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(Re)Produce: professional development of Physical Education teachers in a non-institutional virtual community

(Re)Produce: desarrollo profesional docente en una comunidad de práctica virtual informal de Educación Física

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Abstract

The aim of the study is to analyze a virtual community of physical education practice, called (Re)Produce, as a tool for teacher training. To this end, a case study was carried out focusing on the vision of 15 of the 63 members (including university professors, active physical education teachers and students in initial training). The data emerge from the first three years of community functioning from analysis of the content of the forums, semi-structured interviews, and participant comments on the research report presented to them. The results show certain advantages and problems of asynchrony and ubiquity (possibility to participate at a distance and problem of lack of personal contact); written interaction (knowledge accessible over time, more elaboration of the discourse but, on the other hand, more time and more self-control); and flexibility and the voluntary and open character of the community (adjustment to personal interests and needs at the expense of a lack of systematicity and continuity in the development of the themes).

Keywords

Virtual communities of practice; Physical Education; on going teachers training.

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Resumen

El objetivo del estudio es analizar una comunidad de práctica virtual no formal (carácter voluntario, no institucionalizado y sin programa) de Educación Física llamada (Re)Produce, como herramienta para la formación del profesorado. Para ello se llevó a cabo un estudio de caso centrado en la visión de 15 de los 63 miembros (entre los que se encuentran profesores universitarios, maestros de Educación Física en activo y alumnos en formación inicial). Los datos emergen de los tres primeros años de funcionamiento de la comunidad a partir del análisis del contenido de los foros, entrevistas semiestructuradas, y comentarios de los participantes al informe de investigación que se les presentó. Los resultados muestran ciertas ventajas y problemas de la asincronía y ubicuidad (posibilidad de participar a distancia y problema de la falta de contacto personal); la interacción escrita (conocimiento accesible en el tiempo, más elaboración del discurso pero, por otra parte más tiempo y más autocontención); y la flexibilidad y el carácter voluntario y abierto de la comunidad (ajuste a los intereses y necesidades personales a costa de una falta de sistematicidad y continuidad en el desarrollo de los temas).

Palabras clave

Comunidades de práctica virtuales; Educación Física; formación del profesorado.

Introduction

The professional life of teachers has changed significantly in recent years. Educational reforms, social changes and technological advances have brought a challenging reality to schools (Li-Juan and Sau-Ching, 2008). According to Kirk (1998), one of the key elements in many of the education reforms is the professional training of teachers. The dual role of teachers as subjects and objects of change makes the field of professional development an essential element (Villegas-Reimers, 2003). Jovanova-Mitkovska (2010) points to several reasons why professional teacher development is important, such as the provision of opportunities to acquire or renew knowledge and skills in specific areas of knowledge, quality information that can be used as a guide for the implementation of specific objectives, influence on teachers' beliefs and teaching practice, changes in teaching methods and strategies, or influence on the way teaching/learning objectives and tasks are determined, among others. According to Montero Mesa (1996, p.76), initial training is *"the stage aimed at*

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preparing future teachers for the teaching function. […]. Their conditions for professionalisation are therefore limited but essential". The initial training of teachers should be oriented towards fulfilling three fundamental functions (BOE, 2006; Imbernón Muñoz, 2001; Marcelo García, 1994), regardless of the level of education to which they are directed: the training and education of teachers, in order to provide them with the resources and preparation they will need for their professional work, to function as a mechanism for official control of the qualifications that teachers must possess in order to be able to carry out their professional functions at the different educational levels and to subject their teaching to adaptations consistent with the training needs of each time, thus offering contextualised training that is coherent with professional reality. Marcelo García (1994) points out some essential elements in the initial training of teachers, such as the continuity of initial training, the need to link theory and practice, the global nature of not only academic but also pedagogical content in this training, training in keeping with the teaching applied by the teacher when he or she enters the working life, supervision as an essential element for improving the work of teachers and the development of a critical and inquiring spirit. Teaching professionals develop their professional practice in a rapidly changing context. Political, educational and social changes require an increasing degree of continuous training on the part of teachers to maintain the required level (Riding, 2006). Jovanova-Mitkovska (2010) points out that professional development in teaching should be highly applicable, a progressive process in which theory and practice run together, realistically oriented towards real needs and with technical support on which to build. Imbernón Muñoz (2007) points out three characteristics that distinguish lifelong learning from initial teacher training: reflection on practice in professional reality, analysing it and trying to understand, interpret and intervene in it, the possibility of exchanges of experience between professionals and the situation of professional development within the framework of an educational centre in which practices can be transformed through collaborative processes with a communication component. Riding (2006) argues that to achieve effective professional development, it must be regular, include opportunities for reflection and group research in the context of practice, be school-based, collaborative, anchored in pedagogical knowledge and be accessible and

