


CARIMBÓ AS A THEMATIC UNIT OF PHYSICAL EDUCATION: PARADIDACTIC MATERIAL FOR PROFESSIONAL EDUCATION IN A FEDERAL INSTITUTION IN NORTHERN BRAZIL

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ABSTRACT

The objective of this study was to verify the feasibility of making a paradidactic book to assist physical education teachers in carimbó dance classes for students of integrated courses in school physical education. This is a field research with the characteristics of an experimental study and with a quantitative approach. This research was carried out at the Federal Institute of Education, Science and Technology of Pará (IFPA), with a sample of 28 physical education teachers. Data collection was carried out through a semi-structured questionnaire made in Google® Form with alternatives on a Likert scale. The results showed that most participants were male (61%), with a mean age of 44.3 years, white (43%) and brown (39%), the average workload was 14.4 hours/month. In addition, the work regime of exclusive dedication was 93% of the participants. The length of professional experience was 19.7 years, classified as stabilization of the professional career. The teachers' perception of the need for the content of the thematic unit of folkloric dance and Carimbó had high validity by the content validation index (CVI). In addition, the paradidactic book as an educational product was developed and validated by the IVC with a score >78. The evaluations showed that both the diagnosis and the application improved the scores after reading the book, which was also demonstrated in the content validation index per item (IVC-I) that improved for diagnosis and application after the reading of the book by the teachers. However, it was possible to develop an educational technology to assist in the teaching of folk dances with a focus on carimbó, through a paradidactic book of narrative tale with a dialogue entitled: Carimbó: what dance is this?

Keywords: Folk Dances. Carimbó. Physical education. Professional Education.

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INTRODUCTION

School physical education (PE) has a prominent place in integral education (IF) and new reflections and paths are needed on the value of bodily and cultural activities in Brazilian education. Therefore, EFE should seek new methodological designs from the perspective of knowledge and actions for the purposes of integrated teaching, with practices where the student is the protagonist, overlapping the Cartesian dual character with an emphasis on structural technicality (Gasparotto and Navarro 2017).

PE in the federal institutes (IFs) seems to go beyond what is based on the guidelines and parameters that guide professional performance in Brazil, and especially in the federal network itself, because the teaching in the IFs is articulated with extension projects, extracurricular activities and research, that is, the work of the PE teacher is associated and complemented with other activities that enrich the contents taught. This is complemented by Metzner et al. (2017) when they state in their study that the experiences lived in the PE classes of the IFs, have provided a new perspective for the area, and are, according to these authors, considered a successful experience that could be followed by other Brazilian educational bodies and institutions such as the state ones (Metzner et al., 2017).

However, scientific studies in the EFE area, specific to the theme of folk dances, have shown difficulties for this thematic unit to be taught within the curricular components of basic education (Silva, 2019; De Souza-Martins et al., 2024; De Miranda et al., 2022; Silva et al., 2023). Therefore, it impairs the necessary conduct to obtain the IF of students for the world of work.

A paradidactic book of narrative tale dialogued with illustrative figures aimed at the youth audience, as methodological support for the work of Brazilian PEE teachers and especially for the professionals of the Federal Institute of Pará (IFPA), may be of interest to improve the teaching of the content of folk dances. It should also be noted that textbooks or paradidactic books with similar proposals for Carimbó were previously researched and were not found. In this sense, the book can also be presented as a possible technological innovation within the didactic and pedagogical perspective.

Within the perspective of professional and technological education (EPT), it seeks to offer an alternative and innovative pedagogical instrument to improve the pedagogical practice in the teaching of Carimbó dance, so that this increases the repertoire of possibilities for professionals, because in the world of work, professionals must recognize,

identify and use research in order to provide a basis for sustaining their professional activities.

From the exposed problem presented in this scenario, it is necessary for the workers of the EFE of the IFPA to be able to envision different and new possibilities of alternative materials for pedagogical actions aimed at the students of the EFE of the Dances. Can a paradidactic book in the format of a narrative tale with dialogue about Carimbó serve as an educational pedagogical tool for IFPA PE teachers as a support for the curricular component of dances?

