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Impacto de las redes sociales en el desarrollo profesional en Educación Física: usos, motivaciones y oportunidades

Social media impact on professional development in Physical Education: uses, motivations and opportunities

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Resumen

Las redes sociales surgieron como una herramienta de comunicación lúdica, sin embargo, pronto se empezaron a ver otras posibilidades, como el desarrollo profesional, en especial, en el ámbito educativo. La presente investigación tiene como objetivo conocer el impacto que generan las redes sociales en el desarrollo profesional de los docentes y estudiantes de Educación Física y comparar los distintos usos, motivaciones y oportunidades que ofrecen. Para ello se elaboró y se validó un cuestionario que fue respondido por 403 participantes. Los resultados indican que la red social más utilizada para el desarrollo profesional en el ámbito de la Educación Física es YouTube (3,39/5), seguida de Instagram (2,82/5) y Facebook (2,68/5); las principales motivaciones para su uso son el entretenimiento y la ayuda que ofrecen para el desarrollo profesional en la formación docente (36,6% ambos); asimismo, las redes sociales permiten iniciar nuevos proyectos (76,8%), como el desarrollo de unidades didácticas y/o programaciones o la participación en congresos.

Palabras clave

Redes sociales, Educación Física, desarrollo profesional, formación docente, aprendizaje en línea.

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Abstract

Social media emerged as an entertaining communication tool. However, other possibilities were soon considered, such as professional development, especially in education. This research aims to learn about what impact social media generate on the professional development of Physical Education teachers and students and compare the different uses, motivations and opportunities that they offer. To that end, a questionnaire was developed and validated, which was answered by 403 participants. The results indicate that the most used social media for professional development in Physical Education's area is YouTube (3.39/5), followed by Instagram (2.82 / 5) and Facebook (2.68 / 5); the main motivations for their use are entertainment and the aid they provide for professional development for teacher learning (36.6% both); furthermore, social media enable to start new projects (76.8%) like developing didactic units and/or programming or participating in conferences.

Keywords

Social media, Physical Education, professional development, teacher training, e-learning

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Introduction

Background on social media and their use in teachers' professional development

Information and Communication Technologies have been presented for years in the daily lives of people living in the most advanced societies and have transformed the way of understanding the modern world. More specifically, social media have influenced the way people communicate, entertain themselves, shop or establish relationships (Harvey *et al.*, 2020).

According to the Pan-Hispanic dictionary of legal Spanish, a social network is a "service of the information society that offers users a communication platform through the Internet for them to generate a profile [...], facilitating the creation of communities [...] and allowing the communication of its users".

These virtual social environments have become one of the most powerful communication tools of the 21st century (Alsuraihi *et al.*, 2016) that has caused, more than a technological revolution, one of a social nature, providing all Internet users with new ways of being creators and learners, and producing a continuous process of intellectual, social and emotional growth (Marín-Díaz and Cabero-Almenara, 2019).

Although social media emerged as a communication tool related to leisure and playfulness, its multiple possibilities in the educational field soon began to be seen (Infante Moro and Aguaded Gómez, 2012) and consequently, it has transformed the way in which many teachers carry out their work (Harvey *et al.*, 2020).

Over the past 15 years, several social media platforms have emerged as popular websites for teacher professional development (PD) and learning (Carpenter and Harvey, 2020). This success of social media as a training tool may be due to the proactivity of their content, as users access the platforms as a daily routine on a voluntary basis, not as a mandatory academic routine (Infante Moro and Aguaded Gómez, 2012), their availability from anywhere and at any time of the day (Carpenter and Krutka, 2014; Schroeder *et al.*, 2019).

Thanks to the immediate interaction offered by social media, teachers can use them to participate in their training in a more personalized way and adapted to their particular needs,

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interests and contexts (Smith Risser, 2013; Trust *et al.*, 2016), although to consider them as a training tool, users should be able to select quality content and adapt the learning to their educational context (Aguilera-Mata and García-Martínez, 2021).

