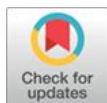


The use of technology in an extension course on volleyball: participants' evaluation



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Abstract

Aiming to evaluate the hybrid extension course named “Volleyball, teaching & Sport Pedagogy” regarding their structure and organization and their relationship with Information and Communication Technology, 33 participants who concluded the course answered a questionnaire with closed-ended questions, on a Likert-type scale, and open-ended questions characterizing the study as mixed methodology, on four topics that refer to the use of Information and Communication Technology throughout the process: a) infrastructure; b) materials; c) assessments; and d) former profile. Most of the analyzed items along the scale received positive and satisfactory ratings, and very few of those received unsatisfactory ratings, which may indicate that the extension course met the expected proposal. Furthermore, it is understood that hybrid courses, which combine Information and Communication Technology and practical and presential classes, are a viable possibility for Physical Education further education both for undergraduate students as well as professionals.

Keywords

further education; extension course; Physical Education; Information and Communication Technology.

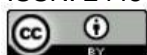
O uso das tecnologias em um curso de extensão sobre voleibol: avaliação pelos participantes

Resumo

Com o objetivo de avaliar o curso de extensão híbrido “Voleibol, ensino & Pedagogia do Esporte” no que diz respeito à sua estrutura e organização e à relação com as Tecnologias da Informação e Comunicação, 33 concluintes do curso responderam a um questionário com questões fechadas, em escala do tipo Likert, e dissertativas, caracterizando o estudo como de metodologia mista, sobre quatro tópicos que remetem ao uso das Tecnologias da Informação e Comunicação ao longo do processo: a) infraestrutura; b) materiais; c) avaliações; e d) perfil do formador. A maioria dos itens analisados ao longo da escala recebeu avaliações positivas e satisfatórias, sendo poucos aqueles com avaliações insatisfatórias, o que pode indicar que o curso de extensão atendeu à proposta prevista. Além disso, entende-se que cursos híbridos, que aliam as Tecnologias da Informação e Comunicação com aulas práticas presenciais, são uma alternativa viável para a formação complementar em Educação Física tanto para graduandos/as como para profissionais.

Palavras-chave

formação complementar; curso de extensão; Educação Física; Tecnologia da Informação e Comunicação.



El uso de la tecnología en un curso de extensión sobre voleibol: evaluación de los participantes

Resumen

Con el objetivo de evaluar el curso de extensión híbrido “Voleibol, enseñanza y pedagogía deportiva” en cuanto a su estructura y organización y la relación con las Tecnologías de la Información y Comunicación, 33 alumnos del curso respondieron a un cuestionario con preguntas abiertas y cerradas, en una escala tipo Likert, caracterizando el estudio como de metodología mixta, sobre cuatro temas que hacen referencia al uso de las Tecnologías de la Información y Comunicación a lo largo del proceso: a) infraestructura; b) materiales; c) evaluaciones; y d) perfil del formador. En general, la mayoría de los ítems analizados a lo largo de la escala recibió evaluaciones positivas y satisfactorias, siendo pocos los que tuvieron evaluaciones insatisfactorias, lo que puede indicar que el curso de extensión cumplió con la propuesta esperada. Además, se entiende que los cursos en este formato, que combinan las Tecnologías de la Información y Comunicación con clases prácticas presenciales, son una alternativa viable para la formación complementaria en Educación Física tanto para estudiantes universitarios como para profesionales.

Palabras clave

formación complementaria; curso de extensión; Educación Física; Tecnología de la Información e Comunicación.

1 Introduction

In Brazil, from the 1980s onwards, professional training in Physical Education (PE) underwent a moment of resignification and questioning, in order to discuss its social role and break with the strictly biological models that influenced it (Cruz *et al.*, 2019). In addition, it sought to overcome the traditional technician influence in teaching by proposing an epistemological change in the area, concerned with training to act (Rufino; Benites; Souza Neto, 2017).

However, nowadays, there are still indications in undergraduate courses of a sports curriculum, that emphasizes precisely sports technique in the pedagogical process, a contradiction with the possibility of the "new training in PE", in which is created a professional imaginary that knowing the technical gestures is enough to teach the modalities (Farret; Terra; Figueiredo, 2016).

