Questioning the Dominant Rationalities: Through rationalizations it is possible to convince that exploitative, oppressive and prejudiced practices are practiced almost freely. For example, in the labor relationship, workers are exploited and accept this situation passively, often reproducing it. Rationalities are created to legitimize the ideas and moral values of small groups that try to maintain their privileges (VIEIRA; VIEIRA, 2014).

For this purpose, they need to mask reality and reduce the rationalities that may jeopardize power relations with the use of new strategies to demonstrate "changes" in the way of thinking and seeing reality, because new rationalities are created to replace those that are becoming inefficient in maintaining the control structure.

70

> The legitimacy of rationality does not only require the use of reason. Emotional correspondences, individual or collective, must be reciprocal. Technological rationality is another form that tries to impose itself in a totalitarian way. However, the discourse of progress through technique cannot be accepted without question. It is a fact that the advances resulting from the association of science with technique bring benefits to humanity, even if the contradictions of this association are visible in the economic and social differences of those directly affected by such advances (ADORNO; HORKHEIMER, 1985, p. 85).

1. Analyze the social-historical context: Each context involves a set of elements particular to its time, which are: material conditions, different degrees of consciousness, specific

knowledge about certain subjects, different moral conceptions and others (ADORNO; HORKHEIMER, 1985).

In this sense, it is pointed out that to understand the development of a given social fact, one must investigate and know its historical trajectory, since the facts modify and are modified through the knowledge and consciousness of those who propose to understand it. Thus, it is pertinent to mention that a historical fact can be understood from different angles, as the information we have about the fact and the scientific techniques that can help to unravel it. Therefore, the understanding of how the theories that explain certain facts are modified is a fundamental condition so that new explanations cannot generate errors and mistakes of the previous ones.

2. Provide Emancipation: According to Marx, the term emancipation permeates the incessant search for the autonomy of the individual and society, based on the ability to create one's own history, playing an active role on relevant problems of collective interest. Therefore, an emancipated society is aware of its existence (VIEIRA; VIEIRA, 2014).

Thus, it is possible to say that the term emancipation is the opposite of alienation, social oppression, the domination of man by man, the prevalence of individual interests to the detriment of collective ones (MARX, 2008). To this end, promoting emancipation is a task that aims to identify the illusions that imprison individuals in superstitious, inert, prejudiced, ideological thinking, that is, of all the elements that make men slaves of their ambitions or forms of oppression.

Based on the above premises, there is a need to go beyond the visible permeated by scientific knowledge. Emancipation is, above all, clarifying (ADORNO; HORKHEIMER1985), that is to provide individuals with the necessary elements to compose rational thought. For this, however, reason must be questioned (HORKHEIMER, 2010), so that it does not constitute an instrument of manipulation and illusion. Thus, the reason that promotes enlightenment is the mechanism to break the limits of existing knowledge.

Promote Individual and Collective Awareness: In this category, to be aware is to be aware of oneself, one's own perceptions, feelings, and emotions. For Damásio (2010), the constitution of individual consciousness does not occur only through reason, because the feelings and emotions that sustain action, based on reason, are essential in sustaining the consciousness that the individual has of himself and of others. It is argued that understanding reality is another preponderant factor, since the limits of this understanding are related to the capacity of individuals or a collectivity to know themselves. Thus, as individuals cannot fully understand their reality, the way to better understand it becomes a collective effort.

On this subject, it is pointed out that the sum of capacities, combined with democratic debate and openness to dialogue, increase efforts to understand reality. Nowadays, with the advent of individualism, the satisfaction of individuals is based on material acquisition (FROMM, 2009).

It is said that impersonal human relations are influenced by utilitarian and individualistic behaviors, because the relationship that individuals develop with material objects inserts degrees of instrumentalization that are invariably carried over to personal relationships. Emphasis is placed on alienation at work, in which individuals are limited in their creative capacity and, as a result, are reduced to the movement of the system, which is another element found today (DAMÁSIO, 2010).

Thus, with fragmented individual consciousness, there is the possibility of emancipated collective consciousness. In general terms, full consciousness, whether at the individual or collective level, is still a utopian objective, but it must undeniably be pursued. Thus, it is pertinent and coherent to speak of awareness, that is, of a continuous historical process, because the consolidation of individuals and society aware of their reality and existence is only possible with the opening of democratic spaces for discussion. Today, however, with the current economic and social structure, which tends to privilege individual and private interests, this reality seems to be far away.

Therefore, Horkheimer (2010) points out the orientation of the behavior of the critical subject towards emancipation, because,

> The critical subject is a social subject aware of the social processes of domination and exploitation. And he does not submit to the determinations of the social system as if they were natural and unquestionable realities. He himself condemns the social system that produces contradictions and domination as a system that concerns a world that is not his own, but "capital's" (HORKHEIMER, 2010, p. 130).

Thus, the categories presented are not unique or exclusive. Within the historical perspective of analysis, the union between them favors a better understanding of the facts, which can be verified by scientific research and theoretical essays that encompass these categories that can be characterized within critical thinking. These indications refer to criticisms that search to break with social control, violence, oppression, domination, exploitation, totalitarianism, authoritarianism and many other themes that make men slaves of other men and of themselves (VIEIRA; VIEIRA, 2014).

For Paul and Elder (2018) it is possible to help, develop and strengthen critical thinking through the application of cognitive strategies. Among them, the following can be emphasized:

Compare by identifying similarities and differences between objects, people, ideas;

a) Classify where one should choose things or ideas within classes; organize (arrange, place, arrange);

b) Interpret where ideas should be expressed based on a clear understanding of what was presented;

c) Make analogies where parallel ideas must be presented demonstrating understanding of the facts said and observed;

d) To express hypotheses by developing a possible explanation or cause, which then requires the need to be proven and verified as true;

e) Draw inferences, by means of a generalization or applicable rule, after the analysis of the data collected;

f) To generalize and conclude by compiling the data collected related to the hypothesis; Make the decision considering all the information collected and analyzed.

4.4.3.2 1st century education: contextuallization

It is notorious that the contemporary world has been changing very quickly. People are faced with very complex situations with high connectivity, especially virtual and technological, permeated with great inequality and social instability at increasingly high rates of production and consumption, often moving towards their own unsustainability (VILAÇA; ARAUJO, 2016).

In this context, it is necessary to rethink what is understood as education, which is a permanent process inherent to living, that is, to the extent that one lives in different situations, one educates, because the day to day is educational and individuals create and recreate forms of social life, this is what is expected of the school and its practices. Historically, the social function of the school has always been - and will continue to be - an environment of socialization and access to knowledge (BUENO, 2016).

However, if in the past the focus was almost exclusively on the transmission and mastery of content, through the cognitive dimension of students, today it is urgent for the school to train critical students with opportunities to allow, with the same commitment, both learning and the development of a set of essential skills for an autonomous, transformative, social action, responsible, with the ability to adapt to challenges and to continue learning throughout life (BIBIANO, 2015).

Therefore, it is concluded that in current times the greatest search is for an education with the purpose of giving opportunity to the full development of children, adolescents and

young people, so that they are boosted in all their potential to live, coexist, learn and produce, whatever their socioeconomic context and their life project. This is the education most capable of generating achievements in many relevant results for each student and of reducing social inequalities (BRANDÃO, 2017).

Thus, the objective of education in the 21st century is to prepare students to deal with the challenges they encounter both in school and outside it, in addition to being autonomous to build the projects they plan, making use of their knowledge and skills. Such a perspective promotes a critical and liberating education that is one of the instruments of change in social reality (FREIRE, 1999).

However, according to the author above, education involves aspects that permeate the pedagogical practice, among them is the figure of the teacher who, in order to promote the development of students' skills in an intentional way, it is necessary that he is open to insert this theme in his planning and actions, and that there is coherence between what he says and what he does, "since education is not neutral and constitutes a political act" (FREIRE, 2002, p. 77).

Thus, education must be an opportunity for the full development of students and, especially in today's societies, it must result from equitable and inclusive opportunities so that everyone can live autonomously in the face of the numerous challenges of this new time.

Especially because the construction of educational processes must expand the purpose of the school and consider the multiple human dimensions; cognitive, emotional, social, bodily and cultural. By valuing such dimensions, education proposals must make explicit the intention to develop the student, and not only in the acquisition of fragmented knowledge (MOCHCOVITCH, 2011).

Thus, it can be inferred that:

> Public policies, management practices, teacher training, school planning actions and teaching and learning methodologies used by each teacher, in any class or curricular component, can contribute to the main objective of this education: to promote an education in which children, adolescents and young people can learn with excellence and also get to know themselves fully, to use their potential when relating to themselves, others and challenges to establish and build their life and community projects (MAYO, 2014, p. 24).

With the evolution of technology, combined with global connectivity and ease of access to knowledge or divergent opinions on the same topic, it is explained that the ways in which problems were solved in the 20th century are no longer sufficient to meet the challenges of the 21st century. This is because we live in a volatile, uncertain and ambiguous world that confers a new complexity to contemporary society, in which there is a demand for more agile and

diversified solutions that will respond urgently to needs, both individual and collective (ALVES, 2013).

In view of this assumption, due to the fluidity and speed with which knowledge can be accessed, situations that previously had little impact on daily life now reflect, and a lot, on the whole society. Knowledge itself begins to be questioned, in what experts call the post-truth era, in which the objectivity of facts seems to be questioned in the face of beliefs and ideologies (CHAUI, 1992).

From this point of view, there is the recognition of an increasing volume of information disseminating at great speed, starting from unreliable and dispersed sources and with objectives that are not always clear. In this context, initiatives that aim to organize and define the broad set of existing skills that can be developed by each person gain even more relevance.

4.4.4 Education on Critical Thinking

Today's society faces a series of crises (economic, social, moral) that require the search for new paradigms, capable of better responding to the demands of contemporaneity.

In this sense, education appears as a fundamental force for the establishment of a new world order. For this force to grow, education must assume the important role of developing an education capable of guaranteeing the necessary conditions to overcome the various crises that afflict all of humanity, especially the crisis of social relations that generally lead to barbarism (GANDIN, 2019).

It is no longer possible to consciously admit a reality in which someone is mistreated because they are different or because they think differently. The diversity present in social relations needs to be understood as quality and not as deformity, and this is the role of education committed to the full development of the human being.

> Faced with the crisis of social relations, education must therefore take on the difficult task of making diversity a positive factor of mutual understanding between individuals and human groups. Its greatest ambition becomes to provide all the necessary means for a conscious and active citizenship, which can only be fully realized in a context of democratic societies (DELORS, 1998, p. 52)

Educating for emancipation permeates a new conception of education, based on the development of critical consciousness, which will be the basis for the liberation of the individual. Thus, it is up to the school to work in favor of domination, enabling it to reflect and liberate action from alienation, based on the domain of knowledge (ADORNO, 2019).

> Evidently, this corresponds to a school institution in which the specific inequalities of

> classes are not perpetuated, but which, starting early from an overcoming of children's class barriers, makes it practically possible to develop towards emancipation through a motivation for learning based on an extremely diversified offer (ADORNO, 2019, 170).

In education, several thinkers contributed to the development of a liberating action through pedagogical criticism, such as Bourdieu, Passeron, Baudelot, Young, Apple, Giroux, Althusser, Demerval Saviani, Paulo Freire. The intention of critical educators was to explain how education became what it is, describing the social dynamics that shaped it in this way. Which implies that it is made up of conflicts and struggles between different traditions and different social conceptions.

In Brazil, critical thinking in education gained prominence from 1970 onwards, along with the presence of the analytical conception and the predominance of the technicist tendency as the epistemological bases of the current educational theories. At that time, several studies were created with the proposal of developing the critique of the dominant education, which evidenced the real functions of educational policy that, in general, were covered by the official political-pedagogical discourse (CHAUI, 1992).

In this sense, the CT aims to foster change by breaking down the obstacles that stand in the way of achieving emancipation. Educating for critical thinking, therefore, means educating for a new social order, based on a renewal of critical consciousness committed to the emancipation of the subject (ADORNO, 2019). By exploring critical thinking, the school is helping its students to acquire knowledge, improve theories and strengthen arguments — something essential for their professional future.

On the subject, Mendes (1996) found that changes in education are happening in several aspects, but with the predominance of technical rationality, and emancipatory rationality is expanding more, albeit slowly.

> To educate, that is, to raise awareness, it is necessary to fight against education, a struggle that has been incessantly taken up against the dominant education. Not only to question it about the nature of its project, its coherence and its incoherence, but, in addition, to emphasize its ideological function in relation to the political, social and economic context (GADOTTI, 2010, p. 58)

The teacher must understand the pedagogical proposal of transformation, to define the political and educational objectives that will be translated into concrete results.

Given the context, it is pertinent to address higher education in Brazil, which is being called upon to demonstrate quality and effectiveness and the development of critical thinking. In the literature, there are approaches regarding the effectiveness in the search for excellence in

professional training combined with the development of critical thinking, in order to open new perspectives on the world, promote self-confidence and more meaningful learning (BROOKFIELD, 1987). Thus, the following approaches are cited:

> - it is necessary to develop critical thinking, because decisions are made and conclusions are reached all the time, while looking at new perspectives and reconsidering decisions;
> - the effective development of critical thinking requires a variety of carefully planned strategies, giving equal attention to all domains of competence, both cognitive, psychomotor and affective, which will result in an increase in safe, effective and opportune care, it also requires adequate time to develop critical thinking skills in students and for teachers to evaluate changes;
> - teachers need to be alert not to see critical thinking as a unit of content to be taught (LIMA; CASSIANI, 2013, p. 45).

In general, as a mediator of knowledge and development of students, the educator must assume a posture of welcoming, active listening and promotion of protagonism to them, who are co-responsible for the training process.

In this way, instead of being the only center with answers, the teacher encourages questioning and the joint construction of knowledge. Another basic principle of education is that the teacher is part of the solution and not of the problem, as much as the student. Therefore, it is necessary to recognize its transformative and reflective potential, as a generator of knowledge, instead of focusing on vulnerabilities. This is an essential condition for them to feel confident and prepared to exercise their potential in the classroom and at school (GENTILI; FRIGOTTO, 2012).

In short, according to Arroyo (2010), "the school has to review itself deeply in order to be democratic in its structures". This means believing in education, which is considered an instrument of struggle and a space that can foster debates between individuals, and consequently, make them social subject's defenders of their own culture (CALDART, 2019).

> The Pedagogy of Struggle educates to a posture towards life that is fundamental to the identity of a fighter for the people: nothing is impossible to change and the more dissatisfied with the current situation, the more human the person is. The normal, healthy thing is to be on the move, not still. The processes of transformation are the ones that make history (CALDART, 2019, p. 52)

To achieve this intent, it is necessary to destroy negative values based on the history of humanity. For this, the teacher must have courage, will and persistence and strengthen himself against the cultural massification impregnated in the education systems, through the articulation between discourse and practice (FREIRE, 2002).

4.5 WHY CRITICAL THINKING?

It is believed that critical thinking only has value when it makes it possible to understand, enjoy or modify reality. That is, to transform the subject so that he is able to change his social environment.

This statement has been gaining strength, as critical thinking is having more and more space in the agendas of discussions about what it takes to develop it. It is one of the competencies considered relevant for each person to be able to analyze, filter, select and use information, establishing new connections between knowledge and creating various possibilities for using data and points of view (LIMA; CASSIANI, 2013).

In this sense, the thought has to be: Meaningful, to correspond to the needs of the learner; critical, so as not to conform to appearance; creative, to be applied, transferred to other situations; lasting, so that the subject is able to interfere in reality (CALDART, 2019).

In this regard, recently, the Organization for Economic Cooperation and Development (OECD) emphasized two competencies: creativity and critical thinking, whose results of a large collaborative project with this focus were presented in 2019, with the participation of Brazil. At the International Conference "Creativity and Critical Thinking Skills in School: Advancing the Agenda", representatives of Ministries of Education from several countries, educators, researchers and actors from organized civil society shared their analysis on the urgency of supporting teachers to promote the development of these skills among students (LIMA; CASSIANI, 2013).

Based on the assumption mentioned above, there is a consensus that formal education should contribute to students' creativity and critical thinking. However, this objective is hampered by a limited understanding of how this theme can be inserted into the daily life of schools.

> Promoting creativity and critical thinking in more systematic and effective ways requires the development of strategies and tools that help teachers, students, and policymakers articulate these competencies in a more visible and tangible way, especially as part of the curriculum (LIMA; CASSIANI, 2013, p. 69)

In addition, educators committed to the development of critical thinking argued about the role of these two competencies in today's societies and defended the need to advance quality approaches and initiatives to insert creativity and critical thinking in schools.

Specifically, critical thinking is also usually seen in a simplified way, and is often associated with negativist postures, resistant to any different information or position, and even

pure skepticism. It is worth noting that in the 21st century this understanding can be broadened, with the identification of the various facets and stages necessary to have a position based on critical thinking in a purposeful way to solve problems (MAYO, 2014).

As with creativity, critical thinking cannot be considered to be just an "innate" competence, where people are already born, but something that can be acquired by being stimulated among all, whose effects are remarkable in daily life in a society that increasingly demands decision-making, analysis of information of all kinds, and construction of positions on the most diverse themes.

Seen in this way, this is also a valuable characteristic for all people, and not specific to just one field of knowledge or area of activity, because,

> Critical thinking is a competence that enables the person to position himself in a rational and analytical way in everyday situations and, therefore, manifests itself whenever someone is faced with some information, situation or attitude of other people and search to make an analysis of its validity (understanding the facts, logic, argumentative coherence, etc.), its origin (who and what motivated the construction and dissemination of information) and purpose (who the information intends to reach and with what objective) It is close to philosophical (logic, for example) and scientific thinking, as it is understood as an expression of rationality (LIMA; CASSIANI, 2013, p. 70).

Based on the above statement, when critical thinking is well developed, it is characterized by overcoming simplifications and egocentrism through information that is not categorized simply as good or bad, adequate or inadequate, something that someone likes or dislikes, in which it is expressed by the problematization, decomposition and resignification of the information or situation (LIMA; CASSIANI, 2013, p. 70).

4.5.1 The Stages Involved in Critical Thinking

In all aspects, Critical Thinking prevents minds from reaching conclusions directly, because it directs reasoning to logical steps that tend to broaden the range of perspectives, accepting discoveries, leaving aside personal prejudices and considering reasonable possibilities. The stages, according to Morelli (2020) are: Knowledge, Understanding, Application, Analysis, Synthesis and Action.