Teaching PD does not necessarily have to be formal (courses, seminars, congresses...), but can also be informal, through online networks or communities (Macià and García, 2016), and it is precisely this type of PD that is referred to when talking about training complement. Thus, social media enable the creation of online communities of professionals with the aim of creating a PD space among members (Luo *et al.*, 2020). This new situation makes social media, according to Goodyear *et al.* (2019), a contemporary way of PD that can meet the challenges of teacher learning.

Social media in the professional development of Physical Education teachers.

Social media have become platforms that enable self-regulation of PD for many teachers, including Physical Education (PE) teachers (Harvey *et al.*, 2020), whether to learn from other professionals, improve their educational practice or share resources (Andrew *et al.*, 2020; Harvey & Hyndman, 2018).

This preference for informal training may be due to the evolving nature of the pedagogical area of PE that urges teachers to stay current in order to develop knowledge and skills competently throughout their career, coupled with dissatisfaction with the quality of formal training available to them (Armour *et al.*, 2015; Keay *et al.*, 2018).

In summary, when social media are used as a training supplement, they facilitate learning and promote collaboration for both PE teachers and aspiring students, allowing them to increase overall subject matter knowledge as well as pedagogical content (Harvey *et al.*, 2020; Hyndman and Harvey, 2019). In addition, these platforms provide a positive space for teachers to discuss their professional practices and issues within PE (Kinchin and Bryant, 2015).

Finally, we highlight that there is little scientific literature addressing the use of social media as a formative complement (Harvey *et al.*, 2020) and this study is one of the first to explain the impact it generates on PE teachers and students.

The objectives of this research are:

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- To know the impact that social media generate in the PD of teachers and students of PE.
- To compare the different uses, motivations and opportunities offered by social media for users.

Method

A descriptive cross-sectional study was carried out using a questionnaire designed *ad hoc* for this research.

Participants

403 PE teachers or students participated in this research. Table 1 shows their characteristics.

Table 1. *Participant's characteristics.*

Variable		Percentage (%)
Gender	Man	69,23
	Women	30,77
Residence	Spain	50,62
	Latin America	49,38
Age	Less than 20 years old	5
	Between 20 and 30 years old	38,5
	Between 31 and 40 years old	28,5
	Between 41 and 50 years old	18,3
	More than 50 years old	9,8
Employment	Primary Education teachers	30,27
	Secondary Education teachers	17,87
	University professors	10,42
	University students	24,32
	Candidates for competitive examinations	5,71
	Other situations	11,42

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Instrument

A questionnaire created *ad hoc* based on two instruments used in recent research targeting PE professionals (Carpenter & Harvey, 2020; Harvey & Hyndman, 2018) was employed. The questionnaire had a total of 14 questions, 12 of which had multiple response options and two were open-ended. The latter two questions asked about the most valued aspects of social media as a formative complement and about the changes caused in the conception of PE using social media. The questionnaire was divided into three sections: use of social media (four questions), motivations for using social media (seven) and opportunities for using social media (three). In addition, there was a section dedicated to collecting participants' personal information. After analyzing all the information, it was decided to exclude four questions in the presentation of the results (two from the first section, one from the second and one from the third), since the data obtained lacked relevance. Prior to its application, the questionnaire was subjected to a process of validation by four PE teachers with more than five years of work experience.

Procedure

The questionnaire was shared through social media: Instagram, Facebook and Twitter, using the "snowball" methodology. Participants had to answer the questionnaire between April 14 and May 12, 2021. All of them were informed about the purpose of the research and were guaranteed the anonymity of the data provided. All 403 participants consented to the use of the data by the researchers.

Data analysis

To obtain the results, the variables of age, sex, employment status and country of origin were analyzed, as well as the categorization of the content of the open-ended questions. Descriptive graphs were prepared with the data obtained to compare the different percentages.

Results

Use of social media

95.8% of the participants in the study indicated that they used social media, so this majority result leads us to investigate the use of social media in the PD of teachers in PE.

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Social media used as a training supplement

Social media most used as a training supplement, according to the participants, was YouTube, with an average use score of 3.39 on a Likert scale of 1 (never) and 5 (a lot). The second most used for this purpose was Instagram (2.82), followed closely by Facebook (2.68) and Twitter with 2.22, while Telegram was the least used (1.96).