Thus, the present research sought to identify the needs for pedagogical actions for the teaching of dance, especially for folk dances with a focus on Carimbó and the impact of a textbook on EFE workers who work in the integrated teaching of IFPA. And thus, the objective of this study was to investigate the possibility of a paradidactic book with a narrative tale dialogued about Carimbó as an alternative didactic instrument for teachers of PEE at IFPA.

METHODOLOGY

METHODOLOGICAL DESIGN OF THE RESEARCH

This research was carried out within the context of the IFPA, which includes 18 campuses with an empirical field research, with characteristics of an experimental study (Silva Pontes et al., 2020), where the independent variable was the paradidactic book and the dependent variable was a semi-structured evaluation questionnaire proposed by the researcher with closed questions, whose approach was quantitative, to confirm or refute the possible efficiency of the Carimbó paradidactic book as an instrument of didactic aid and educational product (Thomas, Nelson and Silverman, 2012).

The research in this case was directed to a single group of investigated volunteers, in order to seek information for possible resolution or minimization of a specific problem, where there should be a previous bibliographic research on the subject (Thomas, Nelson, Silverman, 2012). The quantitative approach requires the researcher to understand and interpret numerical data on a ratio and/or ordinal scale with consequent analysis and presentation of the results in a numerical and statistical way (Silva Pontes et al., 2020).

RESEARCH ETHICS

This research was submitted to and approved by the Research Ethics Committee (CEP) of Faculdade Integrada Brasil Amazônia (FIBRA) under No. 6,788,552, complying with all the requirements of ethical principles contained in Resolution No. 466/CNS of 2012 (Brasil, 2016). All volunteers in this study signed an Informed Consent Form (ICF).

POPULATION AND SAMPLE

The population of this research was made up of IFPA education workers, whose number is currently approximately 3,000 employees, including all 18 campuses (IFPA, S/A). The sample consisted of teaching workers in the area of PE, which currently consists of 47 active teachers, including men and women.

SAMPLE ELIGIBILITY CRITERIA

For inclusion in this research, it was admitted that volunteers are physical education teachers of both effective and substitute genders, of any age group, who are working in any of the 18 IFPA Campis. And as an exclusion criterion, teachers who at the time of data collection did not include a minimum of six months of teaching activities and also those who for some reason did not complete all the evaluations proposed in this research were not admitted. In this sense, the study was initially composed of 31 teachers, three of whom did not complete the final evaluation and were therefore excluded. Thus, the research was composed of 28 physical education teachers from IFPA. The calculation of the n-sample will be described in the item below what describes the statistical analysis.

APPROACH TO DATA COLLECTION

First, the e-mail database of the General Directors of the Campi and the coordinators of physical education (if any), Sports and Leisure Center (NEL) of the IFPA, with the consent of the Coordination of the Professional Master's Degree in Professional and Technological Education, with a summary of the project, its objectives and methodological procedures, was used for the purpose of communication with the main authorities of immediate leadership and later for the physical education teachers who are the focus of this research.

In the background, data collection was carried out between the months of May and June 2024 through a closed online questionnaire prepared and made available via Google

Forms® link sent to institutional electronic addresses and via WhatsApp® of IFPA's EF teaching workers. The descriptive and sociodemographic data were as follows: age, gender, race/color, time of professional training, time working at IFPA, work regime, workload in teaching. In addition, the evaluation instrument consisted of ordered questions on the subject studied to be answered by the participating volunteers with alternatives made available according to a Likert scale.

EVALUATION TOOLS

This instrument is a semi-structured questionnaire based on the bibliographic survey presented in the literature review of this research. Based on this basis, the questionnaire was created considering broad aspects that include questions about the understanding for diagnosis and application of dance content in school physical education. In this perspective, the instrument sought an approximation with the theme of the curricular component of dances for the issues addressed (Brasil, 2018).

From this, a consultation with experts was established for the evaluation and application of the Face Validity test along with a Likert scale. The committee of experts had the participation of Doctors and Masters, accounting for a total of 4 evaluators. The analysis was used to investigate whether the experts' understanding was linked to their experience within the field of activity in which the research is inserted. Front or initial validity (Face Validity) required experts to assess the acceptability of the instrument, seeking to establish cultural adequacy in terms of interpretation and historical accuracy, while achieving inter-rater reliability (Alexandre and Coluci, 2011).