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inclusive, so that all professionals can participate in it on an equal footing. The same author points to virtual teamwork networks as a way to promote the professional development of teachers. These communities have grown in number and quality since the 1990s, and as Lieberman (2000) points out, despite the previous existence of some networks, their number and influence has increased in recent years. According to this author, its flexible structure and organization are more in line with the rapid technological and socioeconomic changes of this era, providing the kinds of knowledge and experience that teachers need to succeed with their students. The characteristics that, according to Riding (2006), make these virtual networks of work among professionals suitable for building the professional development of teachers are the ease of establishing communication between various individuals or groups, asynchrony that facilitates reflection and brings with it contributions of greater quality, the directionality of information, being this towards the user instead of having to look for it, the basis of the written language of communication and the possibility of creating permanent files that can be used at any time as a virtual library. Compared to existing research on teacher professional development in other areas, research concerning Physical Education is much less abundant (Li-Juan and Sau-Ching, 2008; Ward and Doutis, 1999). Fejgin and Hanegby (1999) point out that the introduction of in-service training can be a problem in schools where physical education teachers are marginalized. In fact, this type of training within schools can lead to the perpetuation of undesirable traditional practices (Keay, 2005). Knight (2002) points out that continuing professional development is necessary because initial teacher training cannot contain all the knowledge that will be needed in the professional activity, nor can it contain all the procedures and forms of problem solving that the teacher will encounter in his or her daily work. According to this author, "*obsolescence will reach everyone except those involved in lifelong learning"* (Knight, 2002, p.230). Borko (2004) argues that if professional development is problematic for teachers and legislators, then it will necessarily also be a problem for researchers. Fishman et al. (2003, p.643) note that *"to create excellent professional development programmes, it is necessary to build an empirical knowledge base that links different forms of professional development to the benefit of both teacher and student learning*". Armour and Yelling (2007) identify a number of issues related to teacher

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learning in professional development programmes: teacher professional development programmes are shallow and unchallenging, links to university are interesting and stimulating for teachers, professionals often do not consult recent physical education research, good quality day-long sports updating courses are remembered by teachers, who prefer a professional development model in which they can choose what to learn, which is flexible in content, accessible and free of charge. They also point out that teachers prefer to learn from their own peers, especially those in their own networks, and that it makes no sense for a professional development programme to make teaching incompatible. In the same study, Armour and Yelling (2007) point out that the professors consulted for research defined effective professional development as something that should be practical, relevant, applicable, capable of producing useful new ideas, taught by a good trainer who knows the real world of teaching, challenging and offering time for reflection and collaboration. There is a wide variety of training options for Physical Education teachers. Jiménez Jiménez (1995) highlights some modalities of permanent teacher training, such as training courses, dissemination courses, with action projects, autonomous training, training in centres without or with external support, exchanges and training periods, autonomous research in centres or research with the collaboration and support of educational bodies. One of the most important moments in the professional training of physical education teachers is the internship phase in schools. The monitoring of teaching practices in schools has a profound impact on the learning of trainees (Hammerness et al., 2005). According to Levine (2011), supervisors can help trainees solve problems that arise in the classroom by participating with them in decision making. This author proposes some characteristics that communities of practice should have in order to produce benefits in professional practices, such as the need for norms that promote collaboration and collective responsibility, the articulation of activities that promote access to practice, and interpersonal trust and familiarity.