YouTube was the most used social media, regardless of the variable analyzed: gender, nationality and employment status, with the exception of age, where the under-20 age group used Facebook more (3.28) against YouTube (2.83), which came in second. In terms of origin, YouTube continued to be the most used platform in both Spain and Latin America. However, differences were observed in the use of other social media. Facebook, for example, was the second most used in Latin America (3.07), while in Spain it ranked fourth (2.34). The case of Instagram and Twitter is the reverse: they were used more in Spain (3.11 and 2.89 respectively) than in Latin America (2.36 and 1.67). Telegram, finally, showed low levels of use in both contexts.

Reasons for using social media

The reasons most participants indicated for using social media were entertainment and the help they offer for PD (36.6% both). 18.8% indicated that they like to share their experiences and thoughts, as well as to see what others post. 3.4% of the sample stated that they use social media for the positive reinforcement that the interactions offer.

If we focus on age, as this variable increased, the entertainment motive decreased (from 52.6% in those under 20 to 8.3% in those over 50) in favor of using social media as a PD aid (from 10.5% to 61.1%).

These data correlate with those of the employment status variable. Students and candidates for competitive examinations had entertainment as the main reason for use (57.8% and 60.9%, respectively), while teachers were mostly in favor of PD (44.8%).

Most valued aspects of social media as a training supplement

The most valued aspect was updating (37.4%), followed by interaction (15.6%) and dissemination (12.5%).

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Changes in the conception of PE

Fifty-five percent of the participants indicated that the use of social media had changed their conception of PE, while the remaining 45% indicated that it had not. The analysis by variables does not offer differences either, being only remarkable that students gave more affirmative answers (60.9%). However, when asked about the changes caused to those who indicated yes, the data were significant, indicating as the most relevant responses the expansion of knowledge (46.6%), innovation (27.2%) and the conception of PE (22%).

Negative aspects of social media as a training supplement

Majority of participants responded that social media have negative aspects as a training complement (75%), with a decreasing trend as age increases (100% for the group under 20 years of age and 55.6% for those over 50 years of age).

The negative aspects pointed out by the participants were: false and unverified information (30.1%), digital addiction (25.7%), irrelevant and/or low-quality content (22.8%) and over-information (21.4%). We highlight that digital addiction showed very stable values in all age ranges (around 25%), except in those over 50 years of age where it reached 41.2%, and that students supported the option "false and unverified information" by 34.2%, a higher percentage than in other work situations.

Social media as a tool for initiating new projects in PE

76.8% of the participants responded that social media are a good tool for initiating new projects. We highlight, within the age variable, a growing trend (under 20 years of age 52.6% and over 50 years of age 91.7%). On the other hand, regarding the work situation variable, 84.9% of teachers indicated that social media enabled them to initiate new projects, 58% of students and, to a lesser extent, 43.5% of candidates.

The type of projects developed thanks to social media were teaching units and/or programs (24.6%), conferences (22.8%), educational praxis (20.7%), congresses (17.1%) and articles (14.7%). The option relating to didactic units and/or programs was most frequently chosen by candidates for competitive examinations (38.1%), followed by teachers (25.8%), who also indicated the initiation of educational praxis (22.9%). Initiated educational praxis projects correlated with age, rising from 9.5% in those under 20 years of age to 30.1% in the 41-50 age group, although in the group over 50 years of age it decreased (21.3%).

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Discussion

Use of social media

The use of social media in developed countries is widespread. According to IAB Spain (2020), 87% of the Spanish population between 16 and 65 years of age uses social media, a figure that is congruent with the results obtained in this research. Therefore, PE professionals are not an exception with respect to their use, but quite the contrary, they show a higher percentage of use precisely, considering the results, due to the possibilities that social media offer for training in the educational field of PE.