The Likert scale (1932) is a unified method that seeks to identify the meaning and intensity of the answers. So we opted for the alternatives considering the agreement/disagreement for both groups of questions about the understanding and application of the content, which are: Totally agree, partially agree, disagree and disagree, partially disagree and totally disagree, ranging from zero to the lowest point to five to the highest point. Based on this method, the classification presented in Chart 1 was established.

Table 1. Classification and Score of the assessment instrument

Alternatives	Punctuation	Classification
I agree	4,1 – 5	Fully Adequate
Partially Agree	3,1 – 4	Adequate
Neither agree nor disagree	2,1 – 3	Partially Adequate
I partially disagree	1,1 – 2	Inadequate
I disagree plenously	0,0 – 1	Unrated

Source: Authorship based on Likert (1932) and Content Validation Index by Polit and Beck (2006).

The analysis of the evaluation questionnaire for closed questions for both the diagnosis of need and the impact of the product was performed using the Content Validity Index per item (I-IVC), using the five-point Likert scale (up to 1 – inadequate, between 1.1 to 2 – partially adequate, between 3 – 3.9 adequate and above 4 – totally adequate). The calculation was performed by adding the number of answers with a score above 3 points divided by the number of evaluated, and the minimum acceptable value for item validation is 0.78 (Polit; Beck, 2006). The content validity index (CVI) measures the proportion of evaluators (judges) in agreement on a given proposed item. The formula for calculating the CVI is as follows: $CVI = \text{Number of answers above 3 points} / \text{total number of answers}$.

The instrument was elaborated with 12 questions, which required two dimensions: six for the dimension of understanding the questions of the object of study and another six for the dimension of application of the object studied. With this, a calculation was prepared for the score of understanding the subject and applicability of the educational product. The overall score was composed by the calculation of the two scores: 1- score of understanding of the subject, which will be the arithmetic average of the six questions related to the theme, and 2- applicability score, which was the arithmetic mean of the points of the six questions on the application of the product, and finally, the overall score, which will be calculated by the formula. Chart 2 shows the semi-structured evaluation questionnaire and Appendix B presents the complete instrument.

$$Escore\ geral = \frac{Média\ entendimento + Média\ aplicabilidade}{2}$$

Table 2. Evaluation of the perception of the Carimbó dance as a content of the PE curricular component for the EFE teachers of the IFPA

Q1	The thematic unit of folk dances can be mixed in physical education
Q2	The dances bring a historical and cultural repertoire suitable for teaching in physical education:
Q3	The dances improve the physical aspects of the students.
Q4	Dances enable interpersonal and social development in a context of integral education
Q5	The Carimbó dance can benefit the mental and social health aspects of students
Q6	I teach folk dances as a thematic unit of dances in physical education classes:
Q7	The carimbó dance can be taught through different methodologies
Q8	A textbook is an alternative instrument applicable to the teaching of carimbó
Q9	A textbook would arouse the interest of students for the teaching-learning of the Carimbó dance
Q10	A textbook on Carimbó would be a methodological resource to improve the debate on the value of folk dances in physical education
Q11	Students would learn about the Carimbó dance through a textbook
Q12	A textbook on Carimbó would be an innovative product to improve the teaching of folk dances in physical education

Source: Authorship

EVALUATION OF THE CLASSIFICATION BY PHASES OF THE PROFESSIONAL ACTIVITY CYCLE

For this research, the classification of Nascimento and Graça (1998) was used because it was specifically elaborated for Brazilian Physical Education teachers based on the time of professional experience. The classification was defined as follows: career entry (0 to 3 years of experience), consolidation (4 to 6 years of experience), diversification (7 to 19 years of experience) and career stabilization (20 to 35 years of experience).