Knowlegde – It refers to the organization of the Available Information with the selection and evaluation of the quality of this information, that is, it search to identify the argument or the problem in fact that needs to be solved, whose objective is to obtain a deep understanding of it (MORELLI, 2020).

Contextualization of knowlegde – It means the deepening of information that is

structured from contextualization and a worldview. In this way, the critical subject must be able to locate other information that is articulated with the others, through the ability to read the world and the use of other knowledge to position himself in front of the information. Thus, the contextualization of information based on prior knowledge makes the content appropriate by the person also subjectively, as it relates to the other experiences that the individual has already had and to their worldview (MORELLI, 2020).

1. Decomposition and validity analysis - A information is composed of arguments and facts. To analyze its validity, one must evaluate the coherence and reasonableness between arguments, facts, and conclusions. In this way, critical thinking involves the conscious appropriation of a mental method of analyzing knowledge and information, which allows the identification of fallacies and fake news (MORELLI, 2020).
2. Reflection and ressignification - After understanding the information, contextualizing it, analyzing its pertinence and validity, the critical subject can reflect on the way critical thinking was expressed in the given situation, which points can be improved, give meaning to the process and, often, use it to make a choice or take a position, in which he circumscribes the information based on his analysis (MORELLI, 2020).

As well as creativity, critical thinking is a complex and hybrid skill, as it is made up of cognitive (knowledge about the subject, for example) and socio-emotional (self-management, openness to the new) components that enable the analysis of information.

In short, school transformation presents paths that pass-through teaching-learning that challenges the educator to opt for the liberation of individuals and the liberating daily practice needs a political-social proposal that is emancipatory.

4.6 DIGITAL RESOURCES USED IN HIGH SCHOOL PHYSICAL EDUCATION: A NEW PARADIGM IN EDUCATIONAL FIELD

4.6.1 Why innovate in the education?

Initially, the term innovation "is a matter of knowledge with the creation of new possibilities through the combination of different sets of knowledge" (CHRISTENSEN; HORN; JOHNSON, 2017, p. 23). Innovation in education is of fundamental importance, because it permeates:

> [...] a set of interventions, decisions and processes, with a certain degree of intentionality and systematization, which try to modify attitudes, ideas, cultures, contents, models and pedagogical practices. And, in turn, introduce, in a renewing line, new projects and programs, curricular materials, teaching-learning strategies, didactic models and another way of organizing and managing the curriculum, the

school and the dynamics of the class (CARBONELL, 2013, p. 19).

In addition to this, one must consider the various factors that contribute to the configuration of an innovative process, in which the creativity of the subjects, the motivation to implement the ideas, the knowledge and the possible material resources must be considered.

To bring the discussion of innovation even closer, from this perspective, it must lead to a new educational practice with a well-established purpose, starting from the understanding and the need that these changes come from questioning the purposes of the educational experience itself as a promoting aspect of teacher reflection-action, that is, innovation as a process, and not as an end in itself (FULLAN, 2013).

From the present debate, it is possible to point out that innovation in education comes to give new meaning to educational institutions, because, through the abundant supply of information, mediation in the acquisition of knowledge guarantees it an unsurpassed importance.

Thus, innovation creates possibilities to establish significant relationships between different knowledges, in a progressive way, to acquire a more elaborate perspective; it converts schools into more democratic, attractive and stimulating places; stimulates theoretical reflection on the experiences, experiences and various interactions of educational institutions; it breaks the split between conception and execution, a division proper to the world of work; it expands pedagogical autonomy and generates a focus of continuous intellectual agitation; translates ideas, practices and daily life, but without ever forgetting theory. It is noteworthy that innovation is never undertaken in isolation, but through the exchange and permanent cooperation of the people involved (CAMARGO; DAROS, 2018).

Therefore, promoting innovation in the field of education is currently mainly part of a paradigm innovation, which breaks with the existing logic about the way individuals learn (CHRISTENSEN; HORN; JOHNSON, 2017; THURLER, 2011).

4.6.2 Understanding digital games in education

It is considered that the speed of technological evolution has caused effects of social relations of the most diverse and kinds, in the educational field, as it has put to the test, the very essence and meaning of the school in question (SIBILIA, 2012). Thus, the school context is still considered one of the most productive and possible to unleash various skills, whether artistic, intellectual, or motor (TOKUYOCHI et al., 2018).

However, this change of position must be understood through the understanding that technology can supplant the central vision of the technological device and start to be considered as an artifact that can promote changes in social practices, in the forms of human interaction and in the recognition of oneself and the other, as well as an element that can transform organizational/institutional contexts, to the extent that it revises social structures (RAMOS; SEGUNDO, 2016).

Therefore, such digital technology artifacts have incited in the educational/school area, among others, a constant questioning about their practices, their form of organization, and their social function of the school (LEITE et al., 2022).

Currently, digital games are under constant discussion, because, in a preliminary way, they have the intention of fun and entertainment, and can arouse great interest in different age groups, especially due to their playful characteristic, so they become challenging. According to Cani et al., (2017), games can awaken numerous valences, stimulating learning, the development of concentration, quick thinking, action and interaction, as it is reiterated that they are attractive because they have characteristics that make them fun and challenging for players.

For Ramos and Segundo (2016), digital games are, in themselves, an activity with great possibilities for human formation, in addition to being able to be configured as a learning tool for everyday school life. The authors also emphasize the collaboration of games for the development of cognitive skills that occur through objectives that stimulate decision-making, achievement of goals, planning strategies, among other actions.

When search to understand more about virtual games in the educational environment, it means worrying about improving the quality of Brazilian education in general. In this regard, it is pertinent to cite legal documents such as the Introduction of the National Curriculum Parameters (PCNs), (BRASIL, 1998), which already exposed the need for investments in different fronts of Basic Education, such as the use of television and multimedia resources. And more recently, there is the BNCC (BRASIL, 2017) that sets the regulatory frameworks on the variety of the presence of media and digital manifestations in society and in the school, instituting among its ten general competencies of basic education, the need to:

> understand, use and create digital information and communication technologies in a critical, meaningful, reflective and ethical way in the various social practices (including school ones) to communicate, access and disseminate information, produce knowledge, solve problems and exercise protagonism and authorship in personal and collective life (BRASIL, 2017, p. 9).

Thus, one of the incentives of learning in the school universe, in which physical

education is inserted, is to believe in Digital Information and Communication Technologies (DICT'S) as extremely important devices for pedagogical practices, which among them, is the virtual game, must be on the agenda, as long as they are properly intermediated by the pedagogical intervention carried out by the teacher, bringing to the school universe the digital world, the reality experienced by students, who are the subjects of learning (RAMOS; SEGUNDO, 2016).

4.6.3 Digital games

It can be inferred that educational institutions, as well as physical education institutions, are presented with the challenge of relating access to knowledge and technology in their curricula and pedagogical practices also through it, exposure to the digital and virtual context, as they are routine characteristics in the lives of students (BARACHO et al., 2013).

Translating the above statement, it is notorious that the student class cannot imagine the world without the presence of resources such as television, video games, cell phones, computers and the internet. This indicates the fact that the media and media resources are present in the daily lives of students, transmitting information, feeding an imaginary and building an understanding of the world. On this subject, the PCNs show that students spend many hours in front of the television set, which competes with the school and the family as a source of human formation, of the construction of values and practices of attitudes (BRASIL, 1998).

Hence, introducing the use of technological tools in the school universe and school learning in general and in the physical education component specifically, is demonstrated as a possibility for an educational institution that needs to evolve regarding the knowledge and use of the virtual theme and digital tools. To this end, the use of various technological tools should be thought of as an auxiliary instrument in the teaching and learning process of students in relation to the dimensions of theory and practice present in the content of the discipline, therefore, not as a substitute for human relations and the role of the teacher (BARACHO et al., 2013).

In addition, some scientific evidence emphasizes the fact that school education has faced difficulties such as lack of material and infrastructure, in addition to the way of evaluating the performance and ability of students and the scarcity of innovative methodologies, especially in physical education, as there are still few proposals for the use of digital games in this area (ANDRADE; TASSA, 2015).

Other reasons can also be cited, such as the difficulties encountered by teachers in relation to pedagogical practices and in the elaboration of creative activities. This is because

they are also added to the lack of motivation and disinterest of students in participating in classes (TOKUYOCHI et al., 2018). Demotivation is thus indicated as one of the main problems encountered in the school (ANDRADE; TASSA, 2015; PIZANI et al., 2016).

In view of this reasoning, it search to reverse the demotivation in the classes and increase the pedagogical quality of what can be done in the classes, with emphasis on the use of digital games as an innovative and interactive methodological tool in the school environment (VAGHETTI; SCALLOP; BOTELHO, 2016). In this way, the use of digital games becomes a new methodological strategy to leave the usually routine classes without relevance, in different and creative classes, motivating greater participation of students to reduce the exclusion of students who do not like the common practical classes of physical education.

4.6.4 Digital games used in high school physical education

As already mentioned, the BNCC brings to light the "configuration of the use of new learning technologies for the development of students' general skills" (BRASIL, 2018, p. 9), "to the area of languages" (BRASIL, 2017, p. 6365) and to the specificity of physical education, without, however, being able to replace traditional body practices, (BRASIL, 2017, p. 214).

Therefore, understanding that using digital technologies (virtual, digital, electronic games, exergames, gamification), which will be seen later, can indicate quality in the classroom context, providing a new view of students about body practices. Therefore, it is essential and urgent that teachers improve themselves regarding these resources that are present in the school environment every day, even knowing the challenges for the continuing education of teachers.

In this preamble, we can see that education takes place in a variety of ways and means and is not determined by a physical space or a schedule of hours in a classroom. It is in this vein that some digital resources and other digital technologies will be presented in the context of physical education (BRASIL, 2017).

Thus, it searches to understand digital games as a computational system that involves challenges, since they are defined by rules, interactivity and feedback, with a quantifiable result, and which often causes an emotional reaction. These systems can add teaching and learning possibilities.

Conceptually, the digital game is a playful activity that is composed of a series of actions and decisions (SCHUYTEMA, 2018) guided by clear goals and challenges compatible with the player's level (KIILI, 2015), based on rules (JUUL, 2015; MC GONIGAL, 2012) and that offers feedback to the player (MC GONIGAL, 2012). These characteristics must be combined to

create interactive experiences in digital media that can be foreseen in the planning and activities of physical education teachers in High School, to meet the following pedagogical possibilities:

- Contextualization of contents: a digital game, characterized by narrative, images and actions, is developed in scenarios and contexts that introduce or sensitize students in relation to some content.
- Content learning: educational games are developed to teach some specific content and are oriented to learning objectives.
- Aplication of knowlegde: games can be used as an alternative to the exercise and application of knowledge that is being addressed by the teacher.
- Exercise of skills: the characteristics of games and the experiences provided by them involve the exercise of cognitive skills such as attention, planning capacity, decision-making, working memory, among others. Also, emotional skills related to how to deal with frustration, error, victory, and emotional control to choose the best strategy and regulation of behavior to act at the most opportune time (RAMOS, 2017).

Based on the above, it is adduced that digital games allow working on repetition, physical, motor, cognitive skills, among others, in a challenging and self-motivated way. Some advantages are listed in the possibility of testing hypotheses, repeating attempts, developing new ways to solve the same problem, visualizing the effect of concrete actions and being able to always and safely redo the actions, are some elements capable of exercising the procedural contents in most games (PIMENTEL; FRANCIS; PEREIRA, 2021).

Another connotation given to the theme in question, allows us to think about learning with games in a more comprehensive way is that of media-education. Applying media-education, game-based learning will not only be instrumental, that is, getting students to play, which is the most common idea, but producing games with students, which allows us to consider games as a cultural product that can be studied.

To this end, in the view of Rosa and Cruz (2019), it is necessary to plan an approach with a view to projecting game-based learning as something for the future, in which it consists of two movements, one of reflection and the other of systematization, which should be expanded in its alternatives. The reflection goes through questions such as: who are the students? What is it intended to teach? What content will be covered? How to promote learning? And others. Systematization is the aspect that includes the declaration of learning objectives, the ordering of procedures and the didactic sequence, the definition of the moments of integration of

resources and materials, the delimitation of moments and evaluation criteria that also guide the process of didactic mediation. This systematization results in the lesson plan those records and objectifies the initial reflections.

For this reason, it's important to reiterate that the inclusion of the game can't just be for the game itself but considering what it offers and how it contributes to learning in a playful, fun and contextualized way. Its incorporation into planning can be envisaged at the beginning of a didactic sequence with the function of problematizing or contextualizing content. It can also be proposed during development when it addresses the content and contributes to the appropriation of concepts. Another alternative is to use it at the end, with the aim of proposing exercises and providing a context for applying knowledge (ROSA; CRUZ, 2019).

In short, education through games aims to develop production and authorship skills, working the game creatively in practical activities aimed at students' protagonism. To this end, in addition to digital game production software, teachers can experiment with students using other languages, such as audiovisual or graphic narratives (comics), using existing games played by them as raw material and a reference for creation.

4.6.5 Exergames

There are other digital modalities that can be included in Physical Education classes, such as Exergames, which combine physical exercise and digital games, bringing together games and exercise. They can also be called active games, as they use sensors or sensorized controls to capture physical movement and assign it to electronic movement (FINCO; FRAGA, 2012).

Based on the ideas of Nunes, Toigo and Florentino (2019), games are still viewed with a certain prejudice by Physical Education. However, it is pertinent to mention that they have evolved and overcome the stigma that they only provided sedentary lifestyles and health problems, so that they contribute to the relationship between body, movement and cognition, in addition to the various possibilities for bodily interaction. Allied to this, from a broader sphere, it encompasses electronic games and starts from the concept of interaction, creativity and playfulness, which is considered an object of the body culture of movement and is therefore integral content to Physical Education.

According to Rohden (2017, p. 8), the Nintendo Wii Fit was very important for the development of these games:

> [...] from the point of view of the users themselves, the game helped to get them to practice regular physical activity, improve their health habits in terms of maintaining an adequate body weight and inform them about the importance of a healthy diet. They concluded that the platform can get users to adopt healthy lifestyle habits such as regular physical exercise, better nutrition and hydration.

Rohden (2017) also points out in his study that from the point of view of body movement, Exergames are close to the energy values spent on other activities, reaching the recommended according to the American College of Sports Medicine (ACSM), so that it stimulates various capacities such as strength control, logical reasoning and, above all, encouraging the regular practice of physical activity, in addition to the extreme concentration it requires, reaching levels at which you forget the passing of time and are not distracted by other situations, called the Flow Theory (CSIKSZENTMIHALYI, 1990).

> In 2009, the US company Microsoft launched the Kinect accessory for its seventh-generation Xbox 360 console. This took motion games to a new level, as it completely dispenses with the use of physical controls or other implements, as well as recognizing the movements of the entire body in real time. The accessory is made up of a camera, a 3D depth sensor that combines infrared and a monochrome CMOS sensor capable of projecting a 3D environment and a multi-vector microphone that combines four microphones capable of cancelling out the sounds of the environment by detecting only the user's voice. As soon as it is connected to the base, it moves, mapping the environment and adjusting itself. It creates a 3D replica based on 48 points on each user's body, including facial details, which are reproduced in personalized avatars (ROHDEN, 2017, p.9).

88

From a pedagogical point of view, there are countless possibilities for using Exergames, as they use simulations called virtual realities, in which students can insert themselves into games and body practices.

Considering that the basis of many games is sports, the experience of simulated realities can add a lot to classes, enabling greater interaction, attractiveness and creativity in the execution of activities, and can be used remotely or in person in the classroom, being a giant step forward in the process of digital inclusion.

Thus, Exergames are relevant and creative tools for Physical Education classes, helping with knowledge of the body culture of movement and encouraging regular physical exercise. However, it comes up against the possibilities of accessibility, sometimes being unfeasible for public schools in Brazil, considering the structural weaknesses and material resources for classes (CARVALHO; BARCELOS; MARTINS, 2020).

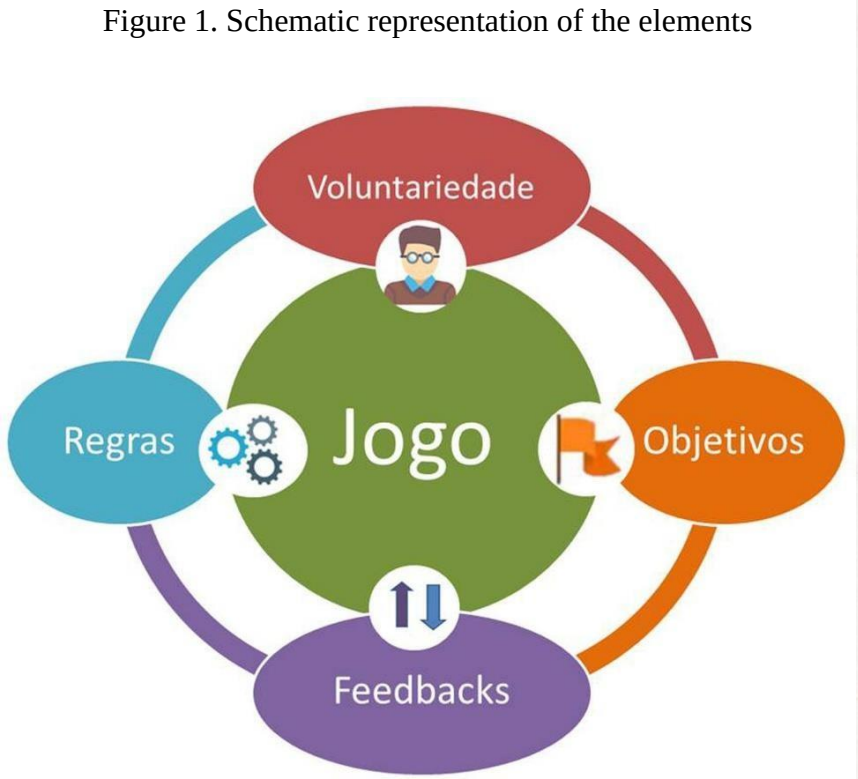
4.6.5.1 Gamification

Another strategic possibility for Physical Education classes is gamification, which consists of applying game elements to the pedagogical activities offered to students. These elements are even used indirectly, for example when the teacher gives the student a star for completing the activity. This is a form of reward applied in electronic games, or when the math teacher increases the difficulty of the operation as the students succeed. This is an adaptation to skills, a concept also presents in games (SILVA; SALES; CASTRO, 2019).