From this, we consider the need for formative and complementary proposals to undergraduate courses, which can enter the field of university extension, such as extension courses, to serve the community - both academic and non-academic (Hirama *et al.*, 2016) - and which comply with the idea of breaking with the predominant technical

models, suggesting alternatives to this current conception (Nozaki; Ferreira; Hunger, 2015).

That being said, we understand that this complementary training process includes undergraduates, as an academic community, in order to experience new proposals and qualify themselves based on them (Araújo *et al.*, 2011), and professionals, as a possibility of continuing training in order to keep up with changes in the academic field (Azevedo *et al.*, 2010).

Considering those issues, the question about complementary training that arises in this research is the implementation of hybrid extension courses, with the support of Information and Communication Technologies (ICT), and whether they can be useful tools for the production of knowledge for those who think they are interested in the topics covered, in this case, the teaching of volleyball.

This study presents the semi-presential extension course called "Volleyball, teaching & Sport Pedagogy", approved by the Pro-Rector of Extension of the São Paulo State University (Unesp), associated with the Physical Education Department of the Biosciences Institute of the Rio Claro campus. The course took place in the second semester of 2022.

Widely publicized through social networks (Instagram), and with the characteristic of a semi-presential offer, it was able to reach interested people from different locations in the state of São Paulo, undergraduates, and PE professionals. Therefore, this study aimed to evaluate the extension course "Volleyball, teaching & Sport Pedagogy" in terms of its structure and organization and its relationship with ICT.

It is understood that this proposal combines the teaching of knowledge produced in the academic environment (here understood as complementary training) with university extension, which materialized in the offer of a course for the internal and external community, with the support of ICT for a semi-presential offer, in order to favor access by the participants.

This work was conducted with the support of the Coordination for the Improvement of Higher Education Personnel - Brazil (Capes) - Funding Code 001.

2 Methodology

This study is of a mixed methods nature for the composition and interpretation of the data produced (Mattar; Ramos, 2021), in which quantitative data is combined in order to classify the information obtained (Walliman, 2015) with qualitative data.

In order to characterize the extension course, named "Volleyball, teaching & Sport Pedagogy", Chart 1 presents its main characteristics.

Chart 1 – Characteristics of the extension course

Characteristic	Description
Structure	Hybrid (online classes - synchronous and asynchronous - and on-site classes, held on the premises of the São Paulo State University "Júlio de Mesquita Filho" at the Institute of Biosciences on the Rio Claro campus) and with a workload of 40 hours, divided into 70 days, distributed into participation in five classes (theoretical and practical), assessment activities, duty to solve, and a final assessment.
Technologies	The Virtual Learning Environment (VLE) was the Google Classroom platform. Google Meet, a video call tool, was used for theoretical and synchronous classes. Activities and assessments were conducted using Google Forms. WhatsApp Messenger was a communication channel between teacher-researcher and participants.
Main themes	Teaching volleyball through games, in which three game-centered approaches were presented (<i>Sport Education</i> , <i>Teaching Games for Understanding</i> , and <i>Step-Game Approach</i>) and methodological references from Sports Pedagogy: technical-tactical, socio-educational and cultural-historical.

Source: Elaborated by the authors (2023).

The evaluation involved 33 graduates of the extension course, divided into two groups: undergraduates (20) and Physical Education professionals (13). Chart 2 shows the undergraduates in terms of Higher Education Institutions and the number per year of graduation.

Chart 2 – Undergraduates' characteristics

Higher Education Institution	Year of graduation	
	Year	Quantities
São Paulo State University (Unesp) - Rio Claro	1st year	8
	2nd year	1
	3rd year	2
	4th year	6
	5th year	1
São Paulo State University (Unesp) - Bauru	6th year or over	1
Federal University of São Carlos (UFSCar)	6th year or over	1

Source: Elaborated by the authors (2023).

Chart 3 shows the number of professionals per group - PE teachers, PE professionals working in sports teaching spaces, and professionals working in both spaces -, the places where they work and their educational background.

Chart 3 – Professionals' characteristics

	Quantities	Locals	Educational background
PE teachers	3	State schools	Graduates in Physical Education and graduates and bachelors in Physical Education
Working in both areas	3	State and private schools; municipal sports departments, and private non-profit institutions	Graduates and Bachelors in Physical Education
PE Professionals (working in sports teaching spaces)	7	Private non-profit institutions	Graduates and Bachelors in Physical Education

Source: Elaborated by the authors (2023).