ABOUT THE EDUCATIONAL PRODUCT

Construction and Development of the Textbook (educational product):

Structure:

The paradidactic material deals with a narrative text that takes place in a temporal succession of events surrounded by facts that can be part of the real or imaginary world in a delimited space, time and environment. The narrative is centered on a fact or event, with characters who dialogue and a narrator who describes the events and actions. In this sense, the narrative text can be developed through different genres such as novels, chronicles, novels, fables,

stories and tales, which are widely disseminated by literature. Including the scientific community, but in the case of the work in question, the narrative genre chosen was the short story (Infante, 2011; Santos and Barrera, 2015).

The narrative focus of the text occurred with the Narrator in the third person, omniscient, with the presentation of dialogues between the characters. The physical space was delimited in the high school and in the main character's house. The temporal space was chronological, linear and current (present).

The construction of the narrative tale involved the following steps:

- a) Introduction
- b) Development
- c) Climax
- d) Denouement

And so, the characters involved:

- a) Patricia (teenager)
- b) Dinair (mother of the teenager)
- c) Francisco (Father of the teenager)
- d) Joana |Darc (Folk dance teacher)
- e) Eracildo (Cildo) – friend
- f) Conceição (Conci) – friend

The plot of the text was the non-acceptance of the teenager's father in the folk dance presentation at school. The paradidactic book entitled *Carimbó: qu dança é essa* is available for free at the following link: <https://publicacoes.even3.com.br/book/carimbo-que-danca-e-essa-4102375>

STATISTICAL ANALYSIS

For the statistical analysis, the Biostat 5.1 for windows software was used, with a significance value of $p < 0.05$ for acceptance or rejection of the hypotheses, with an error of 5%. Initially, a descriptive analysis was performed with mean, median, standard deviation, maximum and minimum numbers of the volunteers' descriptive data. Subsequently, the normality of the data was verified using the Shapiro-Wilk test and, as a result of these results, the Student's t-test or Wilcoxon test was used for repeated measures analysis. To calculate the percentage difference between the test and the post-test ($\Delta\%$), the formula was used: $\Delta\% = [(post-test - Test) * 100 / test]$ (Rosner, 2016).

The sample size was estimated using the G*Power® 3.1 software. The following information was introduced: two-tailed Student's t-test for two paired samples; effect size (d) = 0.60; error α = 0.05; test power = 0.85% and allocation ration. Thus, the minimum sample size calculated was 27 participants. The power of the calculated experiment was 85%, ensuring the control of β error. All statements and/or negatives were limited to the study, according to the level of acceptance for this universe.

RESULTS

Table 1 presents the data describing the participants with mean, median, standard deviation, maximum and minimum number for age, length of profession, length of experience at IFPA, and teaching hours. For the variables of gender, color and work regime, the data were represented by relative and absolute values of frequency and percentage, respectively. The result showed that the profile of physical education teachers has an average age of 44.3 years, time of work at IFPA of 12.4 years and teaching workload of 14.39 h/week. In addition, the most common gender, color and work regime were, respectively, male, white and brown and with exclusive dedication (ND). Also in Table 1, the length of professional experience of 19.75 years allows the group of physical education teachers at IFPA to be classified in the stabilization of their professional careers, according to Nascimento and Graça (1998).

Table 1. Presents data describing study participants

Group of Physical Education Teachers, n= 28					
Variables	Average	DP	Median	No. Max	Min n°
Age (years)	44,37	9,7	41,55	64,0	32,0
Length of Profession (years)	19,75	7,6	16,5	42,0	9,0
IFPA Length of Business (years)	12,42	2,1	8,0	42,0	1,1
Teaching Hours (h/week)	14,39	4,7	14,5	21,0	5,0
Sex/Gender	Frequency	%	<i>p-value</i>		
Male	17	61	0,035		
Female	11	39			
Total	28	100			
Race/Color	Frequency	%	<i>p-value</i>		
White	12	43	0,001		
Therefore	5	18			
Brown	11	39			
Total	28	100			

Work Regime (h/week)	Frequency	%	<i>p-value</i>		
FROM (40h)	26	93	<0,0001		
40h	2	7			
Total	28	100			

Legend: DP=Standard Deviation; Max=Maximum; Min= Minimum; DE= Exclusive Dedication. Source: Authorship

Table 2 presents the results for the classification and validation of the questionnaire's content by item, showing that both the questions related to the content of dances and the application of the paradidactic book perception and evaluation of the teachers on the paradidactic material (educational product) were validated in the pre-test and also in the post-test by the content validation index per item (IVC-I) with a score ranging from 0 to 1 point with a cut-off point of 0.78. As for the classification, all questions had an average of more than 3 points, which allowed classifying all of them as "adequate" for the content addressed. It should be noted that all questions had an increase in scores after reading the paradidactic book.