The definition of gamification is the process of using the mechanics, style and thinking of digital games, in a non-game context, to solve problems and engage people (ZICHERMANN; LINDER, 2010). It has been spreading and gaining ground in the educational environment in Brazil, and specifically in physical education, whose proposal goes a little further than the implementation and use of digital games in educational activities, without detracting from this practice.

The design elements of games are rules, objectives, rewards, immediate feedback, competition, conflict, fun, narrative, cooperation, levels, progression, intrinsic motivation, voluntariness, abstraction from reality, overcoming mistakes, among others, of which voluntariness, rules, feedback and objectives stand out as fundamental. It's worth pointing out that gamification is not a game with these elements, but their application in another scenario, or even just a few of them, as long as they are interconnected, bringing them closer to the gameplay of a game. In addition, they have didactic-pedagogical functions, aimed at motivation, interaction, proactivity and student attention in the learning context (SILVA; SALES; CASTRO, 2019).

Figure 1. Schematic representation of the elements



Source: Silva; Sales; Castro, 2019.

According to Figure 1, the objectives are the direction given to the students as to where they need to go and what they need to achieve. The rules serve to organize and define the subjects' actions within the process. Feedback is when subjects are informed of the state of their process in pursuit of the objectives and their actions. Voluntariness, on the other hand, is the willingness of students to enter the game and carry out the actions and challenges. Examples: the didactic contract can be understood as the rules; the tasks as the challenges; the objectives as the knowledge and skills to be acquired. However, these elements apply in many ways, whether in broad or specific aspects of the classroom (SILVA; SALES; CASTRO, 2019).

The possibilities for application are diverse. They can be adapted to any type of content for any curricular component. In addition, gamification can be of great relevance during remote class time, provided it is applied appropriately, since students are demotivated by the isolation and format of classes, and many teachers fail to make classes attractive. In this way, the gamification should be adopted as a creative and fundamental strategy for classes to take meaningful learning paths (SILVA; SALES; CASTRO, 2019).

Based on the ideas of the authors above, the spread and popularization of digital games, their presence in everyday life and in the context of physical education is noticeable, as innovative mechanisms have been used that refer to this methodology to promote improvements

in learning. This use presupposes those games, such as video games, are able to contextualize information for the student, because the phases present in the games end up respecting the level of the student, who, through error and the possibility of getting it right, doesn't get frustrated when trying to improve their skills in order to pass the phase.

Based on theoretical research by scholars in the field such as Silva; Sales and Castro (2019), Alves (2015), Carvalho; Barcelos and Martins (2020) and others, using gamification in the educational and academic environment is a way of providing the subjects participating in the experience (students) with the opportunity to be part of something in which they feel engaged and motivated, by intending that they will be submitted “in an abstract challenge, defined by clear rules, interacting and accepting feedback” (ALVES, 2015, p. 27), promoting learning.

Being attentive to the purpose of participation, gamification considers the use of elements of digital games, such as narrative, feedback system, reward system, conflict, cooperation, competition, clear objectives and rules, levels, trial and error, fun, as well as interaction and interactivity (SILVA; SALES; CASTRO, 2019).

According to Alves (2015), gamification is an application of the mechanics, aesthetics and concept of games, with the aim of providing integration between people, motivating actions, encouraging learning and promoting problem-solving.

Therefore, based on the context in which gamification emerged and the objectives of engagement between subjects, in any context, it is important to note that the creation of a digital game or a specific virtual environment is not required for gamification to take place, even for a specific educational purpose. What is possible and expected is that the resources and possibilities that digital games present to solve real-life problems are inserted into the context of planning and implementing gamification, where the choice of key elements will depend on the objectives, the purpose with which gamification will be employed (BURKE, 2014), considered as something positive in the discipline of physical education.

Furthermore, the development of a gamification strategy can motivate students to carry out the tasks requested by their teachers, doing so in an engaging and fun way and making it possible for them to feel motivated to carry out their own tasks, which in linked to the types of extrinsic and intrinsic motivation that can motivate human beings and which, when combined, enhance the individual's learning process.

It is therefore clear that gamification in education, especially in Physical Education, contributes to the process of intrinsic motivation, increasingly stimulating the process of learning and acquiring knowledge. Even so, self-determination and a state of flow enable

meaningful and active learning for students, because in addition to being attractive, it causes focus and interest in what is being done and can also be done in person or remotely (PIZANI et al., 2016).

4.6.6 Apps used in High School Physical Education

Lima, Falcão and Lima (2021), in their research, report that Physical Education teachers can use various virtual media and learning platforms, as well as digital applications and others. These include google meet, google forms, whatsApp, google classroom, emails, with free access.

Google classroom is considered by teachers to be one of the most complete, as it allows for the availability of vast didactic-pedagogical materials, such as auditory, visual, textual, among others, but in a well-organized and structured way, making it easier for students to use (LIMA; FALCÃO; LIMA, 2021).

The Virtual Learning Environment (VLE) is also one of the resources widely used in remote classes. According to Godoi et al. (2020), several teachers consider the use of VLEs to be essential during face-to-face classes, as it is a platform with various resources that add to classes, as well as interactive possibilities. It is worth noting that VLEs vary according to schools, universities and others, as it is an environment that can be built according to the needs of each school.

Sobrinho (2020) proposed the use of the social network Instagram as a teaching resource in high school Physical Education classes, by creating a profile for the subject to make subject content available, such as videos and posts in stories, in a way that contributed significantly to students' interest in the subject. It is worth noting that this resource was used in 2019, before the pandemic, but it fits as a resource for remote classes.

Several platforms offer educational videos, such as Technology Entertainment Design (TED), Khan Academy and the main one, Youtube. This has a wide variety of educational videos and channels, which can be filtered by the teacher and used in classes as teaching resources (MOREIRA; HENRIQUES;BARROS, 2020).

In addition to these, there is a wide range of websites with educational content, as seen in the previous chapter, whether in the form of texts, videos or teaching materials. Teachers can also use software to build their materials, such as Professor Maker. Some of the resources available are iMovie and Movie Maker (MOREIRA; HENRIQUES; BARROS, 2020).

The above authors point out that some teachers use these applications in an integrated

way, such as Google Meet for live classes, Classroom for materials and Whatsapp for quick communication, since interaction is carried out by chat, audio or both, respectively.

According to Junior and Monteiro (2020), Google Classroom is an easily accessible tool that doesn't require a server or installation, as well as coming with various other Google resources, such as Forms, Meet, Docs, Drive and Gmail. Its qualities include organization and real-time notifications in students' emails, facilitating communication. In addition, there are various ways of formulating activities, from making materials available, whether through quizzes in Google Forms, activities, texts and teacher videos via Google Drive, YouTube videos, among others that can be made available in Classroom.

Another relevant application is Google Drive, where Massola (2021) reports on its collaborative capacity, as this tool allows different users to edit and store different types of materials, such as videos, texts, books, activities, audios, games, dynamics and others. As a result, collective construction through dialog, note-taking and other strategies can be added to this platform, making it a great option for group work.

Also according to Massola (2021, p. 13):

> The experience with this tool allowed the students to interact and work in groups in the virtual environment, stimulating critical and reflective thinking, negotiating conflicts and making it possible to build new learning experiences. It also encouraged students to exchange ideas, share perspectives and arguments and make use of experiences already shared in the search for a better solution to the issues presented. It is yet another tool with possibilities for interaction between teacher and student and between peers (students and students).

93

Zoom is also one of the tools that can be used in classes, as it has the function of holding videoconferences. Thus, Zoom and Classroom allow asynchronous and synchronous classes to be held when used together, enabling greater teacher autonomy and easy access to various tools (JUNIOR; MONTEIRO, 2020).

Whatsapp is one of the most widely used instant messaging apps in the world, with more than 2 billion users worldwide, and is the most popular app in Brazil. Its functionalities include sharing audio, text, photos, videos, gifs, stickers, emojis, links to websites, voice and video calls (up to 8 people) and files in various formats, such as Word, PowerPoint and PDF (WHATSAPP, 2021).

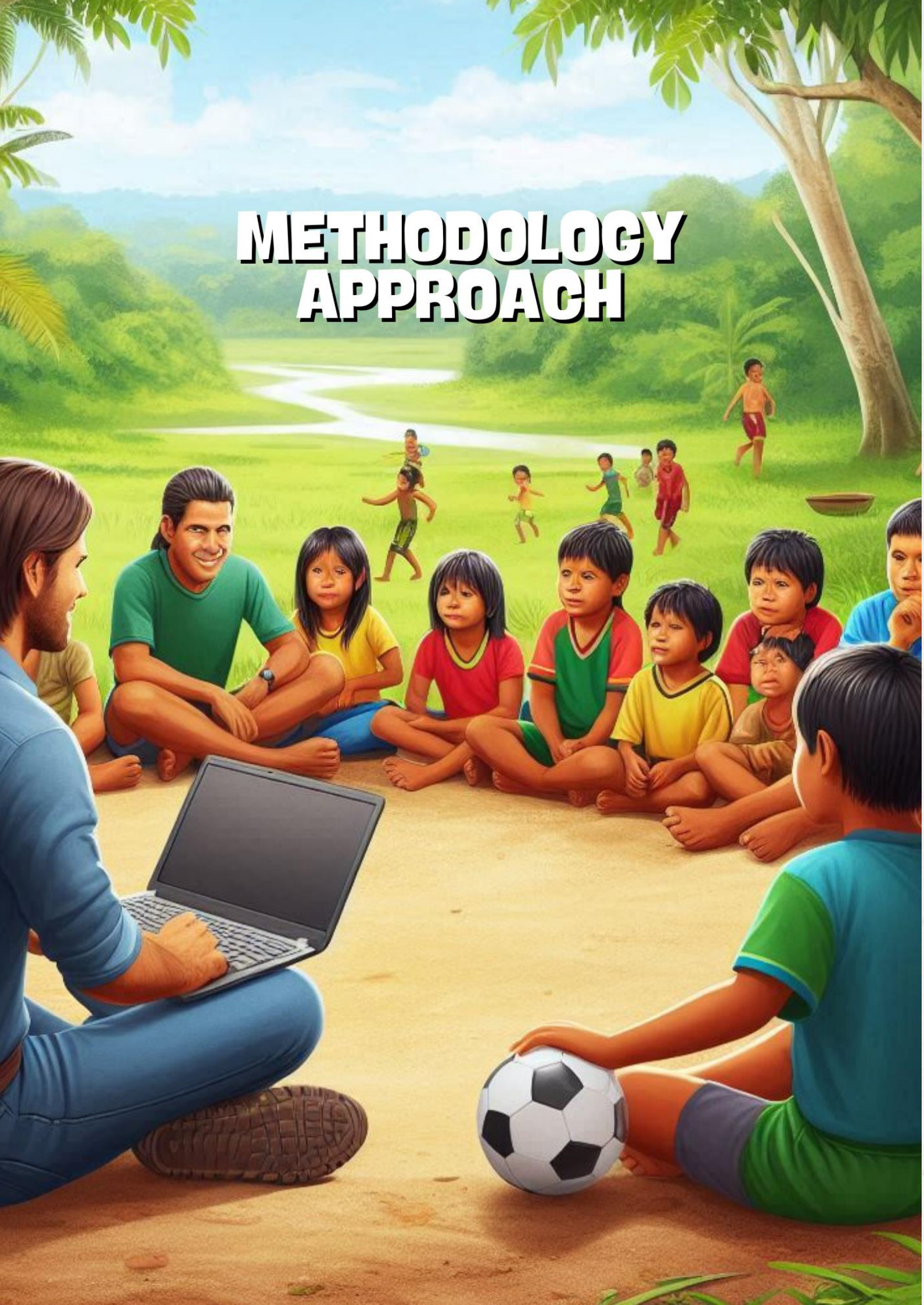
> WhatsApp's interaction tools make it possible to group participants, record and save conversations, share links, images, posts, cards, insert gifs or graphic symbols, emphasize notes in the text, use shades of color to emphasize excerpts, as well as exchange audio (MASSOLA, 2021, p. 12).

In addition, the audio resource becomes an excellent medium for teaching and inclusion for the participation of visually impaired students, and can reach all students, being an important

pedagogical tool in the remote education scenario. However, Whatsapp's greatest quality lies in its accessibility, as it is the most widely used application in Brazil, being popular and simple, reaching the most popular sections of society, and can have a very large gain in the educational process of remote classes, so that it reaches more students than other tools (BORTOLAZZO, 2020).

In addition, it was clear that there is a wide range of applications available and being used by physical education teachers during remote classes or not, some with certain limitations and others with great advantages. However, it is important to note that given the reports on the functionality of these tools, they should be used more during face-to-face classes. This shows how much Brazilian education needs to evolve and enter the digital environment more and more.

METHODOLOGY APPROACH



5. METHODOLOGY APPROACH

5.1 Positioning of the Study

To meet the proposed objectives, a quantitative type of research was carried out in relation to the purposes of an applied nature, which according to (CÓRDOVA; SILVEIRA, 2009) aims to generate knowledge to stimulate and apply to practice, directed towards understanding a real problem, involving local truths and interests and bibliographic that aims to understand the behavior of a population using a survey.

It is also characterized as exploratory in that it carries out a survey on the importance, necessity, usefulness and practicality of creating a physical education portal in the Amazon/Pará. It is also a cross-sectional study because it analyzes data collected over a period from people with similar characteristics and common goals.

The study complied with the ethical principles of the National Education Council and the Human Research Ethics Committee. In addition, the Free and Informed Consent Form - FICF (Appendix 2) was applied, as well as the Free and Informed Approval Form - FIAF.

The work was referred to the Research Ethics Committee (CEP) of the Inter-American Faculty of Social Sciences-FICS, and the research only began after the committee's approval. The study was carried out from August 2021 to June 2022.

Inclusion Criteria: All the individuals investigated were physical education teachers and the students participated in physical education classes in the state school system.

Exclusion Criteria: not agreeing to the study and not signing the informed consent form. (Appendix 2).

5.2 Stages of the Research

In order to establish a discussion on the topic in focus, this study used an exploratory approach, which is applied so that the researcher has greater proximity to the universe of the object of study and which offers information and guides the formulation of research hypotheses in a broader way than just the interpretation of the bibliographic content of the various authors reviewed (ZWICK et al., 2019).

Therefore, the research adopted a theoretical-conceptual framework using books, articles and magazines, with the aim of confronting the reality of the facts with the main concepts addressed by various authors, always establishing a critical reflection to investigate the issue in focus.

Minayo (2014) points out that an exploratory methodology is one that incorporates meaning and intentionality, because “it is possible to obtain explanations of phenomena that were not initially accepted by other researchers, even with the evidence presented, as well as, discovering new phenomena and formulating new ideas and hypotheses” (MINAYO, 2014, p. 98).

The purpose of this study was to carry out field research to verify the relevance of building a **Physical Education Portal for the Amazon/Pará region**, the interests of the subjects, among other aspects.

The aim of field research is to acquire information and/or knowledge about a particular problem for which an answer is sought; or a hypothesis that is to be proven; or even to discover new phenomena and relationships between them (ANDRADE, 2019).

5.3 Locus of the Research

The research was carried out in the state network of high schools in the city of Belém, totaling 171 schools.

5.4 Population and Sample

The study totaled 300 (three hundred) volunteer participants, 200 (two hundred) students (12.5%) of both genders, aged between 15 and 20, and 100 physical education teachers (77%) aged between 22 and 64 from 50 schools (29.5%) located in the municipality of Belém-PA, which is equivalent to 100% of the total number of people in the schools.

In Belém, there are 171 high schools, 62,366 students enrolled and 3,609 teachers. And the population of physical education teachers at the Núcleo de Esporte e Lazer - NEL/SEDUC, which serves high school students in Belém, is 130 teachers for 800 students at this level of education (SEDUC, 2020).

It is worth noting that the sample mentioned above took part in the survey in its entirety, i.e. 300 people answered the questionnaire. The questionnaire was divided into sections based on questions related to the profile of general data and questions related to the topic, such as the relevance of developing the portal, the interest of physical education teachers and students in the portal, followed by information that should be included in the portal.

5.5 Instrument For Data Collection

To collect the data, we used a questionnaire in Google Forms format (Appendix 1), mainly because of the advantages this type of instrument offers when you want to reach a sample of the population, since the data can be tabulated more easily and quickly than other methods.

The survey questionnaire was based on the Likert Scale, with options for the respondents' level of agreement, from “totally disagree” to “totally agree”, in order to make it possible to draw up a set of options that vary on an “axis” from agreement to disagreement (SILVA; SIMON, 2015). We opted for a five-item scale since larger scales make data analysis more difficult and often confuses survey participants.

5.6 Data Analysis

Initially, contact was made with the general management direction of SEDUC searching authorization for the development of the research. Then, contact was made via Whatsapp with the professors and through them with the students for general clarifications about the research to be carried out, as well as to obtain the proper authorizations from professors and students who agreed to participate in the study.

