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**WEBGAMES AND THE FOUR PILLARS OF EDUCATION**

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**WEBGAMES E OS QUATRO PILARES DA EDUCAÇÃO**Jonas Godtsfriedt<sup>1</sup> and Fernando Luiz Cardoso<sup>1</sup><sup>1</sup>Santa Catarina State University, Florianópolis-SC, Brazil.**RESUMO**

As contribuições da tecnologia para o desenvolvimento humano são impressionantes; no campo da educação, as mudanças nos recursos materiais são apontadas como referência deste desenvolvimento no contexto educacional. Uma maneira de se apossar dessas tecnologias foi vista com uma iniciativa bastante próspera, conhecida como webgames. O relatório "Educação, um Tesouro a Descobrir" propõe princípios para melhorar o processo educacional e um novo conceito de aprendizado, fundamentado nos quatro pilares da educação: aprender a conhecer, aprender a fazer, aprender a conviver e aprender a ser. O objetivo deste artigo é apresentar reflexões teóricas de conversação entre webgames e a metodologia pautada nos quatro pilares da educação, no contexto de projetos sociais. Os webgames são jogos lúdicos, transpostos do ambiente dos jogos digitais, para serem vivenciados com o corpo. Os projetos sociais que focam na educação e cidadania, para atingirem as suas metas costumam utilizar jogos lúdicos e o esporte. Assim, o jogo lúdico e o esporte, têm o hábito de estimular o movimento humano, através da atividade física. Conclui-se que existe a possibilidade aos profissionais de educação física que atuam em projetos sociais escolherem usar os webgames, para criar alternativas no incentivo ao movimentar-se das crianças.

**Palavras-chave:** Videogames. Educação. Educação Física e Treinamento.

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**ABSTRACT**

The contributions of technology to human development are striking; in the education field, changes in material resources being pointed out as a reference for this development in the educational context. A way of taking possession of these technologies has been seen with a quite prosperous initiative known as webgames. The "Learning: The Treasure Within " report proposes principles for improving the educational process and for a new concept of learning, founded on the four pillars of education: learning to know, to do, to live together, and to be. The objective of this article is to present theoretical reflections of conversation between webgames and the methodology based on the four pillars of education, in the context of social projects. Webgames are playful games, transposed from the environment of digital games, to be experienced with the body. Social projects that focus on education and citizenship, in order to achieve their goals, usually use playful games and sport. Thus, playful games and sport, have the habit of stimulating human movement, through physical activity. We conclude that there is a possibility for physical education professionals who work in social projects to choose to use webgames, to create alternatives to encourage the movement of children.

**Keywords:** Videogames. Education. Physical Education and Training.

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**Introduction**

The contributions of technological progress to human development are striking; these advancements are also evident in the Education field, making it possible to point out as references changes in material resources, with notebooks and books being replaced by tablets and online materials and data<sup>1</sup>. Digital games and exergames are examples of gamification activities. It is known that the involvement of virtual reality technologies in body practices can motivate the training of specific sports skills, the learning new practices and even new fun<sup>1</sup>.

Another way of taking possession of these technologies has been seen as a quite prosperous initiative known as webgames with the body<sup>2,3</sup>, intended for activity simulation. This pedagogical proposal fosters an adaptation of stimuli arising from game activities in a virtual environment, the digital games, materializing the experience, based on the simulation of these stimuli. According to the authors of webgames, these experiences show benefits to the development of imagination, creativity and to enrichen their motor baggage<sup>1</sup>.

Games with playful elements around the imaginary and the new technologies experienced with digital games, introduce a new concept regarding the embodiment of the

digital environment, which can be called webgames, which can be experienced in different sectors of our daily lives, such as in the school context, in the corporate context or in the area of tourism and leisure<sup>2</sup>. The educational strategies of webgames have been disseminated in journals and events<sup>3-5</sup>, aiming to promote an increase of its use in different contexts<sup>2</sup>. Thus, to establish a starting point for this essay, we see as an investigative gap that the study regarding webgames can still advance scientifically, in this way, it is proposed to reflect on a new context for the use of webgames, this would be within the scope of social projects.

