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Original Article

WEBGAMES IN THE SCHOOL: A PILOT STUDY

WEBGAMES NA ESCOLA: UM ESTUDO PILOTO

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ABSTRACT

The proposal of webgames promotes a return to the "old" digital game, usually associated with the characteristics of a sedentary lifestyle. However, after the digital game is played on the computer, a ludic game is proposed to children, involving attractive practices with human movement, which will thus break with sedentarism. The objective of this study was to analyze the application of the pedagogical proposal of webgames to schools, in association with participant observation. Methodology: 25 elementary school students were investigated; they were attending the first grade at a school in the city of Florianópolis, Brazil. The group of children joined 02 meetings lasting 01 hour and 30 minutes each. During the sessions, their speeches were recorded on a field diary. Results: A recurring aspect in this experience offered to the children was to realize the fellowship and cooperation among them. The speech of one of the students, during the webgames, evidenced an association of the ludic practice experience on the court with the reality observed in the imaginary world of digital games. Conclusions: The study revealed a good acceptance from the children towards the webgames during school Physical Education classes.

Keywords: Videogames. Games and Toys. Physical Education and Training.

RESUMO

A proposta dos Webgames promove um retorno ao jogo digital “antigo”, usualmente associado a características relacionadas ao sedentarismo. Porém, após se “jogar” o jogo digital no computador, é proposto para a criança, um jogo lúdico, que envolva práticas com movimento humano e atrativas, e assim, irá promover a quebra do sedentarismo. O objetivo deste trabalho foi analisar a aplicação da proposta pedagógica dos Webgames, na escola, associada a observação participante. Metodologia: foram investigadas 25 crianças estudantes do ensino fundamental, de uma turma do primeiro ano de uma escola na cidade de Florianópolis, Brasil. O grupo de crianças participou de 02 encontros, de 01 hora e trinta minutos de duração cada. Durante as sessões as falas das crianças foram registradas em diário de campo. Resultados: Um aspecto recorrente nesta vivência ofertada as crianças, foi perceber o coleguismo e cooperação existente entre os alunos. Em uma das falas de um dos alunos, durante os Webgames, emergiu uma associação da prática lúdica vivenciada na quadra, com a realidade observada no mundo imaginário dos jogos digitais. Conclusões: com o estudo, notou-se uma boa aceitação das crianças em relação as práticas dos Webgames, durante as aulas de Educação Física escolar.

Palavras-chave: Jogos de vídeo. Jogos e Brinquedos. Educação Física e Treinamento.

Introduction

Webgames were born with the intention of increasing the chances of one performing physical exercises and activities in a ludic manner, meeting the expectations and interests of different age groups[1]. Pedagogical orientations related to webgames were defined by a group linked to the Leisure Studies Laboratory [*Laboratório de Estudos do Lazer*] (LEL), at São Paulo State University [*Universidade Estadual Paulista*] (UNESP), Rio Claro campus, and have been disseminated in journals and scientific events with the aim of boosting their utilization in different contexts, such as in this article, a pilot study involving the application of webgames to the school reality.

The proposal of webgames promotes a return to the "old" digital game, usually associated with the characteristics of a sedentary lifestyle. However, after the digital game is played on the computer, an interaction, game or play is proposed to the children, to be executed based on ludic and attractive practices with human movement, thus breaking with sedentarism. These ludic activities and games are inspired on themes and realities well known by kids, as they have already been experienced on computer digital games[1].

The common national curriculum base (BNCC), can be understood as a curricular theory understood as a set of arguments that subsidize provided in order to organize a school experience, that is, which are scientific foundations to plan the students' course[2]. Starting from the understanding of curriculum as discursive production, BNCC was subjected to cultural analysis through confrontation with curricular theorization, which implies accepting it as a meaning-producing practice, immersed in networks of power and truth and in circulating discourses by through which certain conceptions of teaching work, physical education, school and education were validated[2,3]. The BNCC sets out the position it aims to occupy when it literally states that it is "a normative document that defines the essential organic and progressive set of learning that all students must develop throughout the stages and modalities of Basic Education"[4:7]. The document (BNCC) recovers the typology that proposes essential learning or skills in the service of the development of defined competences "such as the mobilization of knowledge (concepts and procedures), skills (cognitive and socio-emotional practices), attitudes and values to solve complex demands of everyday life"[4:8].

BNCC has the impetus to intend to invade schools and classrooms throughout Brazil and determine what should be taught in schools (and Physical Education classes), even without knowing the children who are studying there, and how they live, who think, know and do[2]. The format of the BNCC text presents general competences, by area and by curricular component, so each component has specific thematic units, knowledge objects that segment as thematic units and, finally, skills resulting from the knowledge[2]. We have as an example Physical Education for the 1st and 2nd years, a moment of schooling in which in most public and private education systems there is versatility, in which a single educator acts in all curricular components, there is a curricular organization process constructed as follows: i) Physical Education Competences (Experiment, enjoy, appreciate and create different games, games, dances, gymnastics, sports, fights and body adventure practices, valuing collective work and protagonism; ii) Thematic Unit (Play and Games); iii) Object of Knowledge (Games and popular culture games present in the community and regional context); and iv) Ability (Collaborate in proposing and producing alternatives for the practice, at other times and spaces, of games and other bodily practices themed at school, producing texts - oral, written, audiovisual - to disseminate them at school and in the community)[2].