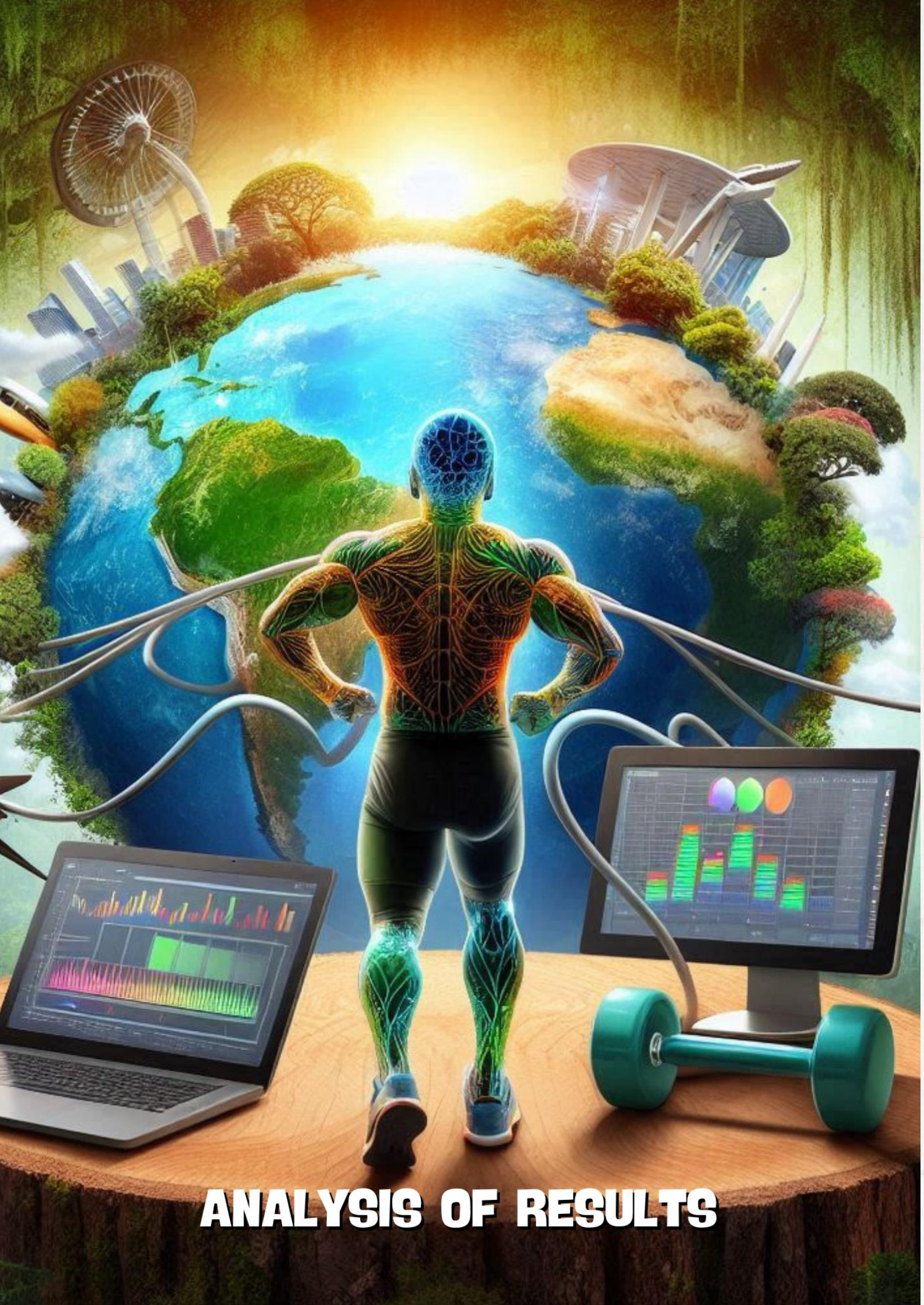
After collecting the data, they were coded and tabulated. The tabulation was done in Windows® Excel spreadsheets, where they were calculated and expressed quantitatively, after which the graphs were prepared that served for the subsequent analysis of the results obtained based on the literature, whose study results are presented in the following chapter by means of simple descriptive statistics.

After the analysis of the results of the field research, the PHYSICAL EDUCATION PORTAL OF THE AMAZON/PARÁ was produced.

5.7 Ethical Considerations

This work is of an academic nature and as a researcher, all the ethical norms that are included in the fulfillment of the principles determined by scientific work involving people, were carried out. The subjects involved in the research did not have their names identified or any harm to them, respecting the right to privacy and ensuring that the information provided was not used for another purpose. The objective and relevance of the survey were explained to the respondents, as well as the importance of their collaboration and the guarantee of anonymity.

The research project was submitted to the Ethics Committee of the Inter-American Faculty of Social Sciences – FICS.

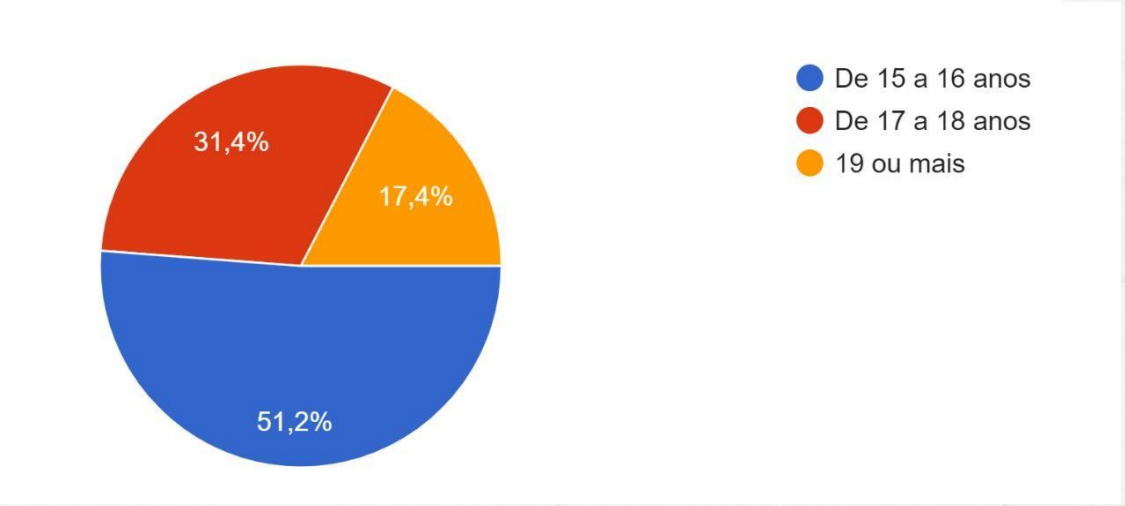

ANALYSIS OF RESULTS

6. ANALYSIS OF RESULTS

In this chapter we will initially present the results found in the field research carried out with the students of the study sample, then the results obtained in the field research carried out with the teachers selected for the research sample will be presented. And finally, the steps of how the construction of the portal proposed in this study was developed will be presented.

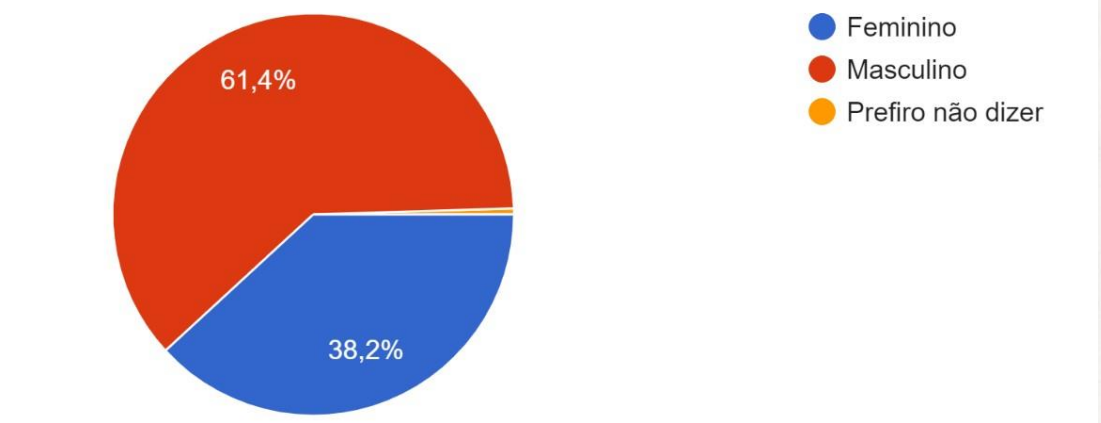
The sample of students was composed of 207 participants of different age groups and of both sexes, of which 51.2% were aged between 15 and 16 years; 31.4% between 17 and 18 years old and 17.4% are 19 years old or older, and 61.4% are male and 38.2% are female, as shown in graphs 1 and 2, respectively:

Graph 1. Age of the students



Source: own authorship

Graph 2. Gender of the students

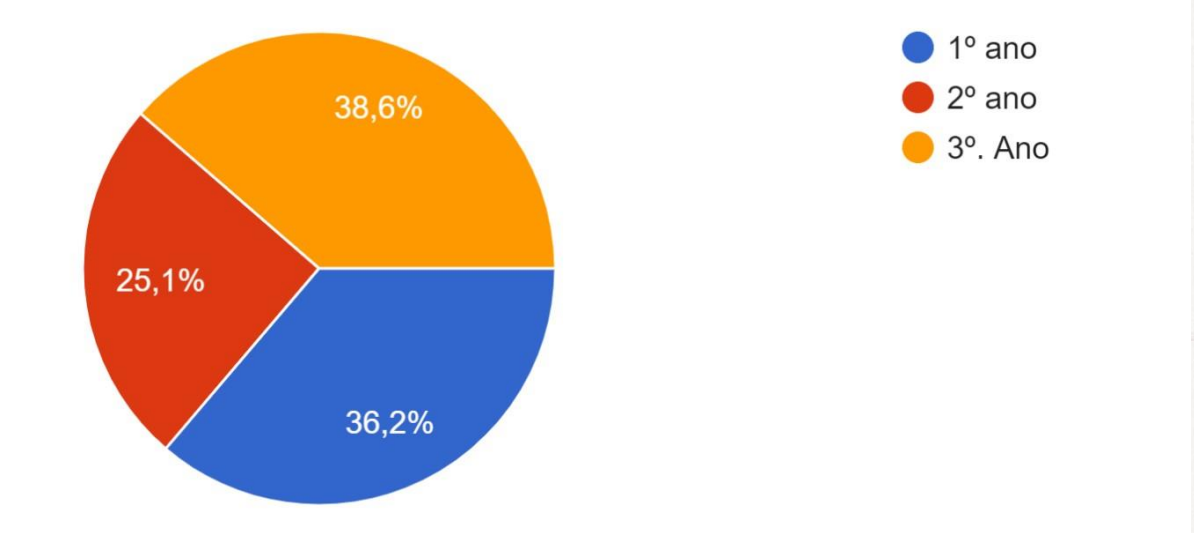


Source: own authorship (2022)

According to data from the 2021 School Census, the number of male enrollments had a relative increase in high school, which corroborates the data found (INEP, 2021).

As for the grades they are attending, 36.2% are in the 1st year; 25.1% are in the 2nd year and 36.2% in the 3rd year of high school. As shown in graph 3:

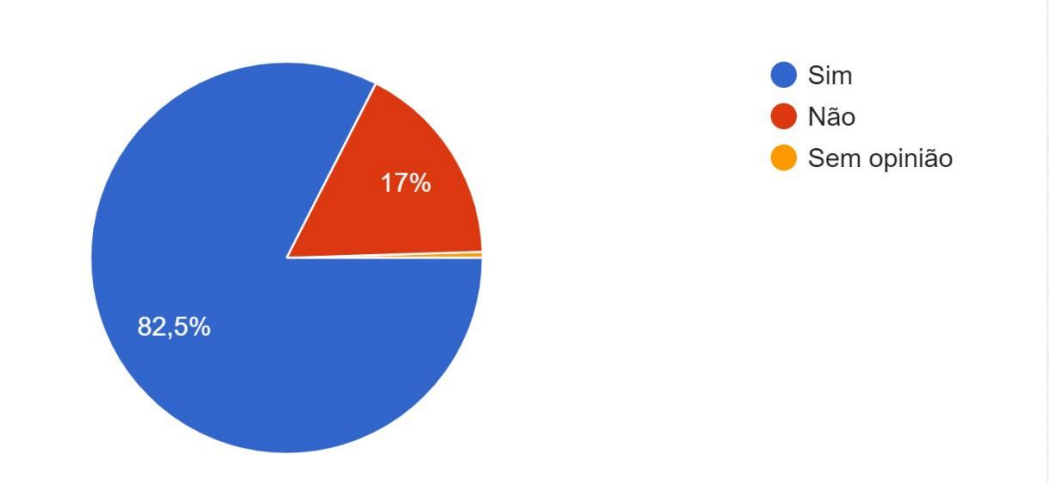
Graph 3. Grades the students are attending



Source: own authorship (2022)

Regarding the specific questions, it was asked if the students like the discipline of Physical Education, out of 206 answers, we obtained the following results: 82.5% answered "yes", 17% answered "no", and 0.5% answered "no opinion", as shown in graph 4.

Graph 4. Do you like the subject "Physical Education"?



Source: own authorship (2022)

The concept of "liking" a subject can be explained as a pleasant or positive emotional state in the face of the activities carried out during Physical Education classes, therefore, the importance of standing out if students have "appreciation" for the subject. In this sense, the findings corroborate with other studies that observed the positive level of satisfaction regarding Physical Education, in the essay by Brandolin, Koslinski and Soares (2015) it was possible to observe, for example, that 38.7% of the participants pointed out physical education as the subject that generates the most satisfaction in high school, when compared to the others, thus, these results can be justified by the fact that Physical Education is still a predominantly space for male socialization and sociability at school, since most of the responses were male students, even with all the cultural intervention that search equal opportunities between men and women in all social sectors.

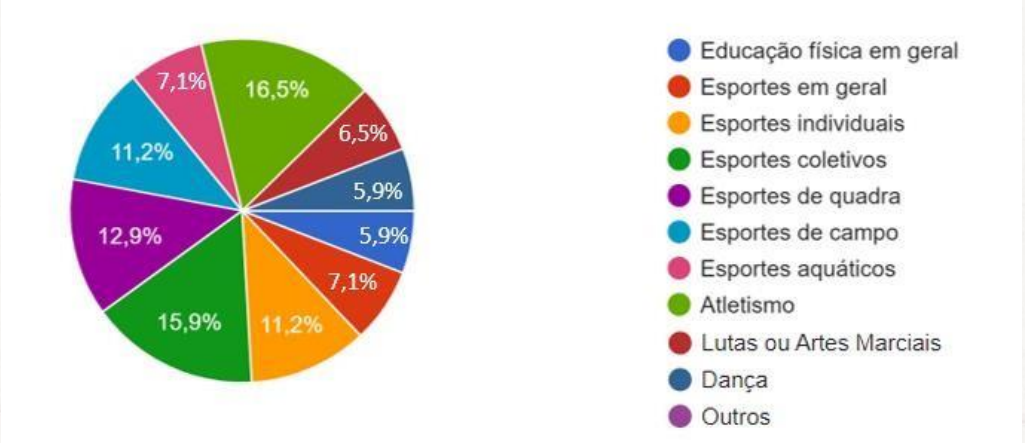
Another point that should be taken into consideration in this study is the issue of gender, it is not news that the female gender often has an aversion to physical education classes, studies show the reasons for the withdrawal of girls from physical education classes, in the study by Santos et. al. (2020) it was noted that in the students' view, the motor difficulty when performing a certain activity ended up exposing them to the class, becoming the focus of criticism and jokes that generate exclusion and rejection by colleagues, especially those who have more ability. They also point out that these practices are almost always ignored by the teacher, who does not intervene or sometimes ends up corroborating the exclusion processes.

Despite this, the authors Schneider and Bueno (2015) point to the possibility that the school is one of the few spaces in which girls have access to certain elements of bodily practices, such as sports.

As well as previous studies that already pointed to physical education perceived as a time and space in the school curriculum aimed at student satisfaction, although part of the pedagogical discourse of the discipline is justified by its usefulness (LOVISOLO; SOARES; SANTOS, 1995). In this way, the production of meanings is directly linked to the type of relationship established with the knowledge that is presented to them. For Dewey (1978), experience occurs in different ways in the phases of the subject's development, it is a phase of nature where situation and agent interact and are modified. For him, "the educational experience is, therefore, this intelligent experience, in which thought participates, through which relations and continuities not previously perceived are perceived" (p. 17).

Still on the students' perceptions, he was also asked about the areas of Physical Education that they like the most.

Graph 5. If tyou answered “yes” in the previous question, which of the alternatives below do you like best?



Source: own authorship (2022)

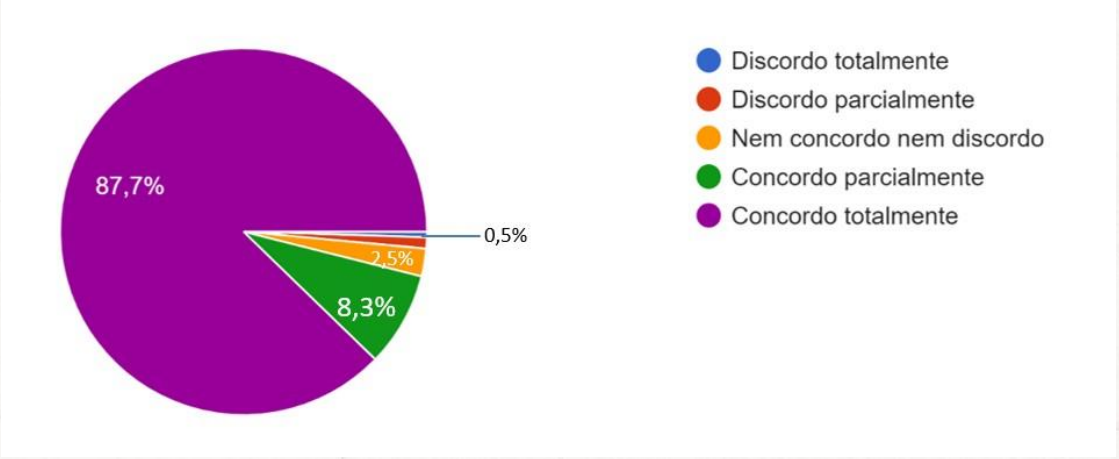
The highest percentage was athletics with 16.5%, followed by team sports with 15.9%, court sports with 12.9%, individual and field sports with 11.2% each, sports in general and water sports with 7.1% each, fighting or martial arts with 6.5% and physical education in general and dance with 5.9%. These findings reinforce a previous study by Santos et. al. (2014) which analyzed that high school students, during the schooling process, give importance to issues such as competition, repetition of content, gender and supremacy of sport, and these emerged as determining factors in the interest in learning the knowledge shared during classes.

In this way, we can understand that as Physical Education constitutes a space for socialization, it also broadens the process of appropriation of bodily practices or what some authors call “practices that constitute our cultural and material heritage, beyond what is learned on the street, and to what extent the identity of PE undergoes transformations in the representations of these young people throughout schooling.” (SANTOS, et. al., 2020, p. 23).

Throughout history, physical education has been a subject that, within the school, is responsible for systematizing specific content, thematizing knowledge related to bodily practices, more directly associated with manifestations linked to physical skills such as games, sports, gymnastics and wrestling. It is worth remembering that the idea of the duality between body and mind, in which the former was given priority, has lost its strength. Physical education in schools cannot be at the service of performance sport, which search to select the best to the detriment of the less skilled, leading to exclusion (JUNIOR; TASSONI, 2013).