Table 2. ICV-I results for the assessment instrument before reading and after reading the textbook, n=28

Assessment Instrument		Pre Book Reading			After the Book Reading		
No.	Issues	Average (Points)	ICV-I	Validation	Average (Points)	ICV-I	Validation
Q1	The thematic unit of folk dances can be mixed in physical education:	3,89	1,0	Yes	4,00	1,0	Yes
Q2	The dances bring a historical and cultural repertoire suitable for teaching in physical education:	3,86	1,0	Yes	4,00	1,0	Yes
Q3	Dances improve students' physical aspects:	3,82	0,96	Yes	3,93	1,0	Yes
Q4	Dances enable interpersonal and social development in a context of	3,89	0,96	Yes	3,93	1,0	Yes

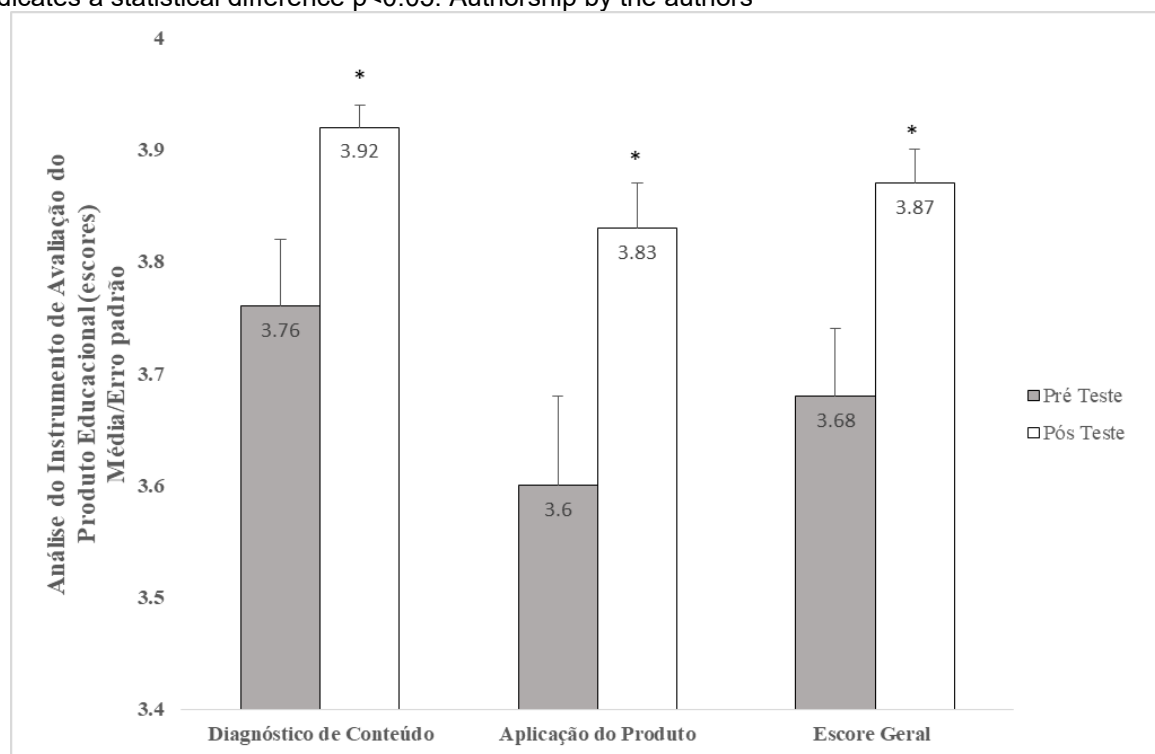
	integral education:						
Q5	The Carimbó dance can benefit the mental and social health aspects of students:	3,86	0,96	Yes	4,00	1,0	Yes
Q6	I teach folk dances as a thematic unit of dances in physical education classes:	3,29	0,92	Yes	3,68	1,0	Yes
Q7	The carimbó dance can be taught through different methodologies:	3,82	0,92	Yes	3,93	1,0	Yes
Q8	A textbook is an alternative instrument applicable to the teaching of carimbó:	3,71	0,92	Yes	3,86	0,96	Yes
Q9	A textbook would arouse the interest of students in the teaching-learning of the Carimbó dance:	3,39	0,89	Yes	3,68	0,96	Yes
Q10	A textbook on Carimbó would be a methodological resource to improve the debate on the value of folk dances in physical education:	3,75	0,96	Yes	3,93	1,0	Yes
Q11	The students would learn about the Carimbó dance through a textbook:	3,36	0,92	Yes	3,82	1,0	Yes
Q12	A textbook on Carimbó would be an innovative product to improve the teaching of folk	3,61	0,92	Yes	3,79	1,0	Yes