The aim of this article is to delve deeper into how the virtual (Re)Produce community of practice serves as a tool for teacher professional development, especially as a tool for continuous teacher training. We highlight two peculiarities of this community as opposed to others:

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Its"informal" nature, understood as not compulsory, nor belonging to any training programme of any institution, without a programme, qualification or degree.

Its open character, which leads to the bringing together of people from different professional backgrounds (teacher training students, university teaching staff and primary school teachers).

Methodology

Contextualization

(Re)Produce is a virtual community of practice (VC), hosted on the MultiScopic online platform. This platform, built using Ning technology, was born at the University of Valladolid and was promoted by some professors from the Department of Didactics of Musical, Plastic and Corporal Expression. As its name suggests, the initial idea of the platform is to generate multiple views on the same object of analysis. MultiScopic is an online social networking platform that hosts different virtual communities of practice (VCoPv) involving physical education teachers, students in initial teacher training, their university faculty and researchers in the field of physical education (Del Val, 2017; González and Bores, 2014). There are currently 562 physical education and physical education professionals participating in different communities of practice (many participants are part of several of these groups).

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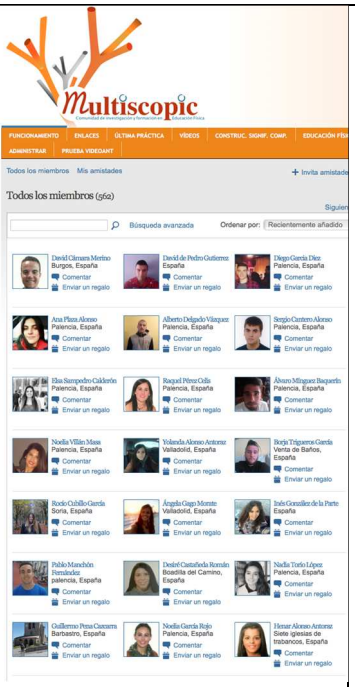	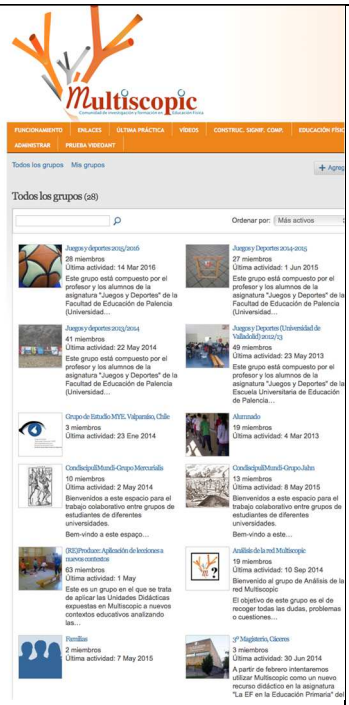	
Participants' page	Groups Page	Extract from a school practice analysis forum

Figure 1. Examples of what the MultiScopic platform looks like

In this virtual space, physical education lessons are presented, which are developed with different groups of schoolchildren from a Primary School. These lessons will then be used for analysis and knowledge sharing by the different MultiScopic participants.

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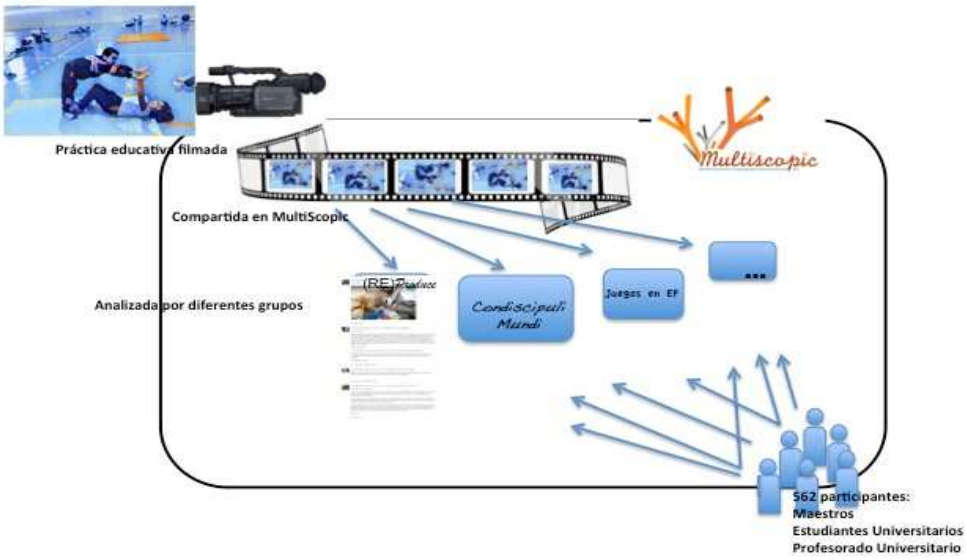