Play and games inspired by digital games, are the essence of the pedagogical proposal of Webgames (which is the main theme, in this pilot study, and presents as Physical Education Skills, the act of experiencing the experience of digital games on the environment's computers school, and after experimenting with these digital games, it is possible to create different games and body practices and move around in school Physical Education classes, valuing the collective work and the protagonism of children, and it is still necessary that the Ability of Physical Education, which can be understood as the idea of collaborating in the proposition and in the production of alternatives for the practice of physical education at school, at other times and spaces, of games and other bodily practices themed at school, producing texts - oral, written, audiovisual - to disseminate them at school and in the community), which considers children's appreciation for the digital medium and brings this en singing for games, games and physical activities that can be experienced in Physical Education classes[1]. The article focuses on Webgames, and their application at school, associating the use of observational techniques, so that, through observation, reinforce the belief in the ability to apply Webgames in the school environment.

The observation technique is a method that generates several pieces of information on new study objects for researchers. To a greater or lesser extent, it is almost always present in psychological assessment processes, especially when the assessment is individual, although it can also be used with groups, as in this specific case. Observation can be generally used in school environments (which is the focus of this article)[5].

A current observation technique, and which can be found in investigations with students, according to Silva and Silva[6], is "participant observation". Participant observation is part of a set of methodologies known, in the educational field, as "qualitative" and, frequently, ethnographic[7].

Participant observation in the school environment allows "looking" into the process of knowledge appropriation from the various segments that make up said environment, which means analyzing the routine existence of schools as accumulated history, seeking, in their present, the state and civil elements by which they have been built. Observing schools, one can verify what is converging, what is diverging or contradictory, in all diverse ways that the former exist[7].

According to Ezpeleta and Rockwell[8], in participant observation, the interpersonal relations between researcher and subject, therein referred to as social relations, constitute theories; it is the relation that which determines the thought, not the other way around[7]. The present article, in the format of a pilot study, aims to describe and reflect on the importance and feasibility of applying digital games aligned to Webgames in physical education classes at a public school in Florianópolis, Santa Catarina. For this goal, a pedagogical protocol was built (using the Webgames pedagogical proposal) for the use of Webgames in school physical education classes, with the objective of observing (through the technique of participant observation, consisting of two parts: descriptive part, and reflective part) the results found during: i) application of the protocol (webgames) in school Physical Education classes, preceded by practical experience of digital games (in the school's computer environment) that are linked to the content of the protocol (webgames).

Method

This research has a qualitative nature, as proposed by Richardson[9]. It was approved by the Ethics Committee of Santa Catarina State University, under legal opinion No CAAE 10430119.6.0000.0118, and intends to investigate the possible contribution of including this pedagogical tool that webgames are in the school. We believe that the presence of webgames is increasingly necessary and relevant in school Physical Education. For such a purpose, a study was conducted, applying webgames to first graders (a class with 25 students aged between 6 and 7 years old), at a municipal school in the city of Florianópolis, Brazil, as shown in table 1. Twenty-five children (52% boys) participated in the study, with an average age of 6.5 (± 0.51) years, enrolled in elementary school at a public school in Florianópolis, Santa Catarina, Brazil (Table 1).

Tabela 1. Characterization of students. Florianópolis, Brazil

Variables	Total (n=25)
Sex	
Female (n)%	12 (48%)
Male (n)%	13 (52%)
Age(full years)*	6,5 (0,51)

**Note: ***Data expressed as mean and standard deviation
Source: Authors

The group of children participated in two meetings lasting one hour and thirty minutes each, with one meeting per week. The time of application of this research, consists of two stages: i) familiarization with the class of children who participated in the pilot study at school; and ii) the pilot study itself. Thus, on the dates of November 26 and 29, 2018 (that is, a total of two meetings), familiarization with the first year class was carried out on both days (totaling three 45-minute classes each class). of elementary school early years, with the goal of becoming

the researcher someone known and familiar to children, and in this way, being able to participate together with the school physical education teacher in future classes (we refer to the pilot project, which took place in the following classes familiarization), without generating strangeness or diverting the attention of the children participating in the study. After the familiarization period at school, it was scheduled with the school Physical Education teacher, the start of the pilot study itself (where the experiences proposed by the Webgames were applied, that is, in each meeting, the previous experience of digital games next to the school's computers, and on the same day students would go to the school court, play and play games inspired by online games, which took place on December 3 and 10, 2018 (each meeting had two classes, because it was a day that the children had a physical education class at school, thus adding up to the two meetings of the pilot project, a total of four 45-minute classes each class).