	dances in physical education:						
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Legend: IVC-I: Content Validation Index per Item >0.78 for validation. Source: Authorship

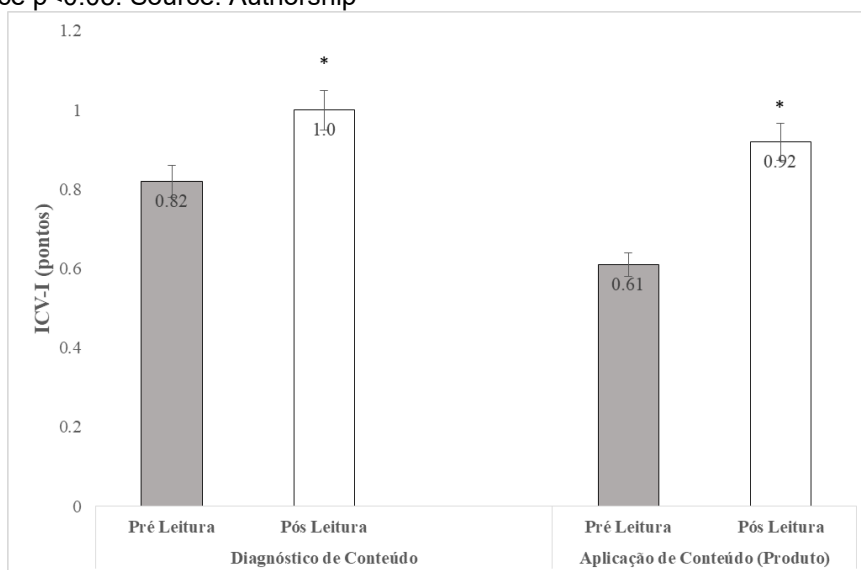
Graph 1 presents the results for the evaluation of the validation of the educational product, which included the group of 28 participating teachers. The scores for the diagnosis of the content of the book ($\Delta\%=4.2\%$; $p=0.041$), application of the book ($\Delta\%=6.4\%$; $p=0.036$) and general score ($\Delta\%=5.1\%$; $p=0.016$) of the instrument that assessed the need for the educational product showed an improvement with a statistically significant difference of $p<0.05$ for all evaluation scores.

Graph 1. Results for the analysis of comparison between the scores of the evaluation instrument. The symbol (*) indicates a statistical difference $p<0.05$. Authorship by the authors



Graph 2 presents the results for the general analysis of the questions of the assessment instrument for the CVI-I, where it was found that both the diagnosis of understanding the content ($\Delta\%=21.9\%$; $p=0.019$) and the applicability of the product (paradidactic book) ($\Delta\%=50.8\%$; $p=0.001$), showed significant improvements $p<0.05$ after reading the book, which are also in accordance with the minimum necessary points ≥ 0.78 for content validation.