Figure 2. Diagram of operation in MultiScopic

Currently, participants are divided into different projects, groups and communities of practice. Among them we highlight:

- Get *on PE* : This is collaborative learning in initial teacher training courses. Students analyze physical education lessons in elementary school from those shown in MultiScopic. Sometimes, expert teachers participate in these groups.

- CondiscipuliMundi: In this case, the collaborative groups are made up of students from different countries. This provides multiple perspectives in the analysis of practice.

- Welcome *help*: These are communities of practice made up of experienced teachers and teacher trainers. Students ask questions about their teaching during their internship.

- *(RE)Produce*: Community of practice analysed in this work, which began to operate in 2009 in an embryonic way but from 2013 onwards on a regular basis with the aim of discussing practices shared through video or textual transcriptions that are replicated by other Physical Education teachers in different schools in various cities in Spain. On a weekly basis in almost

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all cases, the teachers who replicate the didactic units proposed in the group present their experiences to the community, who intervene with suggestions, questions, opinions, reflections and at the same time generate new material for debate.

Participants

This study is conducted with 15 of the 63 members at CoPv (Re)Produce. In this community, participants are volunteers and have no academic commitment or recognition of any kind (which is unusual in some groups called communities of practice, but where members are required to do so by a tuition and commitment to participate in order to obtain a qualification or diploma). This voluntary nature means that there are different levels of participation in the community, from very active members who carry the weight of the debates to"lurkers" who follow the discussions without intervening. To reflect this diversity, participants with different levels of professional socialization were chosen for the study.

Among the most active participants of (Re)Produce are university professors, physical education teachers in schools and several students in initial training.

Relations between participants are uneven. Some of them (university professors) have been friends for more than 20 years, others are former students of the teaching profession who have been trained by the former and who maintain a good relationship with their initial formators, and others maintain a teaching-discent relationship at present. All of this conditions the dynamics of the community (Rehm, Gijselaers and Segers, 2015) and influences the collection of information, making it easier for researchers to obtain detailed reflections on the personal visions of those participants with more experience. In order to reduce the bias of the researchers' position, work has been done on the basis of data, and through *reflection* (Hammersley; Atkinson, 1994), their decisions and reasons have been questioned, opening up to alternative visions to understand the different positions of the actors in the phenomenon.
In the processing of data and presentation of results, the anonymity of the persons involved has been maintained.

Focus of the research

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The research presented in this paper has an interpretative approach (Stake, 2010), opting for the case study since it aims to understand the actions of the participants and their views on the phenomenon studied (Flyvbjerg, 2004; Simons, 2009). The phenomenological influence on the orientation of Stake leads to the understanding of the case by trying to suspend the theoretical frameworks from which the researcher starts in order to let the object of study "speak" and show its peculiarities by trying to "preserve the multiple realities, the different and sometimes contradictory versions of what happens" (Stake, 2005, p.23). This research identifies as a case study: "the virtual community of practice (Re)Produce" and as a *quintain*: "Re)Produce as a means for professional development in teaching", based on a series of initial *tensions (issues*): tension between the dynamics of a community of practice and a virtual community; tension between professional dialogue in person and at a distance; and tension between traditional models and innovative models of continuous training.

These tensions reflected the initial pathways to be explored in the case from the first contacts with the phenomenon, but knowledge of the phenomenon would allow it to evolve, as will be shown when discussing the analysis of the data, to identify and focus the study on the following tensions: (1) tension between synchronous and asynchronous communication; (2) tension between different professional socialization groups and their relationship in the community; and (3) tension between rigid and structured participation and free participation.