The performance of the school physical education teacher during these pilot study meetings was essential for the progress of the research, since this professional had his performance performed in both parts of the research: i) in the part of the computer room, during games online on the computer (where the teacher indicated the games that students should "play" and also distributed the children on the school's available computers); and ii) and in the part of the sports court, in the experience of Webgames, that is, the practical part of the physical education class, where the physical education professional guided the students of the school in the experience of games and playful games inspired by digital games. Thus, it is clear that the physical education professional actively participated in the pilot study, that is, the physical education teacher was responsible for the implementation and pedagogical mediation of Webgames in the school environment.

The group of children (students from the school where the pilot study took place) was defined according to the availability of the teacher responsible for the school's computerized classroom. This occurred due to the need for students to participate in school physical education classes (with the experience of practicing Webgames) following the experiences with digital games in the computer room. Thus, as only a group of children in the first year of elementary school contemplated this criterion, therefore, this group of children was defined as the group of students who would participate in the study, thus, the students together with the physical education teacher At first, they went to the school's computer room (with the help of the teacher responsible for the school's computer room, however the physical education teacher conducted the class) to perform the "play" of digital games, and in a second moment, afterwards, the school physical education teacher guided students to the sports court, with the objective of providing children with Webgames (playful games inspired by digital games recently experienced by students).

The following inclusion criteria for the pilot study were adopted: 1) being the student enrolled in the first year of elementary school in the early years of the school's morning shift (as the morning period met the criteria established by the authors: class in the computer room and then practice games and play on the sports court) and be in the first year of elementary school at the elected public school; 2) be physically fit to perform the physical education discipline, and agree to experience beyond the webgames on the court, also participate in the experiences with digital games on the computer, in the school's computer room; 3) the school physical education teacher, agreeing to participate freely and collaboratively in the study, becoming responsible for the implementation and pedagogical mediation of Webgames in the school environment; and 4) teacher responsible for the school's computer room, choosing to assist in the execution of the pilot study, giving space for children to live together with digital games (a moment that precedes the experience of Webgames on the sports court).

For data collection, participant observation was used and the data obtained were recorded in the field diary written by the researcher during the two meetings (of the pilot study), taking into account the descriptive and reflective steps proposed by Lüdke and André[10]. In

participant observation, the descriptive and reflective steps proposed by Lüdke and André[10] are taken into account, where it is clear that the descriptive step comprised the detailed record of the activities performed; the behaviors and attitudes adopted; unusual situations and recurring aspects; and the speeches and dialogues of the subjects, preserving whenever possible the literal expressions, the reflective stage deals with the registration of the researcher's reflections on the data that emerged from the field about the experiences, considering their speculations, feelings, problems, ideas, impressions, preconceptions, doubts, uncertainties, surprises and disappointments detected throughout the process.

The content analysis proposed by Bardin[11] was used to interpret the data, and also with the purpose of broadening and deepening the analysis of the data obtained during the pilot study, and recorded through the field diary, that is, go beyond the data noted in the field diary. For this purpose, some visual and audio records were also made in this pilot study, using footage, photos, and also collective interviews (in which the students and the school Physical Education teacher participated).

The collective interviews (with the participation of the physical education teacher and his students) of the pilot study, were recorded in audio, through a cell phone device (model Samsung Galaxy S Duos) and transcribed (using the software Express Scribe Transcription and the Microsoft Word word processor). The press conference was composed of a semi-structured interview script (asking the participants of the pilot study information such as: i - how was the first contact of these participants in the pilot study with digital games; ii - what the teacher means to teach; iii - what the students mean to learn; iv - what knowledge the teacher thinks he needs to teach to play practices that involve the use of digital games at school; and v - how the students accepted the pilot study classes, which involved digital games on the computer and Webgames on the court), the questions followed a previously prepared script, but the questions were flexible according to the answers prepared by the students and physical education teacher. Thus, the questions of the press conference and their answers, became effective data in obtaining information in this field of scientific research, which was the school environment.

The research at the school took place from late November to early December 2018. To enable the experiences proposed by webgames and, at the same time, collect as many relevant data and pieces of information as possible for the investigation, the choice was for using an observational technique – "participant observation", as proposed by Silva and Silva[6]. The participant observation data should be recorded on a Field Diary written by the researcher during the meetings, taking into account both the descriptive and reflective parts, in accordance with Lüdke and André[10] as to the preparation of this type of recording[12].

The descriptive part comprehends taking notes, with as many details as possible, on everything that happens in the investigated field, namely, descriptions: of performed activities, of adopted behaviors and attitudes; of unexpected situations and recurring aspects; of the subjects' speeches and dialogues, preserving, whenever possible, their literal expressions. As for the reflective part, it refers to the recording of the researcher's reflections on data that gradually emerge from the field concerning the proposed experiences, considering this individual's speculations, feelings, problems, ideas, impressions, preconceptions, doubts, uncertainties, surprises and disappointments detected during the whole process[12].

The data collected, in this pilot study, on webgames in the school were interpreted by means of Content Analysis[11,13]. For the discussions based on the data found in the research, the children are introduced by aliases, thus guaranteeing their anonymity[3]. The procedures and methods adopted in this investigation comply with the recommendations of the 1975 Declaration of Helsinki.