This study was submitted to the Human Research Ethics Committee and approved under opinion number 5.239.054. Therefore, the participants signed the Free and Informed Consent Form and had their participation in the study duly clarified.

The participants answered an evaluation questionnaire at the end of the course, considering some ICT-related indicators, based on the study by Ionascu and Dorel (2009). The authors proposed that e-learning environments should be evaluated on four main aspects: course infrastructure, materials, assessments, and the trainer's profile. To this end, an evaluation tool was developed with 19 questions, 15 of which were closed-ended and four open-ended, covering the four items mentioned.

The close-ended questions were answered using a five-point Likert scale in order to classify behaviors (Thomas; Nelson; Silverman, 2012), between 1, consisting of answers of total disagreement, inadequate, irrelevant and of low comprehension, and 5, consisting of items of total agreement with the statements, adequate, relevant and of high comprehension, present in each question.

The four open-ended questions, also about the elements used as a basis for developing the evaluation, were added so that the participants could comment on the indicators in written form to improve the evaluation and complement the closed questions in the form of a scale.

The data produced quantitatively was analyzed using the frequency of responses for each item on the five-point Likert scale (Thomas; Nelson; Silverman, 2012), in which

the absolute (n) and relative (%) frequencies for each item on the scale are shown in the tables, as well as the median and mode.

As for the qualitative data, respecting the characteristic of mixed research methods of complementing information, excerpts from the written answers were presented in order to connect the quantitative information with other information collected, which helps in understanding the situation (Gil, 2022).

In order to identify the participants in the qualitative presentation of the data, we will respect the order in which they sent their final evaluation, within the deadline set for fulfilling the proposal, with participant 1 (P1) being the first to deliver it and participant 33 (P33) the last.

3 Results and discussion

The results are presented in the following order: a) course infrastructure; b) materials; c) evaluations; and d) trainer's profile. The quantitative data is shown in tables with the frequency of respondents for each statement. Responses to the first two items are understood to be unsatisfactory, neutral for the third and the last two - higher, as satisfactory responses to what was assessed. Qualitative data has been presented throughout the text in order to complement the statements.

For the infrastructure of the course, seven statements formed part of this category, and it was the category with the highest number of aspects assessed - the information is shown in Table 1.

Table 1 – Course infrastructure

							(to be continued)	
		1	2	3	4	5	Median	Mode
1	The use of Google Classroom was positive for the progress of the course	0(0%)	0(0%)	0(0%)	5(15%)	28(85%)	5	5
2	The tools available via Google Classroom were positive for the progress of the course	0(0%)	0(0%)	0(0%)	6(18%)	27(82%)	5	5
3	The use of Google Meet for the synchronous meetings and doubt sessions was positive for the progress of the course	0(0%)	0(0%)	4(12%)	1(3%)	28(85%)	5	5

Table 1 – Infrastructure of the course

							(conclusion)	
		1	2	3	4	5	Median	Mode
4	The use of Google Forms was positive for the progress of the course	0(0%)	0(0%)	0(0%)	2(6%)	31(94%)	5	5
5	Concerning the theme of the course	0(0%)	0(0%)	0(0%)	1(3%)	32(97%)	5	5
6	Concerning the duration of the course	0(0%)	1(3%)	1(3%)	6(18%)	25(76%)	5	5
7	Concerning the duration of the classes (lives)	0(0%)	0(0%)	2(6%)	5(15%)	26(79%)	5	5

Source: Research data (2023).

When analyzing it, it was possible to see that only one item received an unsatisfactory or inadequate response, related to the total duration of the course, as seen in the following excerpt: "[...] *I just wish the course lasted a bit longer!*" (P7).

There was no direct indication from P7 in relation to duration, but this is an issue that demands attention in courses that use ICT in their structure, an issue highlighted by Pereira and Impolcetto (2022), in another evaluation of an online course, in which the participant indicated the need to increase the number of classes.

Despite not receiving any unsatisfactory evaluations in Table 1, it is possible to identify an essay - also from participant 7 - in relation to the VLE, as seen below: "*My consideration regarding the platform is that I found it complicated to access the feedback - and the problem may be myself, who has difficulty with some technological issues*" (P7).

In today's society, difficulties in using ICT can be a problem in a number of fields, requiring the development of digital competence (Figueira; Dorotea, 2022), which the participant herself questions in the excerpt above, when she wonders whether the difficulty lies in the VLE or is a personal limitation.