Social media used as a training supplement

Regarding the most used social media for academic purposes, YouTube, Facebook, Twitter and Instagram are the preferred ones (Alsuraihi *et al.*, 2016; Kenny and Johnson, 2016). As a result of globalization, the most used social media around the world are the same, and in Spain these four social media mentioned (along with WhatsApp and Telegram) are also the ones with the most users (IAB Spain, 2020). All in all, the choice of these social media by the participants of this study is totally coherent and understandable.

Even though in this research Twitter is not the most chosen option, the origin of the PE community in social media (#edufis) was on Twitter. Some studies show that PE teachers use it several times a day or at least once (Harvey & Hyndman, 2018) and do so as a method for their PD (Carpenter & Krutka, 2014). Perhaps the difference lies in the general use made of Twitter in Anglo-Saxon countries and that made in Spain and Latin America, where this research is contextualized.

Other research points out that some social media offer a range of opportunities for users to interact and develop professionally (Awidi *et al.*, 2019; Infante Moro and Aguated Gómez, 2012). Thus, in the field of PE, social media are a great opportunity to share activities, materials and a large number of resources in general that can become useful for teaching. The specificity of the area of PE (in terms of the learning context, spaces, materials...) plays an important role in this regard, as it allows teachers to be more creative and imaginative.

Moreover, also teachers whose students have a disability use social media for their PD (McNamara *et al.*, 2019). This is also fundamental for the subject of PE, because there are

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some disabilities (especially motor disabilities) that are very conditioning for PE. Teachers must be trained in this regard, enable the learning of all their students and even take advantage of these circumstances to promote other cross-cutting learning. For all this, the use of social media can be decisive, both for teachers to learn how to handle these situations and for those who already know how to do it, to share their knowledge to help their colleagues.

Reasons for using social media

The main reasons why participants use social media are entertainment and improvement of their PD. The particularity of the teaching profession explains why teachers and students of PE make a much wider use of social media for professional purposes than the general population (IAB Spain, 2020), since they offer a great possibility for professional improvement, something that does not occur in other professions.

If we look at age, the use of social media by young people and older participants is more disparate. Due to the influence of the social context, young people have a greater need to post personal matters on social media to feel included and valued and, since many are not yet working as PE teachers, they do not yet feel the need for training beyond formal learning. However, the older ones tend more towards professional use since the learning obtained in social media has a greater transferability for them, since they can apply them in the short term. In this sense, the data obtained by Harvey and Carpenter (2020) are totally congruent with these statements, and it is that teachers began to use social media in a personal way and, subsequently, they also used them for professional purposes.

Viewing and posting motivational material in PE is also a strong reason for using social media, especially for more senior teachers (McNamara *et al.*, 2019), which is totally congruent with what has just been stated.

The use of social media due to the positive reinforcement offered by the interactions is not a very important motive for our participants, even though Goodyear *et al.* (2014) point out in their study that tweets, RTs and likes are a form of reinforcement for teachers. This is especially relevant among PE teachers because the use of social media helps to combat feelings of isolation and marginalization (Brooks and McMullen, 2020; Harvey and Hyndman, 2018), a fact that usually occurs because this area is considered a second-rate subject.

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Most valued aspects of social media as a training supplement

Social media are a very useful tool for teachers to keep themselves updated. PE teachers (and teachers in other fields) need to keep abreast of the latest pedagogical trends and legislative changes to be able to practice their profession with guarantees. In fact, several studies concluded that social media are a great tool as PD in PE (Aguilera-Mata and García-Martínez, 2021) and in education in general (Carpenter and Krutka, 2014).

Likewise, interaction is also valued by teachers and students of PE. Being able to establish communication with other colleagues helps teachers to give and receive feedback on their proposals, which contributes to enriching them, with the students being the greatest beneficiaries. Constant communication in social media provokes the creation of groups with other professionals in the sector (Brooks and McMullen, 2020; Hyndman and Harvey, 2019).

On the other hand, dissemination is a recurring aspect in the scientific literature since one of the great benefits of social media as a training supplement is the possibility of sharing and creating resources (Harvey and Hyndman, 2018; McNamara *et al.*, 2019).

Changes in the conception of PE.