The choice of digital games (i - Glow Hockey; iii - Pacman; v - Snake; vii - Formula Racer; ix - Be the bee; xi - Harry Potter Quidditch) and Webgames (ii - Cooperation football; iv - Human pacman; vi - Cobra game; viii - Blind running; x - Burning Queen Bee or Hornet;

xii - Harry Potter Quidditch) used in the pilot study and presented in Chart 1, it was due to the researchers agreeing with the pedagogical proposal of the Webgames, exposed and described in the book "Webgames with the body: experiencing virtual games in the real world" by the authors Schwartz and Tavares[1], where the authors encourage an increase in physical exercise and physical activities in a creative and playful way. Thus, these digital games and Webgames were chosen for the pilot study (the digital games and Webgames, shown in Chart 1, which present an asterisk "*" symbolize that they were taken from this book - "Webgames with the body: experiencing virtual games in the real world ", previously mentioned, which addresses the subject of Webgames, already the choice of digital game and creation of this signaled Webgame, also in Chart 1, with two asterisks" ** "were made by the authors of this pilot study), since each these Webgames stimulate the development of competences (defined as the mobilization of knowledge, skills, attitudes and values to solve complex demands of everyday life)[4] diverse for children in the school environment.

The skills presented to children in the school environment, when practicing Webgames (in the physical education class at school), can be observed, when analyzing the Webgames chosen for this pilot study, thus we have: Webgame - ii - Cooperation football (the idea of cooperation is worked on); Webgame iv - Human pacman (they are invited to balance on the lines of the sports court, and move around in this "catch-up" game); Webgame vi - Cobra game (offers the experience of group problem solving, as is the case with Webgame, where all children must cross a circuit of obstacles hand in hand); Webgame viii - Blind running (children are encouraged to work their senses, and spatial orientation, since they will be guides, and then guided by another student during the playful activity proposed by this Webgame); Webgame x - Burning Queen Bee or Hornet (in this Webgame, children play a "burned-out" game but must create strategies for the game, and dialogue as a team in decision-making); Webgame xii - Harry Potter Quidditch (in this Webgame children will work on fundamentals of passing, throwing, working collectively in moments of attack and defense during the playful game that this Webgame proposes).

Results and Discussion

Descriptive part of the pilot study on webgames
Performed Activities

Among the first parties approached for the conduction of this study involving webgames, the school's teacher in charge of the technology and computer department was contacted, so that he could authorize the computer room to be used for the digital game experience, characterizing the first part of the webgames, when the children play them, then move on to the practical part in the Physical Education class.

Then, at the subsequent stage, which happened at the next visit to the school, the Physical Education teacher (responsible for the Physical Education classes of the school's first graders) was approached and had the proposal of webgames explained to him. Said teacher was willing to cooperate in the research, asked some questions about its motivation and about how this research on webgames would be conducted, then made himself available right away for an initial approach, guiding visits to the school's facilities.

Afterwards, in the following week, after the first visit to the school, on the 26th and 29th of November 2018, familiarization classes were held with the first graders. This experience was of great value for being an opportunity to be introduced by the Physical Education teacher to the students; in addition to watching said teacher's didactical-pedagogical practice at the school, it was possible to participate and assist in the preparation and execution of the activities planned for these Physical Education classes.

The experience with the children during the Physical Education classes was important, as it allowed listening to the kids, talking to them, and understanding a little bit of their reality, besides participating in the classes dynamically and always actively, helping the teacher to carry out the activities proposed during the class. All this facilitated a first contact and closeness with the children, making room for the possibility of participating again in other Physical Education classes with the teacher and the students, since that initial barrier, before the students met and interacted with the researcher, had been overcome.

After the familiarization period at the school, the pilot study was scheduled to be started (application of the experiences proposed by the webgames), with the school's Physical Education teacher, on December 3, 2018.

DATE: 12/03/2018 - MONDAY
FIRST CLASS TIME: DIGITAL COMPUTER GAMES
1. Original title: Glow Hockey
Theme: Digital Game (Table Hockey)
Source: https://www.yiv.com/Glow-Hockey-Online

2. Original title: Pacman Humano
Theme: Digital Game (Come-eat)
Source: http://www.clickjogos.com.br/Jogos-online/Classicos/Pacman-come-come/

3. Original title: Snake with obstacle
Theme: Digital Game (Cobra Game)
Source: http://www.clickjogos.com.br/Jogos-online/Acao-e-Aventura/Snake/

SECOND MOMENT OF THE CLASS: WEBGAMES IN THE SPORTS BOARD
1. COOPERATION FOOTBALL.
2. HUMAN PACMAN.
3. “GAME OF COBRINHA” (SNAKE WITH OBSTACLES).

The activities for that day were planned to be executed in two stages. The first Physical Education class happened in the school's computer room, where the students played online digital games; each student was able to play the online game on a computer, individually, and thus experience digital games within the school environment. Three online digital games were planned to be experienced by the students, per meeting, on this occasion of the first day of the pilot project (webgames). At the second stage, the students left the computer room and were taken to the school's sports court, where they experienced the three webgames, previously scheduled for this first day of pilot study.