Regarding the use of Google Meet, there was a percentage of participants who neither agreed nor disagreed with the statement related to its use during the course:

One consideration concerning the people: I wish they had activated their webcams during the presentations. I think it is very different when we see the people. This is an issue of Google Meet that annoys me a little bit and that cannot replace the face-to-face classes (P7).

Video classes in the context of distance learning (DL), in both synchronous and asynchronous formats (both made possible in this course), are used to replace face-to-face lectures, and the problem presented above can also be observed in another study, which emphasizes that being online on these platforms does not guarantee a real

connection with the class and the others involved in this process (Ferreira; Branchi; Sugahara, 2020), issues highlighted by P7.

However, as seen in the majority of the responses, the evaluations of the course infrastructure were positive and the participants considered the tools used throughout the process to be adequate: "*The tools used were very well explored and the content was very well organized within the platform. This made a lot of difference when it came to monitoring the activities*" (P16).

In a general evaluation concerning the Google Classroom platform, many points were mentioned as positive, among which can be highlighted the learning environment provided and the participants' favorable reactions related to the use of the virtual space (Gupta; Pathania, 2021).

The organizational issues provided by the VLE are important for the participants/students of the educational proposals that use them, as they help the process by making it easy to locate, within these platforms, the modules that contain all the materials used (Ferreira; Branchi; Sugahara, 2020).

Associated with this information are ICT in further training and the various possibilities provided by the use of these tools, as can be seen in the excerpts below:

Information and Communication Technology tools are very useful when used consciously and with purpose [...]. When it comes to courses for professionals who are already working in the field, I also think it's very valuable, as it makes it easier to fit study moments, like the one in this course, into our routine, in other words, it makes it easier for us to seek continued learning in order to improve our future professional experiences (P6).

It was very interesting for me to have the theoretical part of the lessons recorded and available to access whenever I could. The meetings took place at a similar time to my classes and, by watching the recordings, I was able to go back to points I didn't quite understand (P12).

The autonomy generated by these courses, the possibility for participants to manage the classes as they wish, and the formation of collaborative spaces for the construction of knowledge, aspects contained in the excerpts above, are positive points also found in the research by Ferreira, Branchi, and Sugahara (2020) on courses using ICT.

In general, in the area of Physical Education, the use of ICT is well evaluated in other studies on training courses (Bastos; Anacleto; Henrique, 2018; Camilo; Maissiat;

Picinati, 2021; Mota e Silva; Matthiesen, 2018; Pereira; Impolcetto, 2022; Rodrigues; Chicon, 2021).

Also noteworthy in the participants' responses is the semi-presential aspect of the course, which combines the use of ICT with face-to-face classes that, in a way, allow them to apply the knowledge they have seen theoretically. The following excerpt exemplifies this situation: "[...] *when used as a complementary or hybrid form, it has a lot to contribute to development and learning courses*" (P22).

The challenge of courses in this format is to make the online totally associated with the face-to-face, not as separate fields that are difficult to connect and do not relate to each other (Fletcher; Hordvik, 2022), an element considered to be a positive point of this course concerning this issue, as highlighted by participant 22.

The comment, which highlights the improvement of learning in semi-presential training proposals, is fundamental for the area of Physical Education, an aspect pointed out by González and Borges (2015) on the need for face-to-face interventions in training in the area.

For the materials, three statements were part of this category and received satisfactory ratings from the participants, as shown in Table 2, about the materials used in the course.

Table 2 – Materials

	1	2	3	4	5	Median	Mode
8 Concerning the material of the course	0(0%)	0(0%)	0(0%)	2(6%)	31(94%)	5	5
9 Concerning the quality of the written content	0(0%)	0(0%)	0(0%)	6(18%)	27(82%)	5	5
10 The classes (lives) addressed the topics covered in the course	0(0%)	0(0%)	0(0%)	5(15%)	28(85%)	5	5

Source: Elaborated by the authors (2023).

In this category of analysis, complementing the information in Table 2, we highlight some excerpts from the participants' answers. The first relates to the quality of the written material: "*The theoretical material is very good, making it easy to understand, as well as having very well-selected content*" (P19).

Pereira and Impolcetto (2022) indicate that one of the points they rated highly in the course they offered was the quality of the content and materials provided. The evaluations of the participants in this study highlighted the possibility of advancing in the

knowledge covered in the course, a situation that corresponds to the excerpts highlighted below.