When it comes to exercising, which is part of a healthy lifestyle, physical activities and sports can be developed in several contexts, from leisure to high-performance sports; however, worthy of our attention is education-oriented sports, concerning the development of social competences and values targeting children<sup>6</sup>.

Thus, still with respect to the Education field, considering the characteristics of contemporary societies, their extreme mobility, their quick transformations in all sectors, their diversity and complexity, and the impact of such transformations on the education of new generations, the United Nations Educational, Scientific and Cultural Organization (UNESCO) created in 1993 the International Commission on Education for the Twenty-First Century, composed of education experts from different countries, to whom the following question was attributed: What type of education shall be provided to the new generations in order to prepare them properly to face the challenges of the 21st century?<sup>6,7</sup>

In search of answers, the commission collected data using specialists from several countries, and all this information originated the "Learning: The Treasure Within" report, known as the Jacques Delors report; Delors presided the commission and wrote the document presented to the UNESCO in 1996. This report proposes new principles for improving the educational process (based on the four pillars of education, namely: learning to know, to do, to live together, and to be<sup>8</sup>).

Human development is the greatest goal that guides all social projects aimed at children in situation of social vulnerability, supported on this "4 pillars of education" theoretical methodology, which ensures coherence of purposes and principles involving social programs, with a focus on teaching citizenship by means of ludic activities and sports<sup>9</sup>. Various social projects in Brazil (Guga Kuerten Institute – IGK, Ayrton Senna Institute – IAS, Sports Education Institute – IEE), have focus on education, offering children interdisciplinary practices; said practices experienced by kids rely on the principles of Education through sports and through the Four Pillars of Education<sup>6,8</sup>.

When addressing educational practices by means of physical activities and sports, we can bring back the study of a pedagogical proposal: webgames. Webgames appear with the intention of raising the chances of one performing physical exercises in a ludic manner<sup>2</sup>.

To Schwartz and Tavares<sup>2</sup>, webgames have potential to act in different contexts, such as school (childhood education, elementary and high school, and school break); leisure (hotels and tourism camps, gymnastics and dance, nature, and programs for the elderly); and corporate environments (conventions, indoor training, labor gymnastics, and outdoor adventure); thus, we propose the association of a new possible context for webgames, which would be in the realm of social projects.

It is relevant to ratify the idea that the many social projects seeking to achieve their goals in the teaching of citizenship through ludic activities and sports choose education as a strategic instrument, identifying in the use of the "four pillars of education" an essential theoretical framework to guide the creation of their proposals<sup>9</sup>. Along this path lies the possibility of studying a new proposal, of associating the use of webgames in the environment of social projects that employ their methodologies organized from the four pillars of education: learning to know, to do, to live together, and to be<sup>8</sup>.

Concerning said theory, proposed by Delors<sup>8</sup>, as to learning to know, do, live together and be, which will be analyzed in this research, these learning possibilities can be studied presenting theoretical reflections of conversation between webgames and the methodology based on the four pillars of education, in the context of social projects.

As a means to presenting theoretical reflections deriving from this essay, three different but converging moments will be brought herein and expose the analyses of this investigation. To start the theoretical analysis, we will recall the concepts around webgames. Afterwards, in the second moment of this essay, we will move on to a discussion on the four pillars of education, describing each of them. Then, in a third moment, we will expose the theoretical reflections of conversation between webgames and the methodology based on the four pillars of education, in the context of social projects.

The study was approved by the Ethics Committee of Santa Catarina State University, with CAAE No 10430119.6.0000.0118; and this essay intends to broaden the understanding of the assumption that human development is the great goal that guides all actions in social projects aimed at children in situation of social vulnerability, organized around the theoretical methodology of the "four pillars of education", teaching citizenship through ludic activities and sports. Thus, the objective of this article is to present theoretical reflections of conversation between webgames and the methodology based on the four pillars of education, in the context of social projects.