About the digital games, the following games were played on the first day: Glow Hockey; Pacman; and Snake. In their turn, these webgames were played on the first meeting: Cooperation football; Human Pacman; and Snake game. These digital and webgames were experienced by the children on December 03, 2018.

Still about the first day of the pilot, concerning the webgames, the first one was "cooperation football", which was meant for working on sports initiation, specially passing foundations, in addition to cooperation and a sense of team in sports.

The second webgame was "Human Pacman", whose proposal was to stimulate the children to catch all their classmates, turning all of them into ghosts, as if it was the digital "Pacman" game, but adapted to that Physical Education class.

The third webgame on the first day of the pilot was the "Snake game", which required the children to use their imagination, to be like a snake that should capture all of their classmates

participating in the activity, positioned at different spots on the sports court, then, all together, grabbing each other's hand to form a chain, go through several obstacles proposed by the Physical Education teacher on the court.

The second day of the pilot study was scheduled on December 10, 2018, through common agreement and approval by the school's Physical Education teacher. To conduct the activities proposed for that day, the webgames were planned to be experienced in two moments. The first moment of the Physical Education class took place in the school's computer room, where the students, again, experienced three online digital games; each student was able to play the game on a computer, individually, thus being allowed to experience digital games inside their school environment. It is worth noting that the Physical Education classes happened every Monday, being divided into two sequential sessions, which helped organize the activities with the online digital games and facilitated the playing experience for the students. In the second moment of the class, the students left the computer room and were taken, in an orderly and slowly manner, to the school's sports court, where, again, they experienced three webgames.

DATE: 10/12/2018 - MONDAY
FIRST CLASS TIME: DIGITAL COMPUTER GAMES
1. Original title: Formula Racer
Theme: Digital Game (Formula 1)
Source: http://www.clickjogos.com.br/jogos/formula-racer/

2. Original title: Be the Bee
Theme: Digital Game (Bee)
Source: http://www.clickjogos.com.br/jogos/be-the-bee/

3. Original title: Harry Potter - Quidditch
Theme: Digital Game (Quidditch)
Source: http://poki.com.br/g/quadribol-harry-potter

SECOND MOMENT OF THE CLASS: WEBGAMES IN THE SPORTS BOARD
1. BLIND RACE.
2. BURNED BEE QUEEN OR BANGLE.
3. QUADRIBOL HARRY POTTER.

On this second day of pilot study, three digital games were played: Formula Racer; Be the Bee; Harry Potter. Now, as for the webgames at the second pilot-study meeting, there were three other webgames: Blind race; "Queen Bee or Drone" Dodgeball; and Harry Potter Quidditch. These digital and webgames were experienced by the children on December 10, 2018.

About the second day of pilot study, it was possible to explain the characteristics of the webgames previously scheduled for that day; the first webgame was "blind race": the kids had as goal to be the first one to complete a course set on the sports court by the teacher; they were blindfolded and had to walk with the help of a classmate without a blindfold; thus, the activity encouraged teamwork and peer trust.

The second webgame was "Queen Bee or Drone" Dodgeball, whose proposal was to stimulate cooperation among the children and their strategic vision; it consisted of dodgeball, with the difference that each team could have a "bee" (girl) or a "drone" (boy); the teams should organize themselves tactically and strategically to protect the bee or the drone, because if the latter were hit, their teams would automatically lose the game.

The third webgame of the second day of pilot study was "Harry Potter Quidditch", which provided the teacher with the opportunity to work on sports initiation with his students, specially the passing and throwing foundations, in addition to encouraging cooperation and a team spirit through sports.

The digital games and webgames of the pilot study at the XXXX municipal school, follow this description shown in Chart 1:

Day	Digital game	Webgame in court	Games development
1	[i]Glow Hockey*	[ii]Cooperation football*	[i]Perform a table hockey match against the computer, while playing the digital game. [ii]The children formed two large rows, which were arranged on the sports court, and each row was positioned on top of one of the side lines of the volleyball (marked on the floor of the sports court), so through this distance students could make the passes with the feet of the soccer ball and then kick towards the goal.
	[iii]Pacman*	[iv]Human pacman*	[iii]The player controls the Pacman (round head with a mouth that opens and closes), better known as Come-eat, which travels through a maze aiming to eat tablets (balls) without being raised by the ghost. [iv]The student who imitates Pacman should walk only on the lines, catching the other classmates (similar to the "catch-up" game), who will be performing stretching movements commanded by the physical education teacher, while also walking on the lines and running away from Pac Man.
	[v]Snake*	[vi]Cobra game*	[v]The player controls a virtual snake through the directional keys of the keyboard, aiming to capture points located on the screen that in turn are increased to the length of the snake, which makes the game more difficult, since the only rules are that the snake's head it cannot collide with the rest of your body or the wall. [vi]This activity aims to make the students, during a "catch-up" game, enable the "hunter" (who starts as a "catcher" in the game), who, when touching one of their classmates, both stay united, hand in hand, forming a large chain (which will grow as the game progresses, until it forms a "snake" with all the children hand in hand), and that after forming this "snake" with all the students, children collectively have to overcome some barriers set by the physical education teacher (who formed a circuit with challenges and obstacles) in the gym where the activity takes place.