The videos, texts, and scientific articles presented throughout the theoretical material provided, as a complement to the information, were considered positive. The use of these is considered important due to the online nature of the lectures, in order to make it easier to visualize the elements covered.

[...] the use of audiovisual materials that already exist on the internet contributed both to getting to know new and very interesting channels and as complementary and very illustrative material. The choice of articles was also very assertive, as it made me think about subjects I hadn't stopped to research before (P6).

The use of audiovisual resources linked to ICT makes the training process more tangible and - further corroborating participant 6's response - can stimulate the search for related information. It also highlights the importance of these materials in terms of mixing different forms of language (Camilo; Maissiat; Picinati, 2021).

Despite the benefits, Pereira and Impolcetto (2022) suggest that complementary materials from external sources can be a problematic item, as they are beyond the control of the organizers when the sources are unavailable. The solution to prevent these problems is to copy the content, or print it, as the authors use the term.

However, in relation to game-centered approaches to teaching volleyball, one of the central topics of the training course, there are few audiovisual materials available that include these elements. One example is the digital teaching material for teaching volleyball through games (Parente; Ginciene; Impolcetto, 2022), used throughout the course.

For the third category, evaluations, two statements were included, as shown in Table 3. As with the previous category, all the participants' answers were allocated to the items on the scale considered to be satisfactory. Thus, the consideration in this respect is that the options used throughout the course met the proposal.

Table 3 – Evaluations

		1	2	3	4	5	Median	Mode
11	Concerning the proposed evaluations activities	0(0%)	0(0%)	0(0%)	5(15%)	28(85%)	5	5
12	Concerning the level of the proposed activities	0(0%)	0(0%)	0(0%)	8(24%)	25(76%)	5	5

Source: Research data (2023).

In order to complement the information contained in Table 3, we first present an excerpt on whether or not the activities were appropriate to the content covered during the lessons. "*The activities assigned were very consistent with the lessons given, both in terms of content and the sequence in which the content was presented during the lesson*" (P5). This should be precisely the purpose of assessment activities in distance learning environments, to help organize and learn the content covered throughout the courses (Branco; Haracemiv, 2015), a situation to which the course corresponded, according to the excerpt highlighted.

However, despite this response and the satisfactory level achieved by the category (Table 3), two other points were raised regarding the evaluation, which are analyzed below. The first concerned the depth of the content: "*I thought the terms and approaches had to be half memorized, otherwise we couldn't answer! I [...] found it a bit difficult to answer just by reading the text and explaining it on Meet*" (P7).

It is worth mentioning that all the questions proposed in the assessments throughout the course were in line with the theoretical material provided and were topics covered in the synchronous classes. However, the choice of theoretical and content application questions was due to the characteristics of the course, the bulk of which took place online, so that they could be carried out asynchronously after the meetings. According to Branco and Haracemiv (2015), these are the ones that demand the most attention from participants in distance learning courses, precisely because of the high amount of reading required to complete them, which can be transferred to shorter courses like this one.

The second point focuses on the socialization of the knowledge produced in the evaluations, both in the theoretical activities and in those carried out in the practical and face-to-face classes. The following excerpt deals with this issue:

[...] I miss the exchanges, because in other courses I've taken in Classroom, we send the activities, but we almost never have moments of presentation and sharing to find out what the other has created or thought of. I just missed those moments (P15).

It has been proved to be extremely important for the course participants to share the information they had produced, thus reducing issues relating to the punctuality of the course.

It is important for training courses such as the one described in this study - short-term, with a specific theme, implemented at a specific time - to respect the knowledge acquired by the participants during the period (Bastos; Anacleto; Henrique, 2018; Rodrigues; Paes; Souza Neto, 2015).

When there is interaction among the participants and discussions take place about the content covered as a way of constructing knowledge, it is possible to create and recreate new meanings about the subject addressed to teach sports and thus innovate in practice (Camilo; Maissiat; Picinati, 2021), however there was a deficiency in this aspect, mentioned by participant 15.

The last excerpt presented in this category of analysis is related to a future projection of the content covered in the performance (or future performance) generated by the assessment activities. "*Activities that are objective in their content and that encourage course participants to reflect and also project how they will act as professionals in the field*" (P13).

Participant 13's speech corroborates the information mentioned by Mota e Silva and Matthiesen (2018), whose training course was a concrete proposal aimed at the participants' practice, by offering possibilities for dealing with the content covered.