In the specific approaches, the students were asked whether they believed it would be relevant to develop a physical education portal for SEDUC-PA high school students and teachers. As shown in graph 6 below:

Graph 6. Is it relevant the development of physical education portal for SEDUC-PA high school students and teachers?



Source: own authorship (2022)

The results show that 87.7% of students totally agree that a physical education portal for high school students and teachers is relevant, 8.3% partially agree, 2.5% have no opinion, and only 0.5% partially disagree.

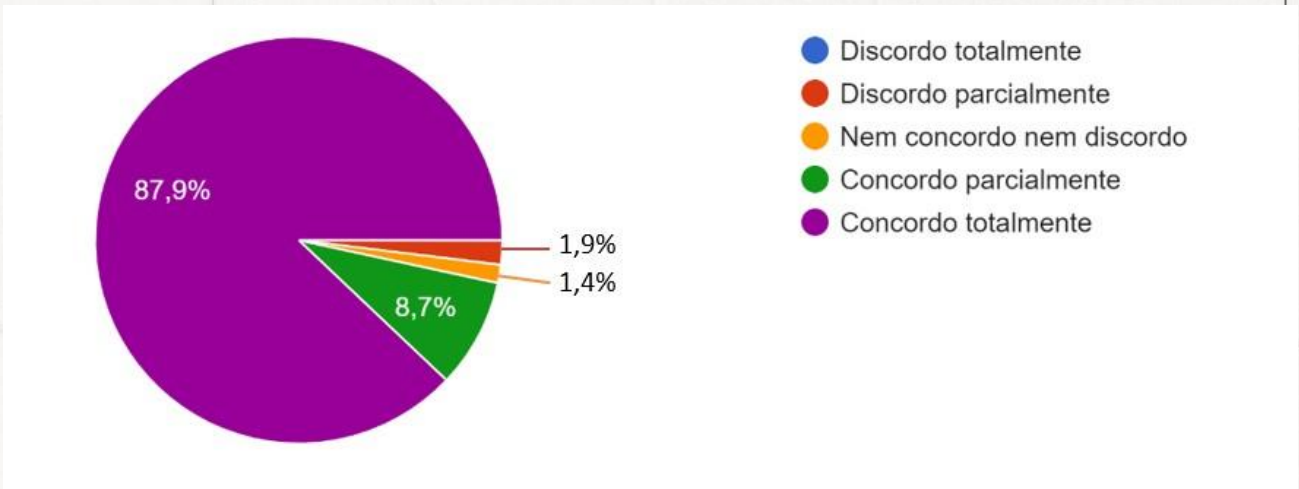
It can be seen in Graph 7 that the majority of students (87.9) agree with the development of the portal to arouse interest, especially among students, since according to Matos and Neira (2016), there is an increasing detachment of high school students from Physical Education classes who often fail to see the real significance of the classes for their lives and this may be

caused by some reasons such as: the methodology used by the teacher, repetition of content, expressive sportiness of classes and the lack of structure and adequate materials for a more conscious and promising practice of this discipline.

Coelho (2018), from an action research perspective, investigated the benefits of using ICT to record the individual progress of students in physical education, using Portables Digitals Assistants (PDA), known as a handheld support (similar to a portable minicomputer), to record and consult pedagogical information during classes, such as student attendance, school calendar, anthropometric assessment data, timetables, lesson plans, observed behavior, among other information, as well as using it as a teaching tool by playing videos and music during lessons and making audiovisual records by photographing and filming some moments of the lesson.

Another point raised was whether a portal could increase the interest of physical education teachers and students at SEDUC-PA secondary schools. 87.9% of respondents agreed with this question; 8.7% partially agreed; 1.9% partially disagreed and 1.4% neither agreed nor disagreed.

Graph 7. Can the development of a physical education portal increase the interest of Physical Education teachers and students at SEDUC-PA high schools?



Source: own authorship (2022)

Based on these findings, we can say that the COVID-19 pandemic has caused a significant disruption around the world, thus, technologies have become more present in people's daily lives and have contributed to education in several instances, in this sense, with the significant interruption of PE brought about by the pandemic (that is, isolation, social distancing and school closures), the use of digital technologies in teaching and learning has

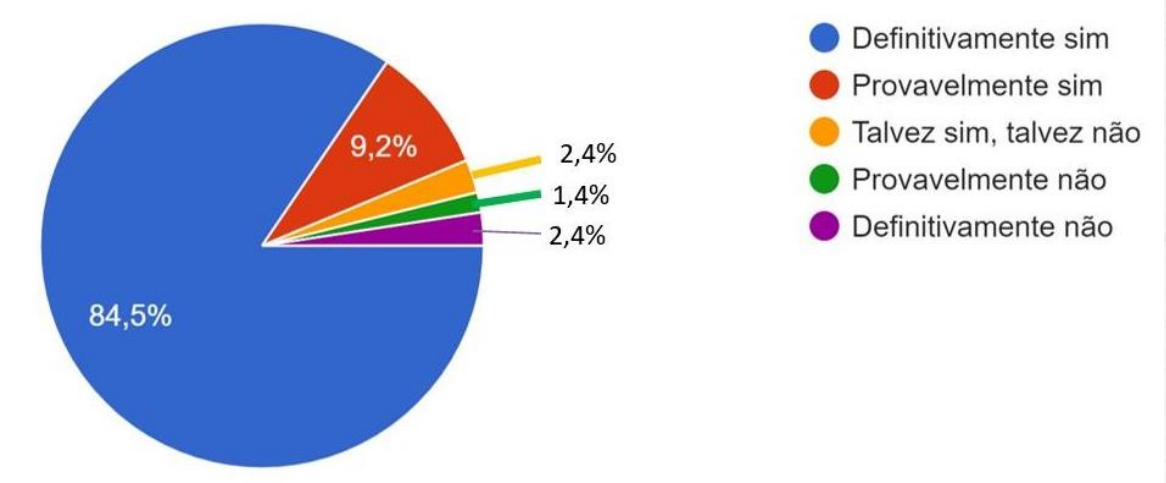
become a necessity overnight (PARRIS, et. al., 2022).

The students' positive responses regarding the relevance and probable increase in interest of a physical education portal can be justified because online activities may have contributed to physical, cognitive, social and affective learning in Physical Education, as reported by Parris, et. al. (2022) in their study, which also exemplifies that one of the participants used “online” activities to promote students' knowledge and understanding. Thus, despite a few exceptions, it seems that a portal focused on Physical Education can contribute to the knowledge and commitment of the students who will be able to use it.

Graph 8. The most relevant information that a physical education portal should contain to increase the interest of teachers and students at SEDUC-PA high school physical education are:

Information on sports in general and specific sports
Information on school physical education
Information on sporting events
Information on martial arts/fighting and various types of dance
Information on courses in physical education and sports
Information on teaching materials in physical education and sports
Scientific publications in physical education and sports
Links to videos on games, physical education, sports and sports competitions
Important national and international links to physical education and sport.

Translated with www.DeepL.com/Translator (free version)



Source: own authorship (2022)

Based on the results, we obtained positive responses regarding the relevant information

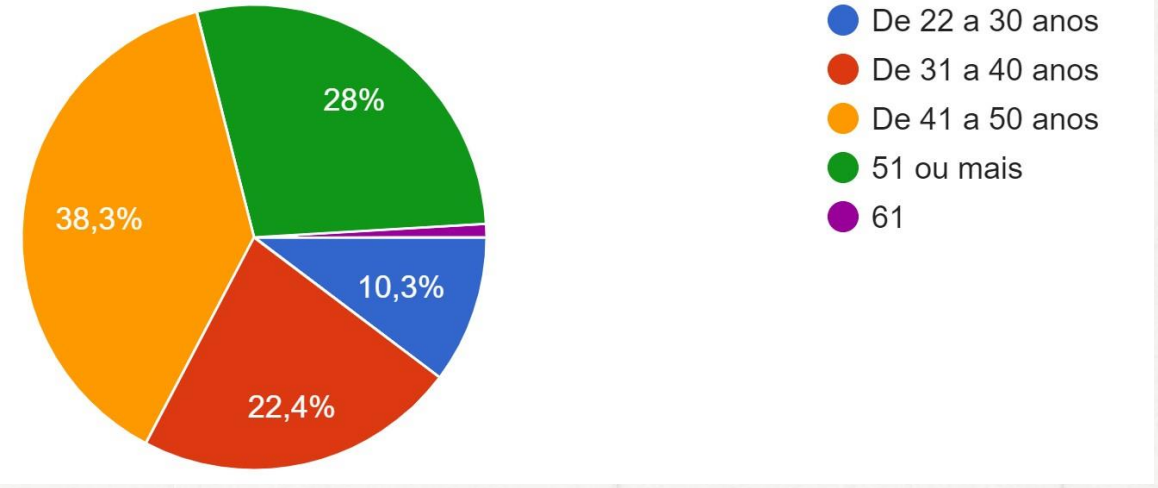
that should be included on the physical education portal, with 84.5% of students agreeing with the information mentioned; 9.2% reported “probably yes”; 2.4% for “maybe yes, maybe no” and “definitely not” and 1.4% for “probably not”. In view of this, many issues need to be addressed by researchers into physical education in digital media.

Considering the literature, Santos et al. (2014) present an overview of scientific production on the subject in national journals between 2006 and 2012. The study shows that until then there had been a great deal of interest in analyzing media products, which between 1990 and 2005 was mostly linked to sports and then expanded to other approaches such as the dissemination of supposedly ideal body models. The same study also includes approaches to the inclusion of media tools in the teaching and learning process, which comes second in the overall percentage.

Despite this, when analyzing some experiences with media education in the context of an undergraduate Physical Education course in Brazil, Bianchi and Pires (2015) found that there are few educational proposals aimed at exploring the possibilities linked to information and communication technologies. Given the scarcity, the authors suggest difficulties to be faced by professionals in promoting pedagogical interventions from different media-education perspectives, such as: technical-instrumental; object of study or criticism; productive-expressive. It is therefore important to emphasize the relevance of a portal for accessing content aimed at physical education, which can be used in a variety of ways, both for students and teachers.

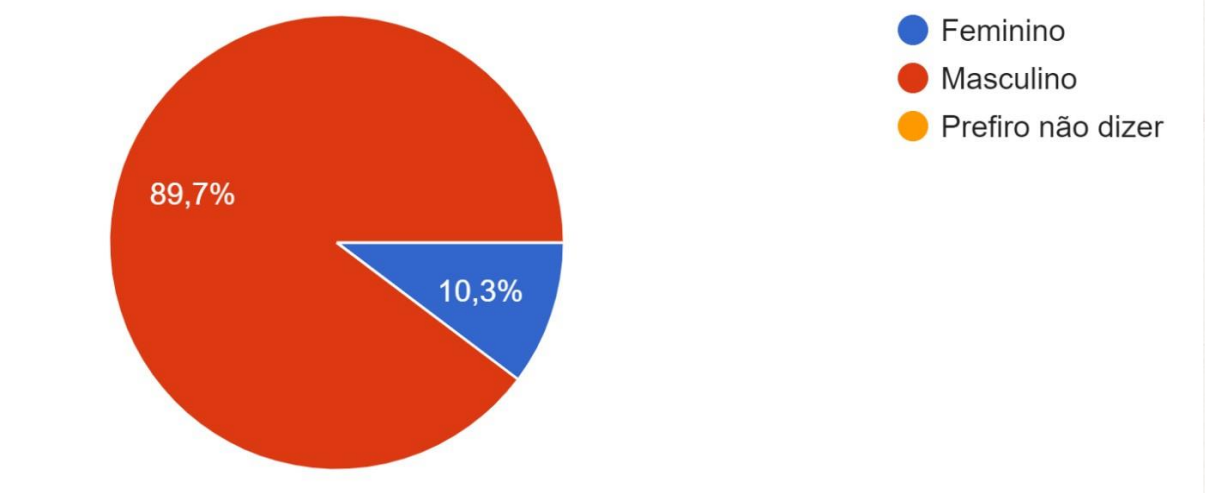
Teachers were also asked about the relevance and content of a possible portal. Our sample included 107 teachers, with the majority aged between 41 and 50 (38.3%); 28% aged 51 or over; 22.4% aged between 31 and 40, according to graph 9, and of both sexes, 89.7% male and 10.3% female, according to graph 10.

Graph 9. Age of the teacher sample



Source: own authorship (2022)

Graph 10. Gender of the teacher sample



Source: own authorship (2022)

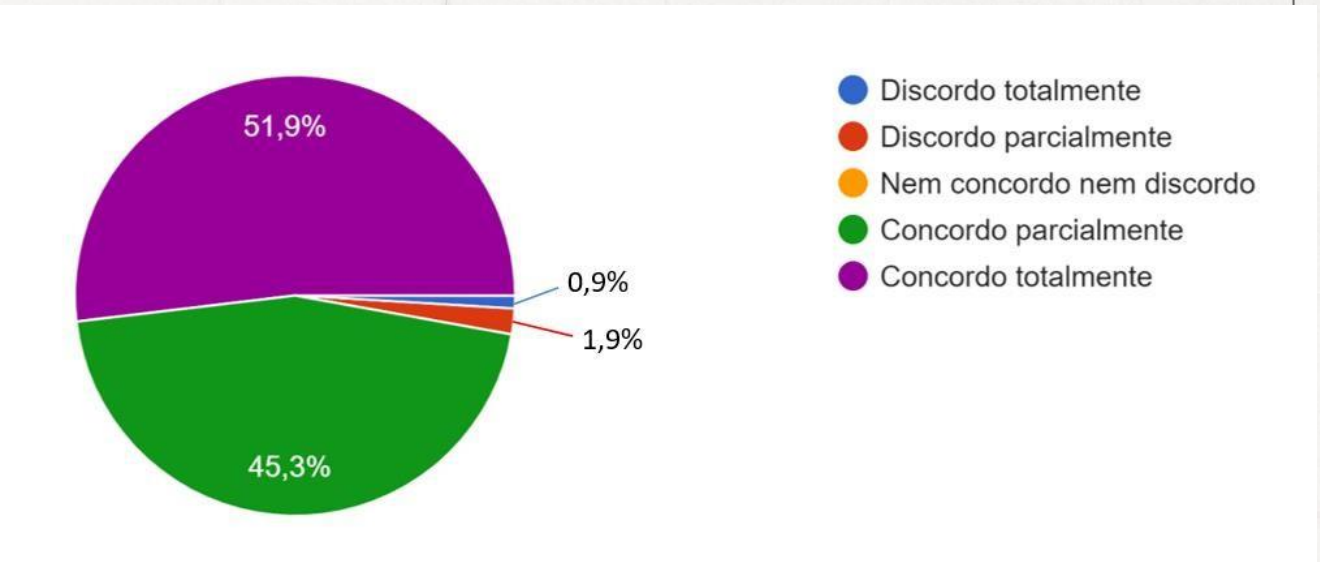
The results in Graph 10 are due to the strong military influence in the history of physical education in Brazil, as it was closely linked to disciplinary body training and education that sought physical rather than intellectual excellence and was strictly dominated by men. Nowadays, even with all the changes brought about by legislation regarding this discipline, the number of male teachers is still growing (CASTELLANI FILHO, 2018).

Regarding graduation, 100% of the teachers have both a degree and a bachelor's degree in physical education, 77% have a specialization; 16% have a master's degree and 7% have a doctorate. Another piece of data collected was on how many years they have been trained in physical education, and 100% reported that it has been 10 years or more, and 100% have also

worked in secondary education for 10 years or more.

In relation to the specific questions, they were also asked about the relevance of developing a physical education portal for SEDUC-PA high school students and teachers.

Graph 11. Is it relevant the development of a physical education portal for SEDUC-PA high school students and teachers?



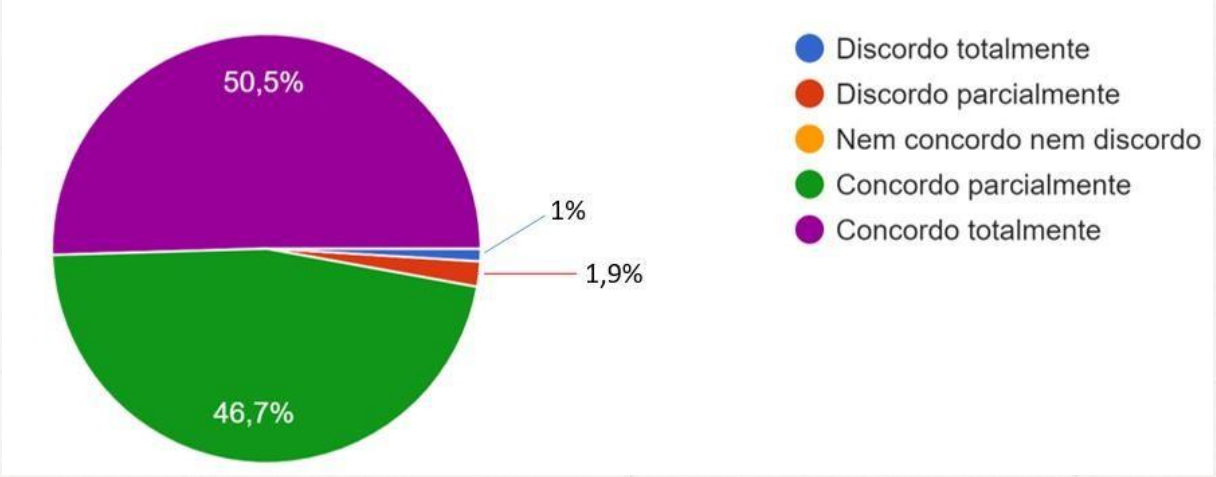
Source: own authorship (2022)

The teachers' perspective on the relevance of a portal in physical education was favorable, as 51.9% totally agreed; 45.3% partially agreed; 1.9% partially disagreed and 0.9% totally disagreed.

When compared to the students' responses, we can see a relevant difference in the answers: on the one hand, we have the students who already sympathize with digital technologies and live with them naturally on a daily basis, and on the other, we have physical education teachers who, according to some studies, have historically had a reputation for being traditional and resistant to change (KIRK, 2010; 2012; TINNING, 2012). However, since the consequences of the pandemic, whether by choice or necessity, many teachers have experimented with technology in relatively new ways in their personal and professional lives (PARRIS, et. al. 2022).

The same question about the interest of students and PE teachers was asked of teachers, as shown in the graph below:

Graph 12. Can the development of a physical education portal increase the interest of physical education teachers and students at SEDUC-PA high schools?