## Webgames

Highlighting in this essay the importance, on the theme of games, and its questions of ontological background: what are games? What are its main characteristics? In search of answers to these and other questions, some names and works that can currently be considered classics in the works produced on the theme of games have emerged and become popular. One of the main representatives of this group is Huizinga, whose great work, "Homo Ludens" broadly addresses the theme of games<sup>10</sup>.

The game is something that is linked to human needs, and even in other animals you can find moments that refer to playfulness or what we call games. Within these principles on the use of games Huizinga<sup>11</sup>, he believes that the game represents an element of the culture that precedes itself (culture), constituting itself as an autonomous reality. Through the process of scientific and technological advances in game studies, the creation of "digital games" results. Digital games, take a plurality of forms and are designed for many platforms that are based on computational resources, such as personal computers, consoles and mobile devices. These games can be designed, both to be played by a single player, as well as for small groups or even large virtual communities<sup>12</sup>.

According to Guttmann the concept of sport initially passes through the definition of the terms: play and game, where, according to the author, the word "play" is associated with any non-utilitarian activity, physical or intellectual, realized with the purpose in itself<sup>13</sup>. In this way, for Guttmann, play is about activities practiced for the simple pleasure of playing and activities that are mandatory or performed for a greater purpose are excluded. The second term, would be the "game", where Guttmann<sup>13</sup> points out that it is a more practical game organization that incorporates the presence of rules and greater organization in activities. Thus, the concept of sport is proposed as being more robust, presenting itself as an activity that should be understood with physical, competitive and playful actions and behaviors<sup>13</sup>.

Ludicity as an anthropological phenomenon of men, present in the game itself and in their playful practices, is important and perceptible in the proposal of studies and research on exergames, which are motion electronic games; however, the range of motion games can be expanded, knowing that they can be not only an option for ludic activities and fun physical

activities, but that they also have potential to be applied as a pedagogical instrument to several environments and contexts in the professional practice of a physical educator. A choice that adds value to this interpretation on motion digital games and that converge with exergames is webgames.

Webgames are represented by the union between technological resources and human movement, the use of webgames has provided the development of important cognitive elements like imagination and motor enrichment<sup>1</sup>. The basis to the proposal of webgames is centered on using stimuli from digital games, properly transposed to be experienced with the body, in person, promoting playfulness<sup>2</sup>.

A concern that justifies the idea of adapting digital games to be experienced with the body has revolved around the perception that, even with the interfaces that have gone the opposite way, from the physical to the virtual, allowing the presence of the body during the game, the suggested movement was restricted, since the player could not be too distant from the device (videogame), thus being dependent upon the latter to execute the gestures. Another point was that the use of electronic equipment and the internet meet the expectations of the current days, for all age groups, with a strong motivational appeal towards repressing sedentarism<sup>2</sup>.

David Le Breton<sup>14</sup> when discussing the theme between the body and technology, elaborates an anthropological and sociological approach to the modern world, which considers the body as a guiding thread. According to Breton<sup>14</sup>, information technologies finally culminate in the intervention of a modified humanity, that is, the boundary between the subject and the object ends up disappearing, thus, there is, the human and the machine. For the author<sup>14</sup>, without the body, which gives him a face, man would not exist, in this way, living consists in frequently reducing the world to his body, through the symbolic that incarnates.

Francisco Ortega<sup>15</sup> proposes that the cult of the body is one of the phenomena that define our contemporaneity, being in daily life, in the media, in cultural production and in ideological discourses the body has been acquiring unimagined proportions. According to this author<sup>15</sup>, the pressure of this cult of the body on people produces perplexity and confusion. On the relationship between body and technology, the work of Sibília<sup>16</sup>, contributes significantly to the discussion of this theme, citing that for children, in today's times, putting the body on the scene to speak or even act, presents as an easier task, since reading or even writing are tasks that are as solitary as they are silent.

New interfaces do not replace the textbook or even the figure of the educator; as skeptics may think, because the media and technologies at school (and in other educational environments, like the social projects); they provide a new organization and structure of the stages and ways of knowing and learning about academic and social culture<sup>17</sup>.