In the last category of analysis, on the trainer's profile, three statements made up the evaluation, as shown in Table 4. It is worth noting that although two items on the scale received answers in which they neither agreed nor disagreed with the statements made, the excerpts from the open-ended answers do not explain this situation.

Table 4 – Trainer's profile

		1	2	3	4	5	Median	Mode
13	The teacher of the course was able to explain the content clearly	0(0%)	0(0%)	0(0%)	1(3%)	32(97%)	5	5
14	The teacher of the course stimulated the participation of the students during the course, whether in debates, Google Classroom forums or other means	0(0%)	0(0%)	1(3%)	4(12%)	28(85%)	5	5
15	The teacher of the course was available when you had any questions and helped you solve them	0(0%)	0(0%)	1(3%)	0(0%)	32(97%)	5	5

Source: Research data (2023).

Regarding the didactics of the teacher-researcher of the course, the following excerpt stands out: "*The teacher who taught the course was very didactic at all times,*

always demonstrating mastery of the content and making it easy for everyone to understand, even the most complex content" (P21).

It is part of the teachers' didactics to mobilize different knowledge to be passed on to the students (course participants) and to manage the information that reaches those who study, relating personal knowledge to that of the group and, when possible, making decisions that allow discussions to move forward (Figueiredo; Lobo da Costa; Llinares, 2021).

This situation, according to Soares (2020), can be considered as "true dialogue", understood by the author as the non-imposition of truths, in the collectivity of verbalizing and communicating, respecting those involved in the process, an important action for the development of relationships, a fact which, according to participant 21, contributed to the progress of the course.

The following excerpt, about the participants' reflective process, stimulated by the teacher-researcher who taught the course, considered to be an important element related to continuing education (Behrens; Fedel, 2019), was highlighted by the participants: "*In this case, I would highlight the feedback on the activities, because I liked the way they were done, always in a dialogical way, without 'judgments' and always with an air of instigating the participant to reflect once again on the proposal and their practice"* (P22).

According to participant 22's account of the reflective process in training opportunities, one of the difficulties is dialoguing with peers throughout their career (Camilo; Maissiat; Picinati, 2021), and using the feedback sent to participants by the teacher via the VLE proved to be a positive situation. Here again, Google Classroom stands out as a possible tool (Tonon et al., 2020) that contributed to this category of analysis.

Finally, the excerpt that deals with the availability and monitoring of the participants' training process:

The teacher established a very open channel of communication with the students and I believe that this was very positive, because everyone felt that they could exchange information and experiences about their professional practices, as well as ask questions about these situations and about the subject of the course itself (P26).

This is considered a crucial point when using VLEs in training processes, since, due to the distance, the availability of the course provider to meet the participants must be increased (Pereira; Impolcetto, 2022). In the proposal for this course, in addition to

Google Classroom and the possibility of group and individual messages, the option was to create a WhatsApp Messenger group, precisely to increase contact and make the teacher-course participant relationship more accessible.

Another point in favor of proximity between teachers and participants in online courses is belonging to the group. The possibility of facilitated and open communication between the characters involved in the training process makes it more attractive (Bastos; Anacleto; Henrique, 2018), which can result in better learning results and, in a way, contribute to other points discussed earlier about the application of the content covered in the teaching-learning-training practice of professionals.

5 Closing remarks

On the proposal of evaluating the hybrid extension course called “Volleyball, teaching & Sport Pedagogy” according to its structure and organization, based on the analysis of four main elements (infrastructure, materials, evaluations, and teacher-participant relationship), there were indices considered adequate in terms of the use of ICT. Although, according to the scale data and the answers to the open questions, some contradictions were noted and indicated throughout the results, the importance of quantitative and qualitative data complementing each other in this type of analysis is highlighted.

Looking at the evaluations, some aspects can be highlighted about the use of ICT, such as: the organizational issues of the Classroom platform, which makes it possible to indicate it in the execution of hybrid courses; the quality of the materials made available; the use of accessible language; and the feedback sent by the professor-researcher after the activities performed by the participants.

On the other hand, the use of technology deserves a warning, in the sense that it is still an obstacle for some people due to the difficulties they encounter when using these means. In addition, the participants stressed the importance of carrying out a certain number of hours of practical classes in person as a complement to the remote classes, which is totally pertinent to a proposal for complementary training in the area of Physical Education.