Continuing Chart 1...

2	[vii]Formula Racer*	[viii]Blind running*	[vii]Run on a race track and composed of different circuits and with dozens of opponents, the player must show to be the most competent driver through the acceleration commands to overtake all opponents and reach the first position. [viii]The children divided into pairs (one of the blindfolded children) go through an organized route in the sports court. Children are encouraged to make movements with their arms (simulating a steering wheel), making noises from a car accelerating. .
	[ix]Be the bee**	[x]Burning Queen Bee or Hornet**	[ix]In the context of a maze, the player must guide the bee to the hive, taking care of obstacles along the way. [x]Children divided into two teams must choose a player to be the queen bee or bumblebee that will be protected by the respective teams. To win the game, it is necessary to "burn" all of the opposing team, but if the "Queen bee or Hornet" is burned before, the game ends and the team that managed to hit it wins.
	[xi]Harry Potter Quidditch *	[xii]Harry Potter Quidditch*	[xi]Commanded by the little wizard Harry Potter, the player must fly on his broom and dodge the shots of balls thrown by the opposing player, sending the ball to one of the three circles of the field. [xii]The webgame in question, proposes a joke with two groups the "attackers" and the "defenders", the attackers will be in the middle of the sports court, and will go towards the "goal" making passes with their hands, and will try to approach the goal , and throw the ball into hoops (hula hoops) or throw the ball low towards the goal, however on the way the "attackers" in addition to making passes, must dodge the "defenders" who will be on the side of the sports court (on both sides) of the court, throwing balls to "burn" (if they hit the ball, this will cause the attacker to return to the beginning of the activity, which is the middle of the court, missing the group of attackers).

Chart 1. Contents covered in the intervention. Florianópolis, Santa Catarina, Brazil.

**Note: ***Games proposed by Schwartz and Tavares[1]; **Game proposed by the authors; List of digital games: I - digital game available at: https://www.yiv.com/Glow-Hockey-Online; III - digital game available at: http://www.clickjogos.com.br/Jogos-online/Classicos/Pacman-come-come/; V - digital game available at: http://www.clickjogos.com.br/Jogos-online/Acao-e-Aventura/Snake/; VII - digital game available at: http://www.clickjogos.com.br/jogos/formula-racer/; IX - digital game available at: http://www.clickjogos.com.br/jogos/be-the-bee/; XI - digital game available at: http://poki.com.br/g/quadribol-harry-potter

Source: Authors

Observed Behaviors and Attitudes

The children's behavior was interesting at first; initially, during the first day of the pilot study (webgames), the students entered the computer lab and seemed to be well adapted and confident while using the computer.

For the first digital game experienced by the children, Glow Hockey, the students were still arriving at the school, all very euphoric about the novelty, about starting the Physical Education class and being allowed to sit in front of the computer to play digital games.

For the second digital game, Pacman, still on this first day of pilot study, the students were calm, except for a few ones, who showed some impatience in the process of switching games or when having trouble accessing the second game, Pacman.

The third digital game experienced by the student was Snake, during which they behaved well and remained quite motivated and excited about the opportunity of playing digital games in a Physical Education class.

After the first class (first 45 minutes), out of a total of two classes (one hour and thirty minutes of class, that is, two classes of 45 minutes, since the class was split into two sessions), on this first day of pilot study, the students were taken to the school's court to eexperience the webgames.

The process of leaving the computer lab to go to the sports court went well, without any excessive or strange behavior. When they arrived at the court, the Physical Education teacher started the activities with the webgames; the first digital game adapted to the real world (webgame) was "COOPERATION FOOTBALL". The first graders were very attentive and engaged, had no difficulty understanding the dynamics of the game proposed on the court and were soon performing the passes with the ball, in a cooperative manner, just as the activity required.

The second webgame proposed was "HUMAN PACMAN". It had the kids really excited, who seemed to be happy for participating in this playful practice and were always saying that they were mimicking the character from the online digital game they had just played in the computer lab; in that moment, they were experiencing the chance of playing the character during that ludic activity on the sports court.

The third ludic practice the children experienced was "SNAKE WITH OBSTACLE". The students behaved in this activity, which required comprehension and respect towards classmates, because they were supposed to complete a course with obstacles set by the Physical Education teacher; after each obstacle portion that was overcome, the "snake" would grow, with a long column formed by the students, who were connected to each other by the hands.

Continuing the pilot study, on the second day there were three other digital games and, afterwards, three new webgames. The online digital games experienced on the computer by the children were: Formula Racer F1, Be the bee, and Harry Potter Quidditch. Their respective webgames were: Blind race, "Queen bee or Drone" Dodgeball, and Harry Potter Quidditch.