Costa and Betti<sup>18</sup> sought to study the validity of body experiences; and they used as basis the Harry Potter movie, more specifically, the Quidditch game, which was duly transposed to be played on a court. Their results revealed that these body experiences can be of great importance, especially in the school context. Based on this initiative, the webgames were developed by a research group that has a focus on studies in the area of Leisure, located in a public university in the state of São Paulo, Brazil and the webgames have been published in journals and events, aiming at promote an increase in its use in different contexts<sup>2</sup>. This research group, looked for other stimuli from the virtual environment, resorting to online digital games that could be adapted to be played with the body during Physical Education classes, in different environments, starting the proposal of webgames<sup>2</sup>.

To exemplify how webgames can be practiced, we will present the following digital game and their respective webgame, as follows the description presented in Chart 1:

Digital game	Webgame	Games development
<sup>i</sup> Pacman*	<sup>ii</sup> Human pacman*	<p><sup>i</sup> The player controls the Pacman (round-headed yellow character with a mouth that opens and closes), better known as “Eat-and-eat”, who travels through a maze with the aim of eating tablets (small white balls) without be raised by the ghost.</p> <p><sup>ii</sup> This webgame can be made by children, where one of them should imitate Pacman, and will only walk on the lines marked on the court, chasing other colleagues.</p>

**Chart 1.** Example of digital game and their respective webgame

**Note:** \*Game proposed by Schwartz and Tavares<sup>2</sup>; List of digital game: I – digital game available at: <http://www.clickjogos.com.br/Jogos-online/Classicos/Pacman-come-come/>

**Source:** Authors

The choice of digital game (i - Pacman) and webgame (ii - Human Pacman) used in this explanation of how webgames can be practiced, which are being presented in Chart 1, was due to the researchers agreeing with the pedagogical proposal of Webgames, described in the book “Webgames with the body: experiencing virtual games in the real world”<sup>2</sup>. Webgames stimulate the development of competences (defined as the mobilization of knowledge, skills, attitudes and values to solve complex demands of everyday life)<sup>19</sup> diverse for children in different contexts (among these contexts, social projects can be cited, according to the theoretical reflection proposal presented in this essay).

Professionals from different areas of education, among them we can include the Physical Education professional, should choose the games and adapting them, suiting them to the intended goals of a given Physical Education class, and they can do so along with the players as well, that is, everyone is surrounded by an atmosphere of encouraged creativity and imagination, which thus takes the ludic behavior to all instances of experiences. This learning for physical education professionals as to webgames will help meet contemporary expectations on the quality of the human-technology relationship<sup>2</sup>.

For Lévy<sup>20</sup> the virtual is understood as a power, that is, opposite to the current, not to the real, however the author himself, in his other literary work, starts to consider that the virtual starts to have at least three senses: the common, the philosophical and the technological. In Levy's conception, the technological sense is related to the area of information technology, in sequence the author himself, suggests a parallel between common sense, and the philosophical sense, where he proposes that the philosophical sense is virtual what exists only in potential and not in action, the field of forces and problems that tends to be resolved in an update, that is, in the philosophical sense, the virtual is obviously a relevant dimension of reality<sup>20</sup>. According to Lévy<sup>21</sup>, one must not consider the virtual context as the successor of the real environment, but rather as an alternative of innovation that raises the chances of moving<sup>2</sup>.

Henry Jenkins<sup>22</sup> when addressing the theme of a creative narrative meeting the media industry, proposes the distinction between interactivity and participation, citing that interactivity refers to the way in which new technologies were planned to respond to consumer feedback, on the other hand participation is shaped by cultural and social protocols. Neto<sup>23</sup> argues that the activities to be appropriated from the virtual environment represent an additional supporting tool for achieving the intended goals. According to Murray<sup>24</sup>, a narrative such as those found in digital games that can serve as inspiration for the creation of playful games adapted from these digital games, that is, webgames.