Source: own authorship (2022)

As for the interest of students and teachers from the point of view of teachers, the graph does not change significantly: 50.5% totally agree that a portal can increase the interest of students and teachers; 46.7% partially agree. The findings corroborate the study by Parris, et. al., (2022) that although the increased use of technology was expected, many teachers reported using social media platforms to pass the time and relieve boredom, although some used them as an aid in teaching physical activities.

On the other hand, it is clear that the importance of digital media, and our results are consistent with other studies, in Australia, Brazil, China, Ireland, South Korea, Mexico and New Zealand Jeong and So (2020), Cruickshank, Pill and Mainsbridge (2022) and Howley (2021) reported that PE teachers have used social media to encourage students to "do something" during the pandemic.

Teacher resistance has also been attributed to limited teacher training in the use and application of digital technologies in the classroom (HYNDMAN; HARVEY, 2019; LAW; PELGRUM; PLOMP, 2018). Another point that further substantiates these findings is that several teachers in one study reported that their training in digital technologies focused almost exclusively on the dangers of these platforms (PARRIS, et. al., 2022).

Finally, the teachers were asked about the most relevant information that should be included in a physical education portal to increase the interest of teachers and students in high school physical education. The data is shown in the graph below.

Graph 13. The most relevant information that a physical education portal should contain in order to increase the interest of teachers and students at SEDUC – PA high school physical education are:

Information on sports in general and specific sports

Information on school physical education

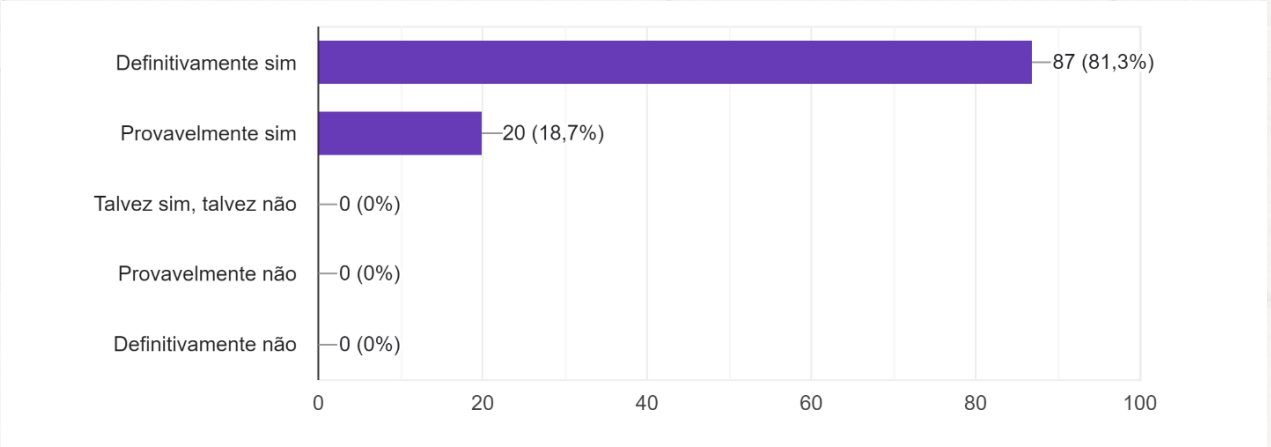
Information on sporting events

Information on martial arts/fighting and various types of dance Information on courses in physical education and sports

Information on teaching materials in physical education and sports Scientific publications in physical education and sports

Links to videos on games, physical education, sports and sports competitions

Important national and international links on physical education and sport



On this last question, from the teachers' point of view, 81.3% answered “yes” and 18.7% “probably yes”. In this respect, it can be seen from all the above that the exchange of information is the basis of digital media, so a portal aimed at aspects of physical education that is robust and faithful to the subject's content is essential for students and teachers to adhere to it. This is especially true given that such platforms are now one of the most common ways of exchanging information (GOODYEAR; ARMOUR; WOOD, 2019) and that PE embracing technology in a pedagogically sound way is a relatively long-standing ambition (CASEY; GOODYEAR; ARMOUR, 2017).

This is confirmed by the fact that as many young people rely on these platforms for information on health and physical activity as teachers. Although digital technologies such as social media have been identified as an accessible and potentially rich resource for learning about health, physical activity and the body (CASEY; GOODYEAR; ARMOUR, 2017), teachers have so far been somewhat resistant to their use, with some struggling to integrate

digital technologies into their practice in innovative and pedagogically sound ways. This has somewhat resulted in a pedagogical “dead end”, but now from studies involving physical education and digital media, it seems timely to reverse it.

Finally, the following table shows the stages in the development of a portal for a Physical Education database.

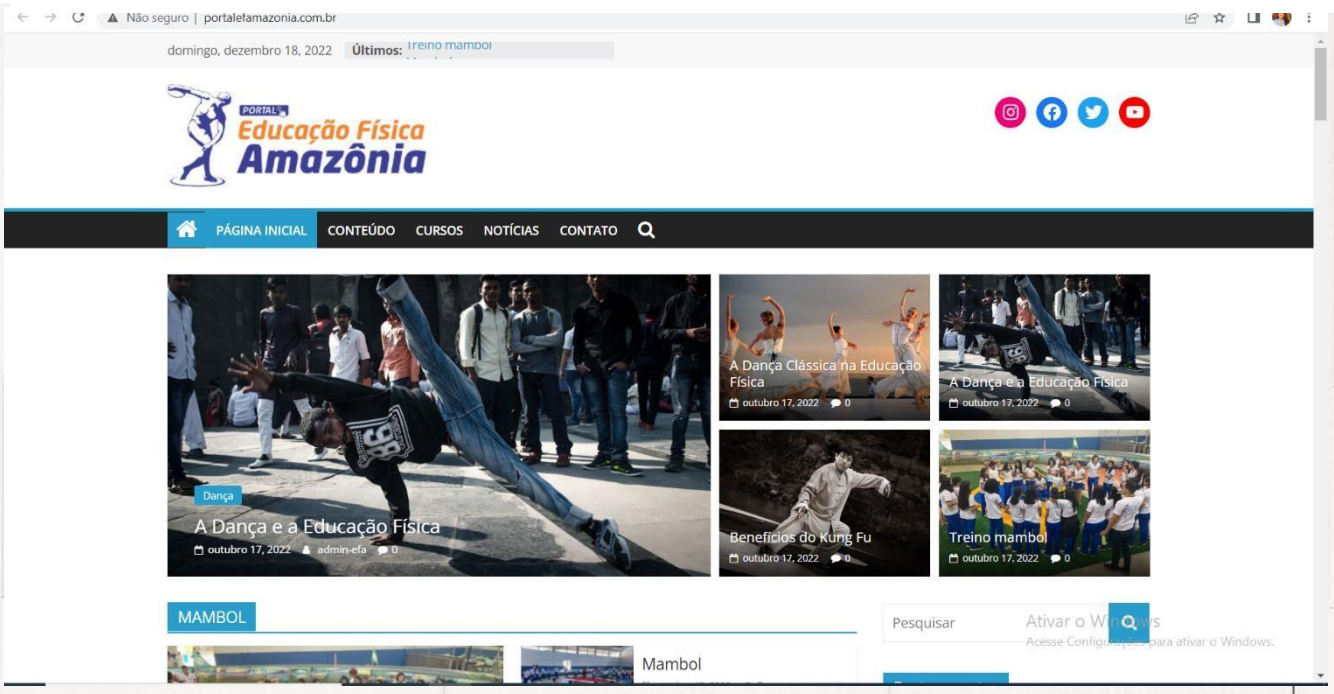
Table 1. Stages of the portal development

PHASE/STAGE/TASK/WEEKS	**1**	**2**	**3**
PRELIMINARY PHASE			
Collection of documents, spreadsheets, images an everything relevant			
Diagnosis of existing servers and archives			
Diagnosis of infrastructure and information transfer			
Sizing the technology to be used in the infrastructure			
PLANNING PHASE			
Acquisition of domain (completed)			
Hiring hosting (completed)			
Elaboration of the Implementation Plan			
Elaboration of the Training and Activities Transfer Plan			
DEVELOPMENT AND DEPLOYMENT PHASE			
Domain Configuration			
Configuration of the host environment			
Installation and configuration of tools			
Identification and execution of Databases scripts			
Page layout development			
Page coding with php language			
Facebook pixel configuration			
FINAL DEPLOYMENT PHASE			
Availability of the Application on the institution’s infrastructure			
Creation of the Database on the institution’s infrastructure			
Approvoal of the Information Technology Solution			
SUPPORT PHASE			
Assisted Operation			
Solution Technical Support			
FINAL PHASE			
Final Presentation of the solution			

Source: own authorship (2022)

This resulted in the publication of the Amazon Physical Education Portal, as shown in the figure below:

Figure 2. Educação Física Amazônia portal homepage



Source: own authorship (2022)


FINAL CONSIDERATIONS

7. FINAL CONSIDERATIONS

This process of cultural transformation regarding digital education makes us reflect as teachers, the consumers of this new way of teaching, are encouraged to search for information and thus create new connections with this media content.

Information and communication technologies today have shown us their great capacity for comprehensiveness, aesthetics and scientific technical information updated in real time, requiring Brazilian education professionals to quickly master the technology in question so that they can better use the various forms of media to contribute to the day-to-day learning of students in Brazil, given that the proper and correct use of these digital tools enhances all the methodological processes of teaching today, considering the speed and quality of the knowledge available on the various platforms geared towards the development of education in a globalized way, thus facilitating the pedagogical process of teaching and learning in a more efficient and effective manner.

It is clear that more assertive public policies need to be developed for the use and exploitation of digital technologies in the public schools of our state of Pará, such as the construction or renovation of cyber spaces, as well as the acquisition of advanced and up-to-date computer equipment, as well as promoting training for all teaching, administrative and pedagogical staff and school management and establishing a great pact of commitment with all those involved and trained so that the quality of education is given a boost.

In the research in question, we identified that there is a lack of digital tools such as a WEBSITE aimed specifically at Physical Education and Related Activities in the Amazon region and specifically in the state of Pará. Due to this lack, we set out to develop a website aimed at Physical Education and related activities in the region in question, with the aim of disseminating, publicizing and making available to society in general all the educational production and knowledge, emphasizing the pedagogical practices of Physical Education and related activities such as the creation of games and plays, theses, dissertations, articles, books, images, videos genuinely from the Amazon and links to sites of other entities that are committed to the dissemination of education in Brazil.

Finally, we believe that in this way we are contributing to the growth, development and advancement of Physical Education and Related Activities in the Amazon region.

REFERENCES

ADORNO, Theodor W; HORKHEIMER, Max. **Dialética do esclarecimento**. Rio de Janeiro: Jorge Zahar Ed., 1985.

ADORNO, Theodor. **Estudos sobre a personalidade autoritária**. São Paulo, Unesp. 2019.
ALARCÃO, Isabel. **Professores reflexivos em uma escola reflexiva**. São Paulo: Cortez, 2015.
ALEGRIA, J. Os professores e a tecnologia em sala de aula. **Caleidoscópio**. Canal Futura. 2017. Disponível em: http://futura.org.br/caleidoscopio/os-professores-e-a-tecnologia-na-sala-de-aula/ Acesso em: 10 out. 2021.

ALMEIDA, Luciano de; FENSTERSEIFER, Paulo Evaldo. A relação teoria-prática na educação física escolar: desdobramentos para pensar um "programa mínimo". **Kinesis**, v. 32, n. 2, dez. 2018. Disponível em: https://periodicos.ufsm.br/kinesis/article/view/16503. Acesso em: 26 jun. 2021.

ALVES, Rubens. **A escola com que sempre sonhei sem imaginar que existisse**. SP: Campinas: Papirus, 2013.

ANDRADE, T. E.; TASSA, K. Motivação nas aulas de Educação Física no ensino médio. **Revista Digital** Buenos Aires, v. 20, n. 203, p. 1-7, 2015. Disponível em: https://www.efdeportes.com/efd203/motivacao-nas-aulas-de-educacao-fisica.htm. Acesso em: 14 out. 2022.

ANDRADE, Maria Margarida de. **Introdução à metodologia do trabalho científico**. 9 ed. São Paulo: Atlas, 2019.

AQUINO, O.F. Fundamentos epistemológicos da ciência didática: contribuições de Mikhail A. Danilov. **Revista Educação Unisinos**, v. 20, n. 2, p. 234-244, maio/ago. 2016. Disponível em: https://revistas.unisinos.br. Acesso em: 16 nov. 2021.

ARROYO, Miguel. **Ofício de mestre. Imagens e autoimagens**. Petrópolis: Vozes, 2010.

ASSMANN, H. (Org.). **Redes digitais e metamorfose do aprender**. Petrópolis: Vozes, 2005.

BARACHO, A. F. O. de.; GRIPP, F. J.; LIMA, M. R. de. Os exergames e a educação física Escolar na cultura digital. **Rev. Bras. Ciênc. Esporte**, Florianópolis, v. 34, n. 1, p. 111-126, jan./mar. 2013. Disponível em: http://www.scielo.br/pdf/rbce/v34n1/v34n1a09.pdf. Acesso em: 13 out. 2022.

BASTOS, M. I. **Utilização das TIC em Escolas Públicas**: um estudo de caso. Monitoramento e avaliação. Projeto 914BRA5002. Relatório Final, 2011.

BELLONI, M. L. **O que é mídia-educação**. Campinas: Autores Associados, 2019.

BETTI, I. C. R. **O prazer em aulas de educação física escolar**: a perspectiva discente. 1992. Dissertação (Mestrado em Educação Física) -Universidade Estadual de Campinas, Campinas, SP, 1992.

BIANCHI, P.; PIRES, G. L. Cultura digital e formação de professores de educação física: Estudo de caso na unipampa. **Revista Movimento**, Porto Alegre, v. 21, n. 4, p. 1025-1036, out./dez. 2015. Disponível em: https://seer.ufrgs.br. Acesso em: 15 nov. 2021.

BIBIANO, Bianca. **A escola perdeu sua função social no Brasil**. 2015. Disponível em: https://meuartigo.brasilescola.uol.com.br/educacao/funcao-social-escola.htm. Acesso em: 9 fev. 2021.

BORTOLAZZO, S. F. Uma análise sobre o Whatsapp e suas relações com a educação: dos aplicativos às tecnologias frugais. **Revista Pedagógica,** Chapecó, v. 22, p. 1-15, 2020.

BRANDÃO, Carlos Rodrigues. **Em campo aberto**. São Paulo: Cortez, 2017.

BRANDOLIN, F. KOSLINSKI, M. C. SOARES, A. J. G. A percepção dos alunos sobre a educação física no ensino médio. **Rev. Educ. Fís/UEM**, v. 26, n. 4, p. 601-610, 4. trim. 2015.

BRASIL. **Base Nacional Comum Curricular**/Ministério da Educação. Secretária de Educação Básica. Diretoria de Currículos e Educação Integral. Brasília: MEC, 2017.

BRASIL. **Base Nacional Comum Curricular**/Ministério da Educação. Secretária de Educação Básica. Diretoria de Currículos e Educação Integral. Brasília: MEC, 2018

BRASIL. **Constituição da República Federativa do Brasil**. Diário Oficial da União, 5 de outubro de 1988

BRASIL. Ministério da Educação. **Parâmetros Curriculares Nacionais**. Brasília, 1998. Disponível em: <http://porta l. mec.gov.br/seb/a rquivos/pdf/livr001. pdf>. Acesso em: 14 out. 2022.

BRASIL. Ministério de Educação e Cultura. LDB - **Lei nº 9394/96**, de 20 de dezembro de 1996. Estabelece as diretrizes e bases da Educação Nacional. Brasília: MEC, 1996

BROOKIFIELD, S.D. **Developing critical thinkers**: challenging adults to explore alternative ways of thinking and acting. San Francisco, CA: JosseyBass, 1987.

BRASIL. Ministério de Educação e Cultura. **Plano Nacional de Educação**. Estabelece as diretrizes no período de 2014-2024. Brasília: MEC, 2014.

BRUNER, Jerome. **Realidade Mental Mundos Possíveis**. Porto Alegre: Artmed. 1986. 119 páginas

BUENO, José Geraldo Silveira. **Função social da escola e organização do trabalho pedagógico.** 2016. Disponível em: https://meuartigo.brasilescola.uol.com.br/educacao/funcao-social-escola.htm. Acesso em: 9 fev. 2021.

BURKE, B. **Gamify**: how gamification motivates people to do extraordinary things. Bibliomotion. Brookline, 2014.

CALDART, R. S. Educação do Campo: Notas para uma análise de percurso. **Trab. Educ. Saúde,** Rio de Janeiro, v. 7 n. 1, p. 35-64,mar./jun.2019.

CALLAI, Ana Nathalia Almeida. Considerações acerca da Educação Física escolar a partir da BNCC. **Conexões**: Educ. Fís., Esporte e Saúde, Campinas: SP, v. 17, e019022, p.1-16, 2019.

CAMARGO, F; DAROS, T. **A sala de aula inovadora**: estratégias pedagógicas para fomentar o aprendizado ativo. Porto Alegre: Penso, 2018

CANI, J. B. et al. Análise de jogos digitais em dispositivos móveis para aprendizagem de línguas estrangeiras. **Revista Brasileira de Linguística Aplicada**, v. 17, n. 3, p. 455-481, 2017. Disponível em: https://doi.org/10.1590/1984-6398201711880. Acesso em: 14 out. 2022.

CAPARROZ, Francisco Eduardo. **Entre a educação física da escola e a educação física na escola**: a educação física como componente curricular. Vitória: UFES; Centro de Educação Física e Desportos, 2017.

CARBOGIM, F.D.C., et al. Teaching critical thinking skills through problem-based learning. **Texto & Contexto Enfermagem**, 2017; 26. doi:10.1590/0104-07072017001180017

CARBONELL, J. **A aventura de inovar**: a mudança na escola. Trad. Fátima Murad. Porto Alegre: Artmed, 2013.

CARDOSO, L.S, et al. O pensar da enfermagem em serviço de urgência e emergência intra-hospitalar. **Revista de Enfermagem UFPE** on line, 2016; 10: 4524-4531. doi:10.5205/1981-8963-v10i12a11519p4524-4531-2016.

CARVALHO, João Paulo Ximenes; BARCELOS, Marciel; MARTINS, Rodrigo Lema Del Rio. Infraestrutura escolar e recursos materiais: desafios para a educação física contemporânea. **Humanidades & Inovação**, [S.l.], v. 7, n. 10, p. 218-237, 2020.