The first digital game of the second pilot-study day was Formula Racer, which is about Formula 1 (F1) car races; it grabbed the students' attention and had them all engaged, especially the boys, who were trying to speed as much as the game allowed. Analyzing the game inspired on the digital game Formula Racer, it is possible to associate it with the webgame "BLIND RACE"; this ludic game sparked solidarity and fellowship among the children, because the activity involved trust to be guided, that is, each student experienced the opportunity of, momentarily, losing their sense of sight while completing a race course, as if they were a formula 1 car.

During the second digital game, still on the second day of pilot study, the children experienced the game "Be the bee", whose goal was to control a bee and take it to its hive. Now, as the webgame inspired on the bee game, we have "QUEEN BEE OR DRONE" DODGEBALL; this game was well accepted by the kids, who had been learning just days before, during their Physical Education classes, how to play Dodgeball; this new version of the game, with the addition of the "bee" (girl) and the "drone" (boy), grabbed the students' attention, who seemed very excited about it.

The last digital game proposed on the second day of pilot study was the online game Harry Potter Quidditch. It was well accepted by the kids, who remained quite entertained with the character of the movies. The game required a lot of attention from the children, as they had to control a character flying on a broom while throwing objects and dodging other objects that

tried to bring him down. For the analysis, the webgame proposed from this digital game was HARRY POTTER QUIDDITCH. It was well accepted and assimilated by the kids, and the instructions provided by the Physical Education teacher only contributed to the children performing well.

Unexpected Situations and Recurring Aspects during the Observation

As some unexpected situations observed during the pilot study we can mention that, at certain moments, while the digital games were being played in the school's lab, a few children stayed indifferent about the novelty and proposal being presented to them, of being able to play a digital game during a Physical Education class. However, the interesting thing is that those same children who, on the first day of pilot study, were aloof and not very interested in the experience happening there, were also the ones who, on the second day, arrived more motivated and asked which digital games they would play on that day.

A recurring aspect in this opportunity offered to the students, which was the experience with the webgames, was to notice the fellowship among those first graders because, during the stages that took place both in the lab and on the court, it was possible to see that the students who stood out while trying to understand the digital game, or even the webgame, were the same who were always ready to help the others.

The Subjects' Speeches and Dialogues

Participant observation has as common proposal the habit of recording data found in the research field, that is, during data collection; data must be immediately recorded on the field diary so as to prevent losses of relevant, important and detailed information on observed data. However, if the immediate recording is not possible, using video, photo or interview resources is suggested[14].

With this possibility of broadening data recording, that is, going beyond the data noted on the field dairy, this study pilot also counted on some visual and audio resources, using video recording, pictures and collective interviews (with the participation of the school's students and Physical Education teacher).

About the collective interviews held in this pilot study on webgames, it is worth noting herein that, in the semi-structured interview, there is usually no rigidity in the order of the questions for both the researcher (PhD student) and the research subjects (first graders). The researcher can keep talking with the support of a previously defined script, but the questions can become more flexible depending on the demands perceived from the children's answers (research subjects). Based on Lüdke and André[10], when they speak of the interviewee being able to request revisions and analyzing their answers, besides adopting an interrogative attitude while being investigated, we can state that this instrument, the semi-structured interview, is susceptible to corrections, clarifications and adaptations, which make it very efficient in sourcing the information desired in the scientific research field.

The collective interviews in this pilot study were audio recorded on a mobile device, then transcribed. The content analysis method was the strategy that guided, in general, the analysis of the data collected throughout the research. To Lüdke and André[10], content analysis can be characterized as a technique in which the research can infer on data with validity and reproducibility for its context.

To Bardin[11], content analysis can be associated with a set of communication analysis techniques aiming at obtaining, by systematic and objective procedures, message content descriptions.

We can describe an example of speech observed during the Physical Education class, which was an interesting report that was recorded on the first day of pilot study with the webgames: one of the students associated the ludic practice experienced on the court

(webgames) with the reality seen in the imaginary world of digital games; the student, Isaac, during the game that finished the class, stated the following:

[...] yeah... we can play SONIC because we're training race now, and we can train SONIC [...]

By carefully observing this passage cited by the student Isaac, it is possible to perceive through content analysis, the description of the content of this message made by the student, who associated the digital game (*SONIC* - a digital game in which the character of a Hedgehog runs at high speed during the phases of the game, and emphasizing the fact that this game "*SONIC*" was not experienced at school in the computer environment, but belongs to the universe of this child) to his daily practices in physical education classes (activities that involve running and commuting during play activities at school), that is, the student realized that he could suggest to the Physical Education teacher a digital game to be practiced at school (in the computer environment), and that it could be adapted to a Webgame (a future recreational activity, inspired by digital games, to be experienced on the school courts during school physical education classes).