Regarding the components of digital games, according Schell<sup>25</sup>, these are: character, world and interface. The characters, in digital games, the “hero” of the narrative is the player himself<sup>26</sup>. The world is an artificial universe where the events of a digital game take place<sup>27</sup>. And the interface is the resource that connects the player to the digital game world<sup>25</sup>.

For Quiroga et al<sup>28</sup>, digital games are being created with the purpose of educating or training some human skill, among these skills we have the movement. McGonigal<sup>29</sup> discusses in her researches, digital games from playful experiences and analyzes how digital games have supplied desires that the real world cannot supply. Thus, it becomes necessary to highlight that, when using digital games and webgames, the intention is not to make them exclusive during the classes but, instead, favor new proposals for the diversification of activities of Physical Education professionals<sup>2</sup>.

Technological resources must be employed in the school context (and we can also allude to context of social projects) not only to render classes more attractive and draw the children attention, but also to allow for a critical analysis of their use in the routine of children in the current world, as well as to contribute to social transformation and the renewal of the educational process<sup>30</sup>.

A relevant consideration about this innovative proposition that this essay brings is that some social projects usually seek to teach citizenship by means of ludic activities and sports, and webgames are full of creativity and foster movement through digital games transposed to ludic activities that prioritize movement. Thus, it is possible to perceive an opportunity for a dialogue between webgames, in the context of social projects, and their possible association with the methodology of the four pillars of education.

### **The Four Pillars of Education**

Delors<sup>8</sup> highlights the idea that "education is also a social experience through which children learn about themselves, develop interpersonal skills and acquire basic knowledge and skills". Delors further stresses that passing on evolutionary knowledge and skills, by means of education, adapted to the cognitive civilization, is the basis to the competences of the future<sup>6,7</sup>.

To transform the potential of children into knowledge, capabilities, attitudes, skills and values by means of education, teachers need to be creators of learning opportunities who, taking into account their students' interest, develop curiosity and desire to learn for the entire life<sup>7</sup>. To achieve this, Delors<sup>8</sup> suggested that education must be structured on four pillars for the development of an individual in the course of their life: learning to know, to do, to live together, and to be.

The methodology of the four pillars of education, prioritizes an act of working on education from these four pillars as the guiding thread that guides and gives unity to all the actions of the social project that is using this work methodology<sup>6,31</sup>. The pedagogical practice of social projects that are based on the pillars of education, promote the search for the integral education of the child, expanding the view of sport beyond physical activity by privileging its educational function<sup>31</sup>.

The definition of competencies to be developed in each pillar of education allows educators to plan the daily activities of the social project, knowing in advance what they want to achieve in each action and the to evaluate<sup>31</sup>. This methodology of the four pillars of education is applied in social projects, using especially as an educational tool the practice of sports and recreational activities in an interdisciplinary approach between Physical Education, Psychology, Social Work, Library Science, Computer Science, Performing Arts and Pedagogy<sup>8,31</sup>.

The four pillars methodology can be organized through planning and evaluation meetings, where planning and evaluation is proposed (by the interdisciplinary team of education professionals) of the actions that will happen in a certain period of time in the social projects. In these evaluation and planning meetings, the interdisciplinary team evaluates the actions developed by education professionals; in a second moment, the team is trained through targeted activities or dynamics promoted by the team responsible for this moment of training<sup>31</sup>. All the educators plan the activities together and in this process they incorporate their ideas and the knowledge inherent to their area of activity, in this way the activities will be planned always trying to maintain during the daily life of the social project at least two educators from different areas (in order to promote the interdisciplinary work), and also, within this methodology of four pillars of education, it can be emphasized that the written planning guarantees, even, that the physical education professional (and other education professionals) never stay in the field without counting a previously planned activity, except in unpredictable situations, when the flexibility that all planning needs to have must enter into the field<sup>31</sup>.

The four pillars of education can be observed in social projects that aim to promote human development, and that also have a focus on stimulating the development of social skills and abilities of children. In the Brazilian territory, it is possible to find some social projects that use this methodology proposed by the four pillars of education, among them: the Instituto Guga Kuerten - IGK, the Instituto Ayrton Senna - IAS, and also the Instituto Esporte Educação - IEE<sup>8,31</sup>.