CASEY, Ashley; GOODYEAR, Victoria A.; ARMOUR, Kathleen. **Digital Technologies and Learning in Physical Education**. Abingdon: Routledge, 2017.

CASSIANE, S.H.B, et al. A situação da educação em enfermagem na América Latina e no Caribe rumo à saúde universal. **Revista Latino-Americana de Enfermagem**, 2017; 25: e2913. doi:10.1590/1518-8345.2232.2913.

CASTELLANI FILHO L. **Educação física no Brasil**: a história que não se conta. Campinas: Papirus, 2018.

CASTELLS, Manuel. **A sociedade em rede** - a era da informação. 15. ed. São Paulo: Paz e Terra, 2020.

CHARLOT, B. **Da relação com o saber às práticas educativas**. 1. Ed. São Paulo: Cortez, 2016.

CHAUI, M. **O discurso competente**: crítica e ideologia. São Paulo: Moderna, 1992.

CHRISTENSEN, C.; HORN, M. B.; JOHNSON, C. W. **Disrupting class**: How disruptive innovation will change the way the world learns. 4. ed. New York: McGraw Hill, 2017.

CIAVATTA, M. **O Golpe Civil-militar e o pensamento crítico em trabalho e educação**. Seminário de Produção Científica do Grupo THESE, UFF, UERJ e EPSJV- Fiocruz, dezembro de 2014.

CIAVATTA, M. **O Golpe Civil-militar e o pensamento crítico em trabalho e educação**. Seminário de Produção Científica do Grupo THESE, UFF, UERJ e EPSJV- Fiocruz, dezembro

de 2014.

COELHO, Cláudia Regina Bergo. Tecnologias da comunicação e informação na Educação Física infantil. **Motriz,** Rio Claro, v. 14, nº 3, p. 337-345, 2018.

CORDOVA, Fernanda Peixoto; SILVEIRA, Denise Tolfo. **Métodos de pesquisa**. Universidade Aberta do Brasil – UAB/UFRGS. Curso de Graduação Tecnológica – Planejamento e Gestão para o Desenvolvimento Rural da SEAD/UFRGS. – Porto Alegre: Editora da UFRGS, 2009.

CRUICKSHANK, V.; MAINSBRIDGE, C. O currículo ficou em segundo plano para xingar: Ensinar saúde e educação física no ensino médio durante a Covid-19. **Educação. Revisão Europeia de Educação Física**, março de 2022.

CRUZ JUNIOR, Gilson; SILVA, Erineusa Maria da. A (ciber)cultura corporal no contexto da rede: uma leitura sobre os jogos eletrônicos do século XXI. **Revista Brasileira de Ciências do Esporte**, Florianópolis, v. 32, nº 2-4, p. 89-104, 2020.

CSIKSZENTMIHALYI, Mihaly; CSIKZENTMIHALY, Mihaly. **Fluxo**: a psicologia da experiência ideal. Nova York: Harper & Row, 1990.

CURY, Lucilene. A educação de hoje rumo à educação planetária de amanhã. **Comunicação & educação.** Ano XXIV, número 2, jul/dez 2019.

DAMÁSIO, A. **O mistério da consciência**. São Paulo: Companhia das Letras, 2010.

DAOLIO, J. **A cultura da/na Educação Física**. Tese (Livre-docência) – Faculdade de Educação Física, Universidade Estadual de Campinas, Campinas, 2012.

DELORS, J. **Educação**: um tesouro a descobrir. 2 ed. São Paulo: Cortez, 1998. Dewey, J. **Vida e educação** (11a ed.). São Paulo: Editora Melhoramentos, 1978.
DIAS JÚNIOR, Marcos Jerônimo; ROSA, Sandra Valéria Limonta. Educação Física no Ensino Médio: atividade de estudo e possibilidades do desenvolvimento do movimento corporal consciente na adolescência. **Obutchénie**: R. de Didat. e Psic. Pedag. Uberlândia, MG, v.5, n.2, p.378-406, mai./ago. 2021.

ENDERS B. C. BRITO, R. S. MONTEIRO, A. I. de. Análise conceitual e pensamento crítico: uma relação complementar na enfermagem. **Rev Gaúcha Enferm**, v. 25, n. 3, p. 295-305, 2014. Disponível em: Acesso em: 4 fev. 2022.

ESCOBAR, Micheli O. Coletivo de Autores: a cultura corporal em questão. In: SOARES, Carmen L. et al. **Metodologia do Ensino da Educação Física**. 2. ed. rev. São Paulo: Cortez, 2012. p.121-133.

FANTIN, M.; RIVOLTELLA, P. C. (orgs.). **Cultura digital e escola**: Pesquisa e formação de professores. Campinas, SP: Papirus, 2017.

FARIA, J. H. de. Economia política do poder: uma proposta teórico metodológica para o estudoe a análise das organizações. Recife: II Encontro Nacional de Estudos Organizacionais, 2002. **Anais do ENEO** [CD-Rom]. 2002.

FERNANDES, M. E. A. **Avaliação institucional da escola**: base teórica e construção do projeto. 2. ed. Fortaleza: Edições Demócrito Rocha, 2012.

FERREIRA, Aline Ferreira; DARIDO, Suraya Cristina. Tecnologias da Informação e comunicação (TICs). In: GONZÁLEZ, Fernando Jaime; FENSTERSEIFER, Paulo Evaldo (orgs). **Dicionário Crítico de Educação Física**. 3. ed. Ijuí: Unijuí, p. 629-633, 2014.

FERRETI, C. J. A reforma do Ensino Médio e sua questionável concepção de qualidade da educação. **Ensino de Humanidades e Estud**. av. 32 (93) • May-Aug 2018.

FERRETI, C. J.; ZIBAS, D.M.; TARTUCE, G.L.B.P. Protagonismo juvenil na Literatura especializada e na reforma do ensino médio. **Cadernos de Pesquisa**, v. 34, n. 122, p. 411-423, maio/ago. 2014.

FINCO, M. D.; FRAGA, A. B. Rompendo fronteiras na Educação Física através dos videogames com interação corporal. **Motriz,** Rio Claro, v.18, n.3, p.533-541, 2012.

FRAIHA, Ana Lívia Gorgatto. **TIC nas aulas de Educação Física**: para ensinar basquetebol. Dissertação (Mestrado). Universidade Estadual Paulista – UNESP. Rio Claro, 2017.

FRANCO, A. R.; VIEIRA, R. M. Estudo de validação de instrumento para avaliar a disposição dos estudantes no ensino superior para pensar criticamente. **Atas CIAIQ**, 2019.

FREIRE, P. **Pedagogia da esperança**: um reencontro com a pedagogia do oprimido. São Paulo: Paz e Terra, 1999.

_____. **Pedagogia da Autonomia – saberes necessários à prática educativa**. SãoPaulo: Paz e Terra, 2002.

FRIGOTTO, G. **Educação e a crise do capitalismo real**. São Paulo: Cortez, 2000.

FRIZZO, Giovanni F. E; RIBAS, João F. M; FERREIRA, Liliana S. A relação trabalho-educação na organização do trabalho pedagógico da escola capitalista. **Educação,** Santa Maria, v. 38, n. 3, p. 553-564, set./dez. 2013

FROMM, E. **Psicanálise da sociedade contemporânea**. 9. ed. Rio de Janeiro: Zahar Editores, 1979.

FULLAN, M. **Los nuevos significados del cambio en la educación**. Barcelona: Octaedro, 2013.

GADOTTI, M. **Pedagogia da práxis.** São Paulo: Cortez, 2016.

GADOTTI, M. **Perspectivas atuais da educação**. Porto Alegre: Artes Médicas, 2010.

GANDIN, D. **A prática do planejamento participativo**: na educação e em outras instituições, grupos e movimentos dos campos cultural, social, político, religioso e governamental. 7. ed. Petrópolis: Vozes, 2019.

GARCIA, L. T. S.; QUEIROZ, M. A. **Embates pedagógicos e organizacionais nas políticas de educação.** Natal: Ed. da UFRN, 2019.

GARCIA, W. E. (Coord.). **Inovação educacional no Brasil**: problemas e perspectivas. São Paulo: Cortez Editora, 1995.

GARRET, M.; SCHOENER, L.; HOOD, L. Debate: a teaching strategy to improve verbal communication and critical thinking. **Nurse Educator**, v. 21, n. 4, p. 37-40, 1996.

GASAYMEH, AlMothana. A study of undergraduate students' use of information and communication technology (ICT) and the factors affecting their use: a developing country perspective. EURASIA **Journal of Mathematics, Science and Technology Education**, v.14, n. 5, p. 1731-1746, 2018.

GENTILI, P. FRIGOTO, G. **Pedagogia da exclusão**: crítica ao neoliberalismo em educação (15ª ed., pp. 73-102). Petrópolis, RJ: Vozes, 2012.

GIACOMAZZO, G.F.; FIUZA, P.J. A implantação do tablet educacional na perspectiva dos professores. **Revista Tecnologias na Educação**, v. 11, n. 1, p.1-10, 2014.

GODOI, M.; KAWASHIMA, L. B.; GOMES, L.; CANEVA, C. O ensino remoto durante a pandemia de covid-19: desafios, aprendizagens e expectativas dos professores universitários de Educação Física. **Research, Society and Development**, [S. l.], v. 9, n. 10, p.1-19, 2020.

GOODYEAR, Victoria A.; ARMOUR, Kathleen M.; WOOD, Hannah. Young people and their engagements with health-related social media: new perspectives. **Sport, Education and Society,** v. 24, n. 7, 2019

GUEDES, I. **Conhecimento científico, senso comum e senso crítico**. 13 setembro. 2019. Disponível em: https://www.icguedes.pro.br/conhecimento-cientifico-senso-comum-e-senso-critico. Acesso em 5 fev. 2021.

GUEDES, Josenilson Viana; SILVA, Angela Maria Ferreira da; GARCIA, Luciane Terra dos Santos. Projeto político-pedagógico na perspectiva da educação em direitos humanos: um ensaio teórico. **Rev. bras. Estud. pedagog**., Brasília, v. 98, n. 250, p.580-595, set./dez. 2017.

GUZO, G. B.; LIMA, V. M. do R. O desenvolvimento do pensamento crítico na educação: uma meta possível? **Educação Unisinos**, v. 22, n. 4,p. 334-343, outubro/dezembro 2018. Disponível

em
http://revistas.unisinos.br/index.php/educacao/article/viewFile/edu.2018.224.11/60746614. Acesso em 3 fev. 2021.

GUZZO V, GUZZO GB. **O pensamento crítico como ferramenta de defesa intelectual**. Conjectura: Filosofia e Educação, 2014; 20: 64-76.

GUZZO V, GUZZO GB. **O pensamento crítico como ferramenta de defesa intelectual**. Conjectura: Filosofia e Educação, 2014; 20: 64-76.

HORKHEIMER, M. **Teoria Tradicional e Teoria Crítica**. São Paulo: Nova Cultural, 2010.

HOWLEY, Donald. Experiences of teaching and learning in K-12 physical education during covid-19: an international comparative case study. **Physical Education and Sport Pedagogy**, 2021.

HYNDMAN, Brendon; HARVEY, Stephen. Health and Physical Education teacher education 2.0: pre-service teachers' perceptions on developing digital twitter skills. Australian Journal of

Teacher Education, v. 44, n. 2, p. 34-49, 2019. Disponível em: https://files.eric.ed.gov/fulltext/EJ1207766.pdf Acesso em: 11 mar. 2022.
INSTITUTO NACIONAL DE ESTUDOS E PESQUISAS EDUCACIONAIS ANÍSIO TEIXEIRA – INEP. **Resultados finais do Censo Escolar 2021**. Dados referentes às escolas públicas. Brasília: DF. 2021

IVO, A.A; ILHA, F.R.S. **A História da Educação e da Educação Física**: Olhares para a Formação e suas Pesquisas. Campinas- *SP*. ETD – Educação Temática Digital, v.1, n.10, p.49-69, dez. 2018.

JACOBS, P.M.; OTT, B.; SULLIVAN, B.; ULRICH, Y. An approach to defining and operationalizing critical thinking. **J. Nurs. Educ**., v. 36, n. 1, p. 19-22, 1997.

JALÚ, Janete; SCHÜTZ, Jenerton Arlan; MAYER Leandro. **Desafios da educação em tempos de pandemia.** Cruz Alta: Ilustração, 2020. 324 p.

JAMESON, F. **O marxismo tardio:** Adorno, ou a persistência da dialética. São Paulo: Editora da UNESP: Editora Boitempo, 2007.

JUNIOR, N. B. TASSONI, E. C. M. A Educação Física, o docente e a escola: concepções e práticas pedagógicas. **Rev Bras Educ Fís Esporte**, (São Paulo), Jul-Set; 27(3):467-83, 2013.

JUNIOR, Verissimo Barros Santos; MONTEIRO, Jean Carlos. Educação e covid19: as tecnologias digitais mediando a aprendizagem em tempos de pandemia. **Revista Encantar-Educação, Cultura e Sociedade,** [S. l.], v. 2, p. 01-15, 2020.

JUUL, J. **Half-real**: videogames between real rules and fictional worlds. Massachusetts: MIT Press, 2015.

KAPP, K. M. **The Gamification of learning and instruction**: Game-based methods and strategies for training and education. Pfeiffer. Hoboken, NJ. 2012.

KASPER, H. O **processo de pensamento sistêmico**. 2015. Disponível em: https://www.lume.ufrgs.br/bitstream/handle/10183/9013/000288315.pdf. Acesso em 11 fev. 2021.

KENSKI, Vani Moreira. **Tecnologias e ensino presencial e a distância**. São Paulo: Papirus, 2017.

KIILI, K. **Digital game-based learning**: Towards an experiential gaming model. The Internet and higher education, v. 8, n. 1, p. 13-24, 2015. DOI: https:// doi. org/10.1016/j.iheduc.2004.12.001.

KIRK, David. **Physical Education futures**. London: Routledge, 2010.

KUNZ, E. **Educação Física**: ensino e mudanças, Coleção Educação Física, 2.ed. Ijuí: Unijuí Ed. 2018. 208 p.

KUNZ, Elenor. Apresentação. Pedagogia do Esporte, do Movimento Humano ou da Educação Física. In: KUNZ, E & TREBELS, A. H. (Orgs.). **Educação Física Crítico Emancipatória** (p. 11-22). Ijui: Unijui. 2017.

LAW, Nancy; PELGRUM, Willem; PLOMP, Tjeerd. (ed.) **Pedagogy and ict use in schools around the world**: findings from the IEA SITES 2006 Study. Germany: Springer, Dordrecht, 2018.

LEITE, L. S. G. P.; COSTA, A. Q. da; OLIVEIRA, M. R. R. de; ARAÚJO, A. C. de. O ensino remoto de educação física em narrativa: entre rupturas e aprendizados na experiência com a tecnologia. **Movimento**, v. 28, e28022, 2022.

LÉVY, P. **Cibercultura**. São Paulo: Editora 34, 1999.

LIBÂNEO, J. C. **Projeto pedagógico e a escola**. São Paulo: Cortez, 2015.

LIBÂNEO, J. C.; OLIVEIRA, J. F.; TOSCHI, M. S. O sistema de organização e de gestão da escola: teoria e prática. In: LIBÂNEO, J. C.; OLIVEIRA, J. F.; TOSCHI, M. S. **Educação escola**r: políticas, estrutura e organização. 10. ed. São Paulo: Cortez, 2016. (Coleção Docência em Formação: Saberes Pedagógicos).

LIMA, M. A. da C.; CASSIANI, S. H. de B. Pensamento crítico: um enfoque na educação de enfermagem. **Rev. latino-am. nfermagem** - Ribeirão Preto - v. 8 - n. 1 - p. 23-30 - janeiro 2013.

LIMA, Paulo Rogério; FALCÃO, Giovana Maria Belém; LIMA, Ana Ignez Belém. Atuação dos professores de Educação Física de Icó-CE no contexto de mudanças advindas do ensino remoto: Performance of Physical Education teachers in Icó-CE in the context of changes from remote education. **Revista Cocar**, [S. l.], v. 15, n. 31, 2021.

LIPMAN, M. **O pensar na educação**. 4a ed., Petrópolis, Vozes, 402 p., 2008

LOVISOLO, H. R.; SOARES, A. J. G.; SANTOS, M. D. dos. Educação e Educação Física em Escolas do Rio de Janeiro. In: LOVISOLO, H. R. (Org.). **Educação física**: arte da mediação. Rio de Janeiro: Sprint, p. 39-81, 1995.

MARCONI, M.A. & LAKATOS, E.M. **Técnicas de Pesquisa**. 2. ed. São Paulo: Atlas, 2014.

MARQUES, Renato Francisco Rodrigues, **Influência da Tecnologia sobre a Prática Cotidiana de Atividade Física.** Mestrando do Programa de Pós-Graduação da FEF-UNICAMP. 2017.

MARTÍN-BARBERO, J. **A comunicação na educação.** São Paulo: Contexto, 2014.

MARTINS, M. L; NOMA, A. K. A influência das ideias neoliberais na educação atual: interlocução com o relatório Jacques Delors e os PCNs. In: JORNADA DO HISTEDBR: Região Sul, II., 2002, Ponta Grossa e Curitiba. A produção em história da educação na Região Sul do Brasil. **Anais**... Campinas, SP: HISTEDBR, 2012.

MARTINS, R. X. Competências em tecnologias de informação em ambiente escolar**. Psicologia Escolar Educacional**, vol. 9, n. 2. Campinas. Dez. 2015. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-85572005000200016. Acesso em 7 out. 2021.

MARX, K. **O Capital**: crítica da economia política. Rio de Janeiro: Civilização Brasileira, 2008.

MARX, Karl. **Manuscritos econômicos-filosóficos**.4.reimp. São Paulo: Boitempo, 2010.

MASSOLA, Gisele. WhatsApp, Google Drive e mapa conceitual: algumas possibilidades com uso de dispositivos digitais para promover inclusão digital e autonomia da aprendizagem para a Educação Técnica Integrada ao Ensino Médio. **Brazilian Journal of Development**, [S. l.], v. 7, n. 3, p. 31090-30105, 2021.

MATTAR, J. **Tutoria e interação em educação a distância**. São Paulo: Cengage Learning, 2012.