It should be emphasized here that the focus of this study was precisely on understanding the possibilities of using ICT in complementary training processes, such as extension courses, and the moments in which these tools were used were more evident in the evaluation, even though it was a hybrid course.

Finally, based on the findings of this study, it is possible to indicate that ICT-supported extension courses are a viable alternative, especially for the field of Physical Education, considering the favorable results presented in the evaluation of this course.

6 References

ARAÚJO, M. A. M.; ALMEIDA, L. L.; DEL-MASSO, M. C. S.; KOGISO, O. K.; LOURO, D. W. *Extensão universitária: um laboratório social*. São Paulo: Cultura Acadêmica, 2011.

AZEVEDO, A. M. P.; OLIVEIRA, G. M.; SILVA, P. P. C.; NÓBREGA, T. K. S.; JÚNIOR SOUZA, M. Formação continuada na prática pedagógica: a Educação Física em questão. *Movimento*, Porto Alegre, v. 16, n. 4, p. 245-262, 2010. DOI: <https://doi.org/10.22456/1982-8918.11809>.

BASTOS, F. B.; ANACLETO, F. N.; HENRIQUE, J. Formação continuada colaborativa de professores de Educação Física. *Pensar a Prática*, Goiânia, v. 21, n. 2, p. 382-394, 2018. DOI: <https://doi.org/10.5216/rpp.v21i2.46883>.

BEHRENS, M. A.; FEDEL, T. R. B. Os contributos da reflexão e da experiência vivenciada na formação continuada de professores. *Revista Eletrônica de Educação*, São Carlos, v. 12, n. 3, p. 1-13, 2019. DOI: <https://doi.org/10.14244/198271993009>.

BRANCO, V.; HARACEMIV, S. M. C. Avaliação do curso de formação de professores no contexto da Educação a Distância. *Educar em Revista*, Curitiba, n. 1, p. 157-176, 2015. DOI: <https://doi.org/10.1590/0104-4060.42113>.

CAMILO, J. B.; MAISSIAT, J.; PICINATI, S. L. D. Formação continuada para o uso das tecnologias educacionais: uma experiência com professores de Educação Física. *Brazilian Journal of Development*, [S.l.], v. 7, n. 6, p. 54116-54135, 2021. DOI: <https://doi.org/10.34117/bjdv7n6-013>.

CRUZ, M. M. S.; REIS, N. S.; CARVALHO, S. C. S.; MEDEIROS, A. G. A. Formação profissional em Educação Física: história, avanços, limites e desafios. *Caderno de Educação Física e Esporte*, Curitiba, v. 17, n. 1, p. 227-235, 2019.

FARRET, E. C.; TERRA, D. V.; FIGUEIREDO, C. A. O tratamento do esporte como currículo no curso de graduação em Educação Física. *Pensar a Prática*, Goiânia, v. 19, n. 3, p. 653-664, 2016. DOI: <https://doi.org/10.5216/rpp.v19i3.33936>.

FERREIRA, D. H. L.; BRANCHI, B. A.; SUGAHARA, C. R. Processo de ensino e aprendizagem no contexto das aulas e atividades remotas no Ensino Superior em tempo da pandemia de Covid-19. *Revista Práxis*, Volta Redonda, v. 12, n. 1, p. 1-10, 2020.

FIGUEIRA, L. F.; DOROTEA, N. Competência digital, DigCompEdu Check-In como ferramenta diagnóstica de literacia digital para subsidiar formação de professores. *Educação & Formação*, Fortaleza, v. 7, e8332, p. 1-21, 2022. DOI: <https://doi.org/10.25053/redufor.v7.e8332>.

FIGUEIREDO, S. A.; LOBO DA COSTA, N. M.; LLINARES, S. Olhar profissional para a docência com tecnologia: um estudo na formação continuada. *Educação Matemática Debate*, Montes Claros, v. 5, n. 11, p. 1-23, 2021. DOI: <https://doi.org/10.46551/emd.e202103>.

FLETCHER, T.; HORDVIK, M. M. Miscibilidade em abordagens combinadas à prática de formação de professores(as) de Educação Física. *Movimento*, Porto Alegre, v. 28, e28018, p. 1-17, 2022. DOI: <https://doi.org/10.22456/1982-8918.122740>.

GIL, A. C. *Como elaborar projetos de pesquisa*. 7. ed. Barueri: Atlas, 2022.