Another speech that was recorded (during the collective interview of this pilot study) and is worth highlight happened at the end of the second day: The Physical Education teacher, while dialoguing with the students, tries to recall some points, at the end of the class, and goes over the games experienced on the court:

> *[...] the third game... was even better... Harry Potter... you played Quidditch... Quidditch is Harry Potter's game, as in the movie, and we tried to do the same, the teams played very well, exchanged passes and threw, it was awesome, really good, ok, as we play more we learn more, we play better, the passes were good, the throws were good, alright [...]*

With this excerpt taken from the collective recording made at the end of the class (interview conducted with the Physical Education teacher and the children), he realizes that when interpreting this text transcribed from the audio, it is noticed again, through content analysis, that for through a set of communication analysis techniques, it was possible to obtain a description of the content of this message, which had the function of reaching and motivating the children, through the act of remembering what they did in class that day, and also offering students a positive reinforcement, valuing and praising their practices and performance in the execution of the tasks proposed in class (as observed when the teacher mentions the good accomplishment of the essentials, such as: passes, and pitches, the latter being the Physical Education teacher, highlights well and values the good execution of the “pitch” made by the children).

In the literature, no studies were found that analyzed the influence of webgames on the intrinsic motivation of children in the school context, and which can be explained because the proposal is innovative and still little explored in the area of research in Education. However, it is unanimous among researchers that investigating the theme of motivation is important due to the existing correlation with the performance of students[15], and when aligned with digital games it has the potential to improve skills and levels of motivation[16,17].

Some reflections on the webgame pilot study

An speculation that emerged during the conduction of this pilot study is about the teaching and dynamism potential for Physical Education classes that this pedagogical tool proved to have; the researcher was perceptive and concerned, because attention and caution are necessary, about explaining to the Physical Education teacher that this pedagogical proposal resulting from the webgames must not be taken as a substitute for the real and traditional

environment of schools, but rather as a chance and a possibility for innovation, by using technology and electronic mechanisms of which children are so fond.

It was noticed through the results found in this pilot study, that the pedagogical proposal of Webgames, can be explained because the proposal is innovative and still little explored. However, the literature demonstrates that the application of digital games in the educational environment has proved to be valid, since it has the possibility to increase the skills and motivation of children[16], and with the inclusion of webgames it can favor greater engagement of participants in school physical education classes[17].

After experiencing the pilot study, the researcher was left with the feeling that the school environment is in an urgent need for an ever-increasing diversification of the contents to be passed on during Physical Education classes. The webgames proved to be an accessible possibility for this application to the school environment, because digital games have a significant presence in the daily lives of kids, who, since childhood, have access to cellphones, tablets, computers, online games, and other technological and electronic devices.

A problem that arose during the pilot study was a reflection referring to technological resources and how they should be handled in the school, bearing in mind that they are not supposed to be used only for rendering classes more interesting. The concern is that these resources must lead to reflections that enable a critical analysis of their use in the daily routine of students and contribute to renewing the educative process in schools.

In the pilot study, a marked creativity of children was also observed when“ playing ”digital games on the computer, in the school's computer room, and when experiencing the webgames on the court in the physical education class, and it is emphasized that some Research has considered these aspects relevant to assess. Research carried out in the educational context, demonstrates that the idea of using creativity in school is an important practice, and shows the relevance of creativity associated with educational institutions[18–20]. However, even though this aspect of creativity is recognized in the context of education, it does not seem to represent a real practice in school life, since, in general, the physical education teacher was not sufficiently encouraged during his initial training to use creative strategies (such as webgames), and feels insecure when using new pedagogical tools[17].

Some ideas that emerged with this whole experience in the school environment have to do with the positive role that digital games can have on the kids' everyday lives when well adapted to be "played" in schools (by means of webgames).

The impressions observed at the school, during the pilot study, could not have been better. The school's board, the teacher from the technology and computer department, the Physical Education teachers, as well as all the other parties involved seemed to be interested in the study with the webgames. A preconceived idea, and which was perceived during this time of interactions in the school environment, while the pilot study on webgames was being conducted, was the importance that teachers give to providing their students with meaningful education. Thus, no prejudice was noticed as to using webgames in elementary school on the part of the Physical Education teachers.

The doubts and uncertainties derived from this pilot study refer to the webgames. Will webgames be a viable didactical-pedagogical tool in the current scenario of our Brazilian education? How will their (slow and gradual) dissemination process be carried out? What about the access to this pedagogical tool for school Physical Education teachers?

Further Considerations

With the proposal of applying webgames as a pedagogical tool to the professional practice of Physical Education teachers in schools, based on the results of this study, it seems possible to consider that webgames can bring about a break with paradigms for digital games,

enhancing the latter with the possibility of human movement and physical activity, taking into account the positive points highlighted during the participant observation at the school. The children's engagement was remarkable; they were motivated and had fun experiencing the webgames, thus seeming to be favorable to the proposal of webgames in the school.

The data of this research indicate a good acceptance from the children towards the experiences enabled through the webgames during the Physical Education classes. After all, the kids' interest in the digital games is mostly justified by their fondness of technology and computers.

In this sense, it is concluded that according to the objective of this study (describe and reflect on the importance and viability of the application of digital games aligned to Webgames in school physical education classes), it is noted that there is an open path for students Physical Education teachers, who can choose to use Webgames to create new alternatives for the movement of children in their classes, thus having their professional practice expanded by the association between playful games experienced on the sports court and experiences with technology in their classes (through the practice of digital games on school computers), thus providing an even more meaningful and quality education for children, through the adoption of Webgames.

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