MATTOS, Mauro G. & NEIRA, Marcos G. **Educação Física na adolescência:** construindo o conhecimento na escola. São Paulo: Phorte Editora, 2016.

MAX, W. **A teoria do pensamento produtivo**. 1982. Disponível em: https://www.maxwell.vrac.puc-rio.br/11728/11728_5.PDF. Acesso em 11 fev. 2021.

MAYO, P. **Gramsci, Freire e a educação de adultos**. Porto Alegre: Artmed, 2014.

MCGONIGAL, J. **A realidade em jogo**: por que os games nos tornam melhores e como eles podem mudar o mundo. Rio de Janeiro: Best Seller, 2012.

MELLO, G. N. de. A Escola e a Estrada da Informação. **Folha de São Paulo**, São Paulo, 16 out. 1998. Disponível em: <http://www1.folha.uol.com.br/fsp/opiniao/fz16109809.htm>. Acesso em: 13 ago. 2021.

MENDES, M.M.R. O **ensino de graduação em Enfermagem no Brasil, entre 1972 e 1994** - mudanças de paradigma curricular? Ribeirão Preto, 1996. 312 p. Tese (Doutorado) - Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo

MENEGHETTI, F. K. **As organizações e a sociedade unidimensional:** as contribuições de Marcuse. Recife: II Encontro Nacional de Estudos Organizacionais, 2002. Anais do ENEO [CD-Rom]. 2012.

MENEZES, Diana Amado de. **Competência socioemocional para o trabalho**: princípio educativo a partir dos Planos de Marketing. Aracaju: Criação, 2019.

MEZZAROBA, C. Reflexões sobre a formação de professores, práticas midiáticas e mediações educativas. **Revista tempos e espaços em educação**. Vol. 08, n 17, p. 191 a 2018, set./dez. 2015. Disponível em: https://seer.ufs.br. Acesso em 15 nov. 2021.

MINAYO, Maria Cecília de Souza. **O desafio do conhecimento**: pesquisa qualitativa em saúde. 13. ed. São Paulo: Hucitec, 2014.

MOCHCOVITCH, L. G. **Gramsci e a escola.** São Paulo: Ática, 2011.

MOORE, M.; KEARSLEY, G. **Educação a distância**: uma visão integrada. São Paulo: Cengage Learning, 2008.

MORAN, J. M. **A educação que desejamos e como chegar lá.** Campinas: Papirus, 2017. Atualização do texto Tecnologias no Ensino e Aprendizagens Inovadoras. USP, 2017. Disponível em:

http://www2.eca.usp.br/moran/wp-content/uploads/2017/11/tecnologias_moran.pdf. Acesso em 11 out. 2021.

MOREIRA, J. António; HENRIQUES, Susana; BARROS, Daniela Melaré Vieira. Transitando de um ensino remoto emergencial para uma educação digital em rede, em tempos de pandemia. **Dialogia**, São Paulo, n.34, p. 351-364, 2020.

MORELLI, **Gestão do Conhecimento científico universidades**: mapeamento dos processos de desenvolvimento de projetos. **Anais**...Florianopólis: SC, 2020.

MORIN, Edgar; CURANA, Emilio-Roger; MOTTA, Raúl Domingo. **Educar na era planetária**: o pensamento complexo como Método de aprendizagem no erro e na incerteza humana. São Paulo: Cortez, 2016.

NAZÁRIO, M. E.dos S.; SANTOS, W.; FERREIRA NETO, A. A produção acadêmica sobre a educação física no ensino médio brasileiro (2011-2016). **Revista Humanidades e Inovação.** Palmas - TO - v.9, n.14, 2018.

NUNES, Túlio Valêncio; TOIGO, Adriana Marques; FLORENTINO, José Augusto Ayres. Exergames como ferramenta pedagógica na Educação Física escolar: uma revisão integrativa. **Saúde e Desenvolvimento Humano**, [S. l.], v. 7, n. 2, p. 107-116, 2019.

OLIVEIRA, M. A. C**. Raciocínio indutivo**. 2016. Disponível em: https://www.infoescola.com/filosofia/raciocinio-indutivo. Acesso em 11 fev. 2021.

OSADEBE, Joyce Frances. Undergraduate Business Education Students' Perception on Information and Communication Technology Use. in Teaching and Learning. International **Journal of Evaluation and Research in Education**, v. 9, n. 2, p. 359-363, 2020.

PACHECO, A.J. **Políticas Curriculares – Referenciais para Análise**. Porto Alegre: Artmed, 2018

PANIAGO, M. C. L. Narrativas eclipsadas e ressignificadas de docentes e discentes sobre/na cibercultura. **R. Educ. Públ**., Cuiabá, v.25, n.59, p.382-395, maio/ago. 2016.

PANIAGO, M. C. L. Narrativas eclipsadas e ressignificadas de docentes e discentes sobre/na cibercultura. **R. Educ. Públ**., Cuiabá, v.25, n.59, p.382-395, maio/ago. 2016.

PARÁ. Conselho Estadual de Educação. **Diretrizes Curriculares do Estado do Pará**. 2020.

PARRIS, et. al. Estrutura para avaliação de sensibilização de extraíveis e lixiviáveis em produtos farmacêuticos. **Avaliações Críticas em Toxicologia**, v. 52, n. 2. p.1-142, junho de 2022.

PAUL, R. e ELDER, L. **O guia do pensamento crítico**. Conceitos e ferramentas. Fundação para o pensamento crítico, 2018. Disponível em www.criticalthinking.org. Acesso em 8 de fev. 2021.

PECOTCHE, C. B. A arte de ensinar e a vontade de aprender. **Coletânea da Revista Logosofia**, v. 2. São Paulo: Logosófica, 2015a. p. 163-167

PIAGET, J. **As Formas Elementares da Dialética**. (Luiz, F.M. Trad.) São Paulo: Casa do

Psicólogo. 1996 (Original publicado em 1980).

PIAGET, J. **As Formas Elementares da Dialética**. (Luiz, F.M. Trad.) São Paulo: Casa do Psicólogo. 1996 (Original publicado em 1980).

PIMENTEL, F. S. C.; FRANCISCO, D. J.; FERREIRA, A. R. (Org.). **Jogos digitais, tecnologias e educação reflexões e propostas no contexto da covid-19.** Maceió, AL: EDUFAL, 2021.

PIZANI, J. et al. (Des)motivação na educação física escolar: uma análise a partir da teoria da autodeterminação. **Revista Brasileira de Ciências do Esporte**, v. 38, n. 3, p. 259-266, 2016. Disponível em: http://dx.doi.org/10.1016/j.rbce.2015.11.010. Acesso em: 14 out. 2022.

PONTES, Tiago Magalhães. A contribuição das tecnologias nas aulas de Educação Física. **Educação Física em Revista**, vol.10, nº 2, 2016.

PRADO, Jeovandir C; LIMA, Antonio B. Pedagogia histórico-crítica: uma discussão sobre a prática social docente no marxismo. In: SEMINÁRIO NACIONAL DO HISTEDBR, 10., 2016, **Anais Eletrônicos**. Campinas: UNICAMP, 2016. Disponívelem:https://www.fe.unicamp.br/eventos/histedbr2016/anais/pdf/911-2709-1-pb.pdf. Acessoem: 2 out. 2021.

RAMOS, D. K. Cognoteca: uma alternativa para o exercício de habilidades cognitivas, emocionais e sociais no contexto escolar. **Revista da FAEEBA-Educação e Contemporaneidade**, v. 23, n. 41, 2017.

RAMOS, D. K.; SEGUNDO, F. R. Jogos Digitais na Escola: aprimorando a atenção e a flexibilidade cognitiva. **Educação & Realidade**, [S. l.], v. 43, n. 2, 2016. Disponível em: https://seer.ufrgs.br/index.php/educacaoerealidade/article/view/65738. Acesso em: 14 out. 2022.

ROCCO, Brenda Couto de Brito. **Um estudo sobre gestão de documentos arquivísticos digitais na Administração Pública Federal brasileira**. UFRJ, março, 2016.

ROHDEN, R. **Uso das tecnologias nas aulas de educação física escolar**. Trabalho de Conclusão de Curso apresentado como requisito parcial para titulação no Curso de Pósgraduação lato sensu em Ciências e Tecnologia, da Universidade Federal de Santa Catarina (UFSC), Centro Tecnológico de Joinville, Joinville, 1-14, 2017.

RONEY, Linda N. et al. Technology use and technological self-efficacy among undergraduate nursing faculty. **Nursing Education Perspectives**, v. 38, n. 3, p. 113-118, 2017.

ROSA, J.; CRUZ, D. M. Análise de Jogos em sites Educativos. In: **Anais** do WIE 2019. Brasília: XXV Workshop de Informática na Escola (WIE 2019), 2019. v. 1. p. 994-1003.

ROSINI, A. M. **As Novas Tecnologias da Informação e a Educação a Distância**. São Paulo: Thomson Learning, 2007.

SACRISTÁN, J.G.; PÉREZ GÓMEZ, A. I. **Compreender e Transformar o Ensino.** Porto Alegre: Artmed, 1998.

SANTOS JR. N. J. **Espetacularização Esportiva na TV**: Ações e Desafios à educação física

escolar, RJ, 2014.

SANTOS, W. et. al. Da relação com o saber às identidades da educação física: narrativas de estudantes do Ensino Médio. Pro-Posições | Campinas, SP | V. 31 | e20190074 | 2020.

SANTOS, W.; MAXIMIANO, F. de L. Avaliação na educação física escolar: singularidades e diferenciações de um componente curricular. **Rev. Bras. Ciênc**. **Esporte**, Florianópolis, v. 35, n. 4, p. 883-896, out./dez. 2016.

SAVIANI, D. Educação escolar, currículo e sociedade: o problema da Base Nacional Comum Curricular. **Movimento- Revista de Educação**, Rio de Janeiro, v. 3, n. 4, p. 54-84, jan./ago, 2016.

SCHNEIDER, O., & BUENO, J. G. S. A relação dos alunos com os saberes compartilhados nas aulas de educação física. **Movimento,** v. 11, n. 1, p. 23-45, 2015.

SCHUYTEMA, P. **Design de games**: uma abordagem prática. Editora Cencage Learning, 2018

SCHWARTZ, G. M. O ambiente virtual e o lazer. In: Marcellino, N. C. (org.). **Lazer e cultura**. São Paulo: Editora Alínea, 2017.

SIBILIA, Paula. **Redes ou paredes**: a escola em tempos de dispersão. Rio de Janeiro: Contraponto, 2012.

SIEGEL, H. **Educating reason**: Rationality, critical thinking and education. Nova York, Routledge, 191 p., 1988

SILVA, João Batista da; SALES, Gilvandenys Leite; CASTRO, Juscileide Braga de. Gamificação como estratégia de aprendizagem ativa no ensino de Física. **Caderno Brasileiro de Ensino de Física,** São Paulo, v. 41, n. 4, 2019.

SILVA, Luiz Alessandro da; PETRY, Zaida Jeronimo Rabello; UGGIONI, Natalino. **Desafios da educação em tempos de pandemia**: como conectar professores desconectados, relato da prática do estado de Santa Catarina.

SOARES-LEITE, W. S.; NASCIMENTO-RIBEIRO, C. A. A inclusão das TICs na educação brasileira: problemas e desafios. Magis, **Revista Internacional de Investigación en Educación**, Bogotá, v. 5, n. 10, p. 173-187, jul-dic. 2012. Disponível em:<www.redalyc.org/pdf/2810/281024896010.pdf>. Acesso em: 14 out. 2022.

SOBRINHO, E. M. A. O uso do instagram nas aulas de educação física no ensino médio integrado. **Revista de Educação, Ciência e Tecnologia do IFAM**, [S.l.], v.11, 203-208, 2020.

SOUSA Robson Pequeno de; MOITA, Filomena M. C. da S. C.; CARVALHO, Ana Beatriz Gomes (Orgs.). **Tecnologias Digitais na Educação**. Campina Grande-PB: EDUEPB, 2011.

SOUZA FILHO, M. de. A Educação Física como componente curricular: trajetória histórica e possibilidades atuais no Ensino Médio. **Revista Digital**. Buenos Aires, Año 15, Nº 150, Noviembre de 2018.

SOUZA JUNIOR, Marcilio. A história da Educação Física escolar no Brasil. Refletindo sua inserção como componente curricular. **Livro didático 3**. Organizadora: Terezinha Petrúcia da

Nóbrega. – Natal, RN; Paidéia, 2018.

SOUZA, G.R.; MENDES, D.S. Mídias na formação em educação física: análise de uma disciplina optativa. **Revista Motrivivência,** v. 26, n. 43, p. 300-315, dezembro/2014. Disponível em: https://periodicos.ufsc.br. Acesso em: 15 nov. 2021.

TAFFAREL, C.; E BELTRÃO, J. A. Destruição de forças produtivas e rebaixamento da formação da classe trabalhadora: o caso da reforma da BNCC do ensino médio. **Germinal:** Marxismo e Educação em Debate, Salvador, v. 11, n. 1, p. 103-115, abr. 2019.

TAHARA, A.K.; DARIDO, S.C.; BAHIAX, C.S. Materiais didáticos e a educação física escolar, **Conexões**: Educ. Fís. Esporte e Saúde, Campinas: SP, v. 15, n. 1, p. 368-379, jul./set, 2017.

THURLER, M. G. **Inovar no interior da escola**. Porto Alegre: Artmed, 2011.

TINNING, Richard. The idea of physical education: a memetic perspective. **Physical Education and Sport Pedagogy**, v. 17, n. 2, p. 115-126, 2012.

TOKUYOCHI, J. H. et al. Retrato dos professores de Educação Física das escolas estaduais do estado de São Paulo. **Revista Motriz,** v. 14, n. 4, p. 418-428, 2018. Disponível em: https://www.periodicos.rc.biblioteca.unesp. Acesso em: 15 out. 2022.

TONET, I. Educar para a cidadania ou para a liberdade? **Perspectiva**, Florianópolis, v. 23, n. 02, p. 469-484, jul./dez. 2020.

TSINGOS-LUCAS, C.; BOSNIC-ANTICEVICH, S.; SMITH, L. A Retrospective Study on Students' and Teachers' Perceptions of the Reflective Ability Clinical Assessment. **Am J Pharm Educ**, v. 80, n. 6, 2016. DOI: 10.5688/ajpe806101.

TSINGOS-LUCAS, C.; BOSNIC-ANTICEVICH, S.; SMITH, L. A Retrospective Study on Students' and Teachers' Perceptions of the Reflective Ability Clinical Assessment. **Am J Pharm Educ**, v. 80, n. 6, 2016. DOI: 10.5688/ajpe806101.

TRUCANO, T. Sociedade da informação no Brasil: livro verde. Brasília: Ministério da Ciência e Tecnologia, 2012. Disponível em: www.governoeletronico.gov.br/biblioteca/arquivos/livro-verde/download. Acesso em 27 maio 2022.

UNESCO. **Educação para a cidadania global:** tópicos e objetivos de aprendizagem. Brasília: UNESCO, 2016.

_____. Organização das Nações Unidas para a Educação, a Ciência e a Cultura. **Alfabetização midiática e informacional**: diretrizes para a formulação de políticas e estratégias: resumo sobre as políticas da AMI. Brasília, DF: Unesco, 2016

VAGHETTI, C. A. O.; VIEIRA, K. L.; BOTELHO, S. S. C. Cultura digital e Educação Física: problematizando a inserção de Exergames no currículo. **Revista Educação**: Teoria e Prática, v. 26, n. 51, p. 3-18, 2016.

VASCONCELLOS, C. S. Planejamento: projeto de ensino-aprendizagem e projeto político-pedagógico: elementos metodológicos para elaboração e realização. 10. ed. São Paulo: Libertad, 2016. (Cadernos Pedagógicos do Libertad, v. 1).

VEIGA, I. P. A. Perspectivas para reflexão em torno do projeto políticopedagógico. In: VEIGA, I. P. A. (Org.). Escola: espaço do projeto políticopedagógico. 10. ed. Campinas: Papirus, 2016.p. 8-32.

VEIGA, I. P. A. Projeto político-pedagógico da escola de ensino médio e suas articulações com as ações da secretaria de educação. In: SEMINÁRIO NACIONAL: CURRÍCULO EM MOVIMENTO: PERSPECTIVAS ATUAIS, 1., 2010, Belo Horizonte. Anais... Belo Horizonte: UFMG, 2010.

VIEIRA, S. L.; VIEIRA, L. Escola: função social, gestão e política educacional. In: FERREIRA, N. S. C.; AGUIAR, M. A. S. (Orgs.). **Gestão da educação**: impasses, perspectivas e compromissos. 2. ed. São Paulo: Cortez, 2014

VILAÇA, M. L. C.; ARAÚJO, E. V. F. de. (Orgs.). **Tecnologia, Sociedade e Educação na Era Digital**. Universidade Unigranrio, Rio de Janeiro, Duque de Caxias, 2016.

VINCENT, G.; LAHIRE, B.; THIN, D. Sobre a história e a teoria da forma escolar. In: **Educação em Revista**, Belo Horizonte, n33, jun./2021

VYGOTSKY, L S. **A Formação Social da Mente**. São Paulo: Martins Fontes, 1987.
WHATSAPP. **Sobre o WhatsApp**. 2021. https://www.whatsapp.com/about/
ZAGO, N. **Educação física no ensino médio**: concepções e reflexões. UFSCAR, 2014.

ZICHERMANN, G.; LINDER, J. **Game-based marketing**: inspire customer loyalty through rewards, challenges, and contests. Wiley, 2010.

ZWICK, Elisa; RIVERA, Alessandra S. P.; BRONZATTO, Luiz A.; BORGES, Ceyça L. P. **Sentidos do Trabalho e do Meio Ambiente no Campo**: uma Abordagem exploratória**. XIII SEMEAD.** set. 2019. Disponível em: < http://www.ead.fea.usp.br/semead/13semead/resultado/trabalhosPDF/400.pdf>. Acesso em 17 jan. 2023.

THE BEST IN

EDUCATION SERVICES!

BECOME A MEMBER OF THE BUSINESS SCHOOL IN ENTREPRENEURSHIP AND PROFESSIONAL UPDATING

ENEAP

COURSES	EVENTS	CONSULTANCY
ARTICLES	ADVICE	AUDIOVISUAL PRODUCTS
RESEARCH GROUP	E-BOOKS	VIDEOS

secretaria@conhecimentoeciencia.com

Elephant Coworking, Av. Gov. José Malcher, 153