GONZÁLEZ, F. J.; BORGES, R. M. Diálogos sobre o ensino dos esportes na Educação Física escolar: uma pesquisa-ação na formação continuada. *Motrivivência*, Florianópolis, v. 27, n. 45, p. 172, 2015. DOI: <https://doi.org/10.5007/2175-8042.2015v27n45p172>.

GUPTA, A.; PATHANIA, P. To study the impact of *Google Classroom* as a platform of learning and collaboration at the teacher education level. *Education and Information Technologies*, [S.l.], v. 26, n. 1, p. 843-857, 2021. DOI: <https://doi.org/10.1007/s10639-020-10294-1>.

HIRAMA, L. K.; MATOS, J. A. B.; JOAQUIM, C. S.; MONTAGNER, P. C. Extensão universitária e formação do professor de Educação Física: contribuições a partir da permanência prolongada. *Revista Ciência em Extensão*, São Paulo, v. 12, n. 1, p. 28-40, 2016.

IONASCU, C.; DOREL, B. A model of analysis of the e-learning system quality. *Revista Tinerilor Economisti*, [S.l.], v. 1, n. 13, p. 136-143, 2009.

MATTAR, J.; RAMOS, D. K. *Metodologia da pesquisa em educação: abordagens qualitativas, quantitativas e mistas*. São Paulo: 70, 2021.

MOTA E SILVA, E. V.; MATTHIESEN, S. Q. Atletismo e ensino da história e cultura afro-brasileira: visão de professores de educação física participantes de um curso de extensão a distância. *Movimento*, Porto Alegre, v. 24, n. 1, p. 119-132, 2018.

NOZAKI, J. M.; FERREIRA, L. A.; HUNGER, D. A. C. F. Evidências formativas da extensão universitária na docência em Educação Física. *Revista Eletrônica de Educação*, São Carlos, v. 9, n. 1, p. 228-241, 2015. DOI: <https://doi.org/10.14244/198271991175>.

PARENTE, T. A.; GINCIENE, G.; IMPOLCETTO, F. M. Voleibol e o ensino por meio jogos: descrição de um material didático digital. *Lecturas: Educación Física y Deportes*, Buenos Aires, v. 26, n. 285, p. 80-96, 2022. DOI: <https://doi.org/10.46642/efd.v26i285.3097>.

PEREIRA, M. C.; IMPOLCETTO, F. M. MOOC “Histórias do futebol praticado por mulheres no Brasil”. *Corpoconsciência*, Cuiabá, v. 26, n. 1, p. 53-69, 2022. DOI: <https://doi.org/10.51283/rc.v26i1.12904>.

RODRIGUES, G. M.; CHICON, J. F. Desdobramentos da formação continuada: por entre as narrativas, as ressignificações. *Revista Aleph*, Niterói, n. esp., p. 75-90, 2021.

RODRIGUES, H. A.; PAES, R. R.; SOUZA NETO, S. A socialização profissional do treinador esportivo como um processo formativo de aquisição de saberes. *Movimento*, Porto Alegre, v. 22, n. 2, p. 509-521, 2015. DOI: <https://doi.org/10.22456/1982-8918.55346>.

RUFINO, L. G. B.; BENITES, L. C.; SOUZA NETO, S. Análise das práticas e o processo de formação de professores de Educação Física: implicações para a fundamentação da epistemologia da prática profissional. *Movimento*, Porto Alegre, v. 23, n. 1, p. 393-406, 2017.


SOARES, M. P. S. B. Formação permanente de professores: um estudo inspirado em Paulo Freire com docentes dos anos iniciais do ensino fundamental. *Educação & Formação*, Fortaleza, v. 5, n. 13, p. 151-171, 2020. DOI: <https://doi.org/10.25053/redufor.v5i13.1271>.

THOMAS, J. R.; NELSON, J. K.; SILVERMAN, S. J. *Métodos de pesquisa em atividade física*. 6. ed. Porto Alegre: Artmed, 2012.

TONON, T. C. A.; DIAS, F. A. S.; PRADO, M. E. B. B.; STORER, F. R. A integração da ferramenta Google Classroom como proposta de inovação para o feito: ensino e aprendizagem. *Research, Society and Development*, [S.l.], v. 9, n. 7, p. 1-12, 2020.

WALLIMAN, N. *Métodos de pesquisa*. São Paulo: Saraiva, 2015.

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