Graph 2. Results for comparison of the CVI-I before and after reading the textbook. The symbol (*) indicates a statistical difference $p < 0.05$. Source: Authorship



DISCUSSION

The study that aimed to investigate the possibility of a textbook of narrative tale dialogued about Carimbó to serve as an alternative didactic instrument for IFPA teachers in the teaching of dance in EFE, showed that the physical education teachers studied approved the paradidactic book on carimbó dance proposed as a product of educational innovation to assist in EFE classes, understanding that this knowledge is part of a larger set that can favor physical, mental and social development, contemplating the citizen within the integral formation for the world of work in an emancipatory perspective (Frigotto, 2010; Ramos, 2010; Ciavatta, 2005).

It should be noted that no specific studies were found in the scientific literature that address an educational product in the form of a book/booklet/booklet and that there are few studies that address a specific educational technology for the teaching of folk dances, especially for carimbó. For this reason, the discussion had a debate approach to the didactic field and also with technologies that address areas with other educational content

However, the research has value for the area of PES, because, according to the study by De Souza-Martins et al. (2024), folk dances are little studied in the scientific literature and in addition, the studies presented in recent years, in the 2010-2023 period, showed that these dances are little taught within the scope of PES, with varied justifications ranging from the lack of adequate space to the lack of specific technical competence to teach the thematic unit of content and similar results were found in the study by Silva et al. (2023).

In this perspective, the paradidactic book presented as a result of this research can be a support for the content because in addition to bringing the historical, cultural components that include music, clothes, instruments, it also brings a context of social criticism in the face of the behavior of the parents of students in front of the content that serves to discuss the value of the Carimbó dance within the scope of the EFE as a regional culture of national and intangible heritage.

Another issue that the study by De Souza-Martins et al. (2024) brings to the academic and scientific debate is the methodological approaches that, from an academic point of view for teaching, there are few theoretical approaches – practices that have proven to be efficient for the teaching-learning context of students related to folk dances. In this context, the present research can also contribute to the teachers who teach this content because it brings a different approach, which can help in the discussion of the theoretical content with a story with illustrations and characters that speak the adolescent language with a measure of regionalism, seeking an approximation with the adolescent school public.

And from a scientific point of view, the study De Souza-Martins et al. (2024), showed that most studies were considered to be of low-moderate methodological quality, which as a result, the conclusions of the selected studies may be ineffective, which was also verified by Silva et al. (2023). In this direction, the present research brought a quantitative approach defined as a study with characteristics of experimental research, where a paradidactic book was used as an independent variable for the verification of cause and made in the evaluation of the participants who were teachers of PE, which demonstrates a reproducible methodological care for new studies.

In this research, the average age of the participants was 44.3 years and most of the teachers were male, brown, with a work regime of exclusive dedication, time working at IFPA of 12.4 years, teaching hours of 14.4 hours and time of professional experience of 19.7 years. Thus, the time of professional activity of IFPA teachers is in a transition from the cycle of affirmation/diversification to career stabilization, according to Nascimento and Graça (1998). For Farias et al. (2018), the cycles of affirmation and diversification in the career are understood as moments of experimentation and consolidation of professional experiences. The stabilization/renewal cycle, on the other hand, has characteristics of triggering critical behavior, renewing and also satisfaction with teaching.

In view of the relationships established within the school, due to the particularity and affinity that teachers express in their professional performance, the cycle of maturity in a

career in physical education is also considered an important moment in the educational context (Farias et al., 2018). Teachers end work activities with positive expectations, with the feeling of success and not abandonment of their careers, in addition, teachers reconfigure the way they perform their function, as well as their professional identity (Farias et al., 2018).

In this sense, the present research can also contribute to the teaching of folkloric dances, especially the carimbó dance, considering that physical education teachers with an average time of professional experience shown in table 1, demonstrates that, in addition to having satisfaction and pleasure in their career, they can adhere to new methodological procedures that meet an improved performance (Nascimento and Graça, 1998; Farias et al., 2018).

Another important issue is the development of an educational technology. In this direction, the paradidactic book of dialogued narrative tale "Carimbó: what dance is this? Which had content validation by the PEE teachers volunteer in this research (Graphs 1 and 2), presents an innovative didactic and pedagogical instrument to assist in the teaching of carimbó dance in PEE classes, as no study was found that presents similar material. This is in line with the objectives of EFA, as the result of this research also contributes to the acquisition and development of theoretical, technical and operational knowledge associated with the production of an educational technology, integrated with all other levels and modalities, produced to be used in schools, especially in federal institutes (IFs) (Brasil, 2008a; Brasil, 2008b; Burnier et al., 2007; Cattani and Ribeiro, 2012).