This didactics aimed at clarifying and empowering children is what occurs in the social project named: Instituto Guga Kuerten - IGK<sup>6,31</sup>, where educators encourage children, and stimulate social skills, such as learning to know (cognitive competence), to do (productive competence), to coexistence (relational competence) and to be (personal competence)<sup>8</sup>. This social project (IGK), has within its work routines, the fact that its education professionals, known as “educators”, should be guided basically by the routines proposed by the methodology of the four pillars of education<sup>31</sup>.

The routines of the workshops (workshops are the name of the spaces where IGK practices take place, and it is known that in this social project, three workshops take place, namely: i - workshop of tennis; ii - complementary sports workshop; and iii - cultural workshops) of the social project, IGK, must present the following steps as a basic structure of their activities: an initial wheel, the development of activities and a final wheel<sup>31</sup>. The first stage is the initial circle, which aims to socialize the students with the lesson planning<sup>31</sup>. In the second stage, development is the main part of the class<sup>31</sup>. The last and third stage, is the final wheel, which aims to provide a reflection and a synthesis of the learning experienced in the previous phases of the class<sup>31</sup>.

In social projects relying on the methodology of the educational pillars proposed by Delors<sup>8</sup>, said pillars are usually adopted to guide and give unity to all actions in the social project<sup>6</sup>. For a better understanding, the basic concepts of each education pillar are described below:

### *Learning to Know*

Learning to learn is to UNESCO almost a synonym for this pillar (learning to know), so much so that, oftentimes, it is referred to as learning to learn. It means considering one's own learnings, weaknesses and strengths to find factors that lead to the expected outcome; from this perspective, one can find the factors that favor or even hinder learning, such as: interest in the subject; dedication and persistence; encouragement from peers, family members, educators; facing shortcomings as an integral part of the learning process, etc<sup>7</sup>.

### *Learning to Do*

According to the UNESCO, the best preparation for work (learning to do) happens through a quality basic education. However, the school should not be the only one responsible for this education; this task involves all sectors of society, especially organizations engaged with the comprehensive education of new generations, united in a collaborative and complementary work, as it is the case of social projects that use the methodology proposed by Delors<sup>7</sup>.

### *Learning to Live Together*

Learning to live together thus has a personal dimension, which is that of learning to deal with one's own challenges, and a collective dimension, that of preparing oneself to produce and live collectively; therefore, students are supposed to develop relationship-oriented capabilities, such as respecting others, knowing to listen, respecting individual differences, learning to compromise and reach an agreement<sup>7</sup>.

### *Learning to Be*

Learning to be complements the three preceding pillars of education (knowing, doing, and living together); it goes beyond the merely instrumental view of education and perceives the individual in their wholeness: body, intelligence, sensibility, sense of aesthetic, responsibility and spirituality<sup>7</sup>.

## **Assessing the Proposal of Webgames and the Four Pillars of Education**

In this context, the educational demands based on the UNESCO's International Letter for Education in the 21st century have as mission to form an individual who can comprehend themselves and the others, through a better understanding of the world, relying on the four pillars of education: learning to know, to do, to live together, and to be<sup>32</sup>.

To Delors<sup>8</sup>, the pedagogical practice of Physical Education teachers must be structured on four primary modes of learning, the pillars of education, which will be, for each individual, the pillars of knowledge: learning to know refers to openness to knowledge, which truly sets one free from ignorance; learning to do means the courage of executing, of failing trying to succeed; learning to live together, in its turn, brings the challenge of interacting respectfully towards everyone, taking fellowship as the way to understanding; finally, learning to be, perhaps the most important, has to do with the role of a citizen and the purpose of living.

We have, in this essay, a scenario where physical education professionals can have their teaching practice incremented by the possibility of adding to their repertoire of pedagogical practices the alternative of using webgames. When applied to the context of social projects founded on the methodology proposed by the four pillars of education, webgames allow physical education teachers to go beyond the virtual world and promote experiences significant experiences for the education of children on the sports court.