Only a slight majority of the participants indicated that the use of social media had changed their way of conceiving PE, a fact that differs in the research conducted by Harvey and Hyndman (2018), in which 80% of PE teachers stated that the use of Twitter allowed them to make changes in their teaching action. These data could be due to part of the sample are students and candidates for competitive examinations, i.e., future teachers or teachers not active in PE, and changing the conception about PE is a complex task, as it needs a training-reflection process.

Among the participants for whom the conception of PE changed, expanding knowledge was the most common option. Similarly, participants in other studies attributed to the use of social media the appreciation of new educational resources and the possibility of learning about other ideas (Brooks & McMullen, 2020; Harvey & Hyndman, 2018).

Negative aspects of social media as a training supplement

A high percentage of the participants indicated that social media have negative aspects. This fact is interesting because despite the knowledge of these negative aspects, the percentage of users of social media is very high, indicating that professionals in PE give

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greater importance to the beneficial aspects. These results also coincide with other studies that determined that biased information, poor quality of the content consumed and the overwhelming amount of information are negative aspects found within social media (Aguilera-Mata and García-Martínez, 2021; Harvey and Carpenter, 2020).

Social media as a tool for initiating new projects in PE

Teachers valued the possibility of initiating new projects more than students and candidates for competitive examinations. One hypothesis could be that the candidates and students of PE have fewer opportunities for entrepreneurship because they are not working as teachers and dedicate a large part of their time to study.

The teaching units and/or programs were the most chosen projects, especially by the students and teachers, as was the case in the research on Twitter by Carpenter and Krutka (2014) and Goodyear *et al.* (2019), where the contents and debates that arose in this social network led to the implementation of new resources in their programming as teachers. Therefore, the choice of this response could be due to the lack of tools that students, candidates for competitive examinations and novice PE teachers usually have when developing programs and teaching units (Dopico, 2016).

The option of initiated projects of educational praxis correlates with the study by Andrew *et al.* (2020), in which the use of Twitter led to an increase in confidence in PE teachers when looking for resources to help them improve their practice. Furthermore, teachers' consumption of educational resources on social media contributes to improved student outcomes (Brooks and McMullen, 2020).

Even though the least selected project was the opportunity to produce articles, social media also have the potential to create relationships between different professionals and researchers with the aim of developing research groups (Harvey and Carpenter, 2020). A clear example of this is the authors of this article, who met through social media. However, these results show that most PE teachers are more concerned with educational practice than with scientific research.

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Conclusions

We can conclude that the majority of teachers and students of PE use social media for both personal and professional purposes and the main reasons are entertainment and PD, respectively, resulting in a linear increase from the first to the second as age increases.

Social media most used as a training supplement is YouTube, while the most valued aspect is updating, highlighting the role of these platforms as a good tool for ongoing PD.

On the other hand, just over half of the participants indicated that the use of social media had changed their way of conceiving PE, highlighting the expansion of knowledge and innovation. Likewise, three out of every four participants thought that social media have negative aspects, with false and unverified information, irrelevant content and over-information being the main ones pointed out.

Finally, most of the participants, among whom we highlight those over 50 years of age and teachers, initiated new projects thanks to the use of social media, especially those related to didactic units and/or programs.

Strengths

One of the strengths of this research is that there is very little scientific literature that addresses the use of social media as a training supplement, and this study is one of the first to explain the impact it has on teachers and students of PE. Another strength is that most of the studies reviewed and contrasted in this research were published in recent years, so the study is up to date.

Limitations

There are limitations in this study that should be considered when interpreting the results. On the one hand, the questionnaire was shared publicly through various social media using the "snowball" methodology. On the other hand, as this study was one of the first to be carried out on this subject, the results could not be compared with many other investigations.

Future lines of research

Future research is suggested on the use of social media as a training supplement, both for students and teachers in the world of PE, as well as in other disciplines, contexts and countries. Likewise, it is proposed to investigate in more depth the role of social media such as Instagram, TikTok or Pinterest, which have been little researched in the scientific literature

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so far. On the other hand, it would also be interesting to address the role played by content creators in this flow of information that moves through social media and that both teachers and students consume as a complement to training.

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