In this context, Diniz and Darido (2015) presented an educational blog for the teaching of folk dances in EFE as a tool for continuing education for physical education teachers, where limitations in participation, organization of knowledge, physical structure and teaching working conditions were identified.

Other studies that have developed educational technologies also show results that can serve as an aid to teaching and learning. The study by Silva Pontes et al. (2020) who proposed a Kit of intuitive mathematical games of arithmetic progression with an experimental approach, proved to be viable for the application costs and also for teaching-learning which, however, the research showed a need for improvements for better adherence of students with better responses to teaching. Another study, by Casanova and Zara (2020) showed that in a professional master's program in physics, the main products

produced were associated with a predominance of experimental proposals and in the form of scripts or didactic sequences.

The studies cited above show the possibility of developing educational technologies for different disciplines and content, showing possibilities for improvements in teaching and learning with experimental research. In this sense, it is worth remembering that this research also used an experimental approach to develop an educational technology, that is, this type of research is a design used in research for the development of educational technologies as an effective and reproducible methodological procedure.

Considering that the thematic unit of folk dances can be a content that increases the possibility of interaction for physical, mental and social contributions within the context of integral education, the paradidactic book produced in this study can contribute to improve the professional (teachers) and professionalizing (students of integrated courses) debate of the IFs (Brazil, 2008th; Brazil, 2008b; Burnier et al., 2007; Cattani and Ribeiro, 2012; Ramos, 2010; Silva, 2019). This is reinforced by Metzner et al. (2017) when they state that the work carried out with the EFE in the FIs can go beyond what is supported by the bases, guidelines and parameters that guide professional performance in Brazil, and especially in the federal network itself, due to the FIs being articulated with extension activities, extracurricular projects, in addition to research and technological development, that is, the work of the PEE teacher can be complemented by multiple activities, in addition to the contents of regular classes.

Gasparotto and Navarro (2017) complement by stating the need for an in-depth reflection on the value of the bodily and cultural practices of PE, because this discipline occupies a prominent place in the integral formation of the student. In addition, EFE can advance in a new methodological and structural design, when it seeks knowledge and actions that can interfere with a positive effect on classes in integrated education, with new practices that place the student as a protagonist to discuss and reflect on the social characteristics contained in this space.

Finally, although the National Common Base (2018) does not point to folk dances as a priority in high school and/or integrated education, the fact that it guides the development of activities that meet the local regional culture, it opens the possibility of approaching folk dances with active methodologies that enable the use of educational technologies such as the paradidactic book developed in this study. In addition, the teaching and/or physical education coordinators also have the autonomy to incorporate the thematic unit of folk

dances given the evaluation of educational value and the possibilities of differentiated approaches.

CONCLUSION

According to the proposed objective, the methodology presented and the results found, the present research allowed us to conclude that it was possible to develop an educational technology to assist in the teaching of folk dances with a focus on carimbó, through a paradidactic book of narrative tale with a dialogue entitled: Carimbó: what dance is this?

In addition, the evaluations carried out with the EFE teachers of the IFPA showed that both the diagnostic and the application content improved the scores after reading the paradidactic book, which was also demonstrated in the content validation index per item (IVC-I) that improved for the two groups of questions (diagnosis and application) after the reading of the book by the teachers.

The profile of the teachers was as follows: higher incidence in the male gender, brown color, work regime of exclusive dedication, teaching workload within the required by the institution, age of 44.3 years. The length of professional experience of teachers was classified as career stabilization. In this way, this educational technology can serve as didactic, pedagogical and methodological support to be used in physical education classes with the thematic unit of folk dances with a focus on carimbó.

However, further studies are suggested that can use a control group with a traditional approach, in addition to the textbook as an intervention, for better comparison purposes.

LIMITATIONS OF THE STUDY

The main limitation identified in this study can be attributed to the fact that there is no other group with a traditional approach to control the group that underwent the experiment with the paradidactic book of narrative tale dialogued about carimbó.

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