Initially, we can ponder the idea that it is possible to find a way to a coherent communication between webgames, in the context of social projects, and their feasible relationship with the methodology of the four pillars of education. To justify this reasoning, we have stated that webgames are ludic games transposed from the environment of digital games to be experienced through the body, by means of games that prioritize ludicity and stimulate movement, walking away from the idea of inertia, commonly associated with digital games.

From another point of view, there are social projects that focus on teaching values, capabilities, attitudes, that is, on educating one for life and citizenship; thus, to achieve their



educational goals, some of them, such as the social projects already mentioned in this essay, routinely use ludic games and sports. It is important to underscore that, in this analysis, we are referring to social projects that use education-oriented methodology supported by Delors's proposal<sup>8</sup>, and that both ludic games and sports stimulate movement by means of physical exercises.

Social skills (which deal with the individual's ability to mobilize knowledge, skills, attitudes and values to solve complex situations in their daily lives) are directly linked to the methodology of the educational pillars, proposed by Jacques Delors<sup>8</sup>, each of these pillars being directly associated with a type of social competence, thus, we have: learn to know (cognitive competence); learn to do (productive competence), learn to live together (competence) and learn to be (personal competence).

In this way, according to the theoretical reflection proposed by this essay, we authors believe that children who come to practice webgames in the context of social projects (which make use of the methodology of the four pillars of education), will be able to experience these social competences that are associated with each pillar of education<sup>8,9</sup>.

Analyzing the webgame chosen for the example exposed in this essay, we can recall the objective of this article, which tried to present theoretical reflections of conversation between webgames and the methodology based on the four pillars of education, in the context of social projects. In this way, we can present the theoretical reflection of this conversation of webgames and the four pillars of education, where we can propose that when analyzing the webgames presented in Chart 1, one or more pillars of education can be related to the webgame. So, as we can see in the following webgame:

- Webgame ii - Pacman Humano - participants are invited to balance on the lines of the sports court, and to move around in this “catch-up” game, that is, we can propose that there is the presence of the pillar of education: learning to know, because the children participating in this webgame must have an understanding of the space around them, and exercise your balance;

In this sense, seeking a better understanding of the initial argument of this study, it can be stated that the idea herein exposed is that human development is the greatest goal that guides all actions in social projects aimed at children; said projects can find support in the pedagogical logic proposed by Delors<sup>8</sup>, and achieve the educational goal of teaching citizenship by means of ludic activities and sports. We thus have a basis to consider the possibility of a viable and real connection between webgames and the context of social projects, with the alternative of working on webgames using the methodology of the four pillars of education.

### **Further Considerations**

Some limitations may have influenced the presentation made in this essay of the theoretical reflections of conversation between webgames and the methodology based on the four pillars of education, in the context of social projects and need to be considered. Firstly, the little production of empirical and theoretical studies and reports of information on the methodology of the four pillars of education, being applied in social projects. Second, the scarce publication of scientific materials that deal with the methodology of the four pillars of education (usually stated in conceptual and non-methodological terms) and how they apply to social projects.

Considering this, we suggest for future research, considering the topic of the possibility of conversation between webgames and the methodology of the four pillars of

education, within the scope of social projects, it is suggested to include the pedagogical tool of webgames in the context of the actions of social projects, and also a greater detail of the work methodology of social projects in relation to the use of the four pillars of education (presentation of how the planning and evaluation of the activities carried out by the interdisciplinary teams proceed), as observed in other studies<sup>6,31</sup>, who presented how the methodology of the four pillars of education applies to projects social.

As practical implications of this study, we have that the conversation between webgames and the methodology of the four pillars of education, in the context of social projects, presented in this essay, can subsidize a perspective in relation to discoveries that can be observed in the field (through future empirical studies), which suggest that physical education professionals (active in social projects) can see the possibility of using webgames in their classes.

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**Acknowledgements:** University Scholarship Program of Santa Catarina UNIEDU / Post Graduate.

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Received on Jul, 08, 2020.

Reviewed on May, 12, 2021.

Accepted on May, 17, 2021.

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