Data collection procedure

This case was followed up during the year prior to the launch of the platform and during its first four years of development. During this time, information has been collected through different procedures: (1) analysis of posts from the different forums of the community of practice; (2) semi-structured interviews conducted at different points in the process with participants; (3) comments made by participants after reading the first research report. The orientation of this process was given by the emerging issues in the development of the study, following a cyclical procedure (Flink, 2012):

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- Formulation of *Issues*, informative questions and lines of inquiry in meetings of the research group.
- Data collection through semi-structured interviews.
- Categorization of the data (carried out by researchers, seeking divergent interpretations of the data following the open coding procedure proposed by Strauss and Corbin -2002-, in some cases contrasted with the participants).
- Formulation of new *informative questions* and identification of new tensions that would better address the *issues of* the case in light of the issues raised.
- Theoretical sampling (Strauss and Corbin, 2002) to guide the new data collection.
- New data collection to expand, confirm, or contrast the issues raised.
- Contrast of data with concepts of other authors and new collection of information (if necessary) to expand, confirm, contrast the issues raised or suggest new lines of inquiry.

Throughout the data collection and analysis process, the following informative questions and lines of inquiry were reached:

Issue	Informative questions	Lines of inquiry and analysis	Topics
Tension between synchronous and asynchronous communication	Does MultiScopic's own asynchronous communication act as an advantage for professional development in teaching?	Is the knowledge generated maintained over time? How do participants manage the information on the platform? Is there communication in an asynchronous participation system?	- Knowledge maintained over time. - The management of information by the participants. - The possibility of communication in an asynchronous system.
Tension between different groups of professional socialization	What is the relationship between participants from different	What professional socialization groups exist?	- Professional socialization groups on the platform.

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and their relationship in the community.	professional socialization groups?	Are there perceived differences in communication between participants from different socialization groups? To what extent is there a benefit in mixing participants at different levels of socialization?	- Communication differences between participants from different professional socialization groups. - Benefits of interaction between participants from different levels of socialization.
Tension between rigid and structured participation and free participation.	How rigid or free is a platform like MultiScopic in terms of participation?	Are there participation requirements? Are the procedures for the exchange of information regulated? Does free participation produce a benefit for the professional development of teachers?	- Participation in MultiScopic. - The regulation of information exchange in MultiScopic. - Benefits of free participation in MultiScopic.

Table 1 - Guiding questions and issues

Results

When asked about the benefits of (Re)Produce as an alternative, perhaps complementary, tool in continuing education, the participants point out some of the aspects that we present below.

Possibility of remote participation, from any device

As with any human group, there are difficulties in bringing several people together at the same time and in the same place. Daily chores, personal, professional or family responsibilities, time differences or long distances between people make it difficult to meet in person. The possibility of the professional training from home is highly valued.

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> *There are some advantages, but the main ones are that training can be done at home and at any time* (Interview with participant 7 in (Re)Produce. May 2016)

In the case of (Re)Produce, we find participants from cities such as Madrid, Salamanca, Valladolid, Oviedo, Palencia, Cáceres, Bogotá or Santander. It would be very difficult, therefore, to try to bring all the members of the community together in one place in order to exchange information.

> *Also be able to access people who are physically not at hand, and then be able to work* (Interview with participant 4 in (Re)Produce. May 2016)

In addition, existing mobile devices, such as mobile phones, tablets, laptops, etc., make it possible to participate in a community such as (Re)Produce from any of them, provided there is an internet connection.

> *You won't believe it, but I'm squatting against the wall while writting this message next to the room where my wife just had her epidural placed. They're letting me back in. Let's see if this MultiScopic thing is going to end up pleasing me....* (post in (Re)Produce from a participant and researcher. December 2012)

The previous fragment is a good example of the possibilities of participating in a training tool such as MultiScopic from a place as unusual as the emergency room corridor of a hospital. The participant feels the company of the group wherever he or she is and makes them share their experiences at the moment, beyond the educational topics. This speaks to us of the bonds that are established and the affiliations beyond the formative processes.

> *It's convenient to know that at any time you can connect and see where the dialogue is going. I remember some time during Christmas 2014 when I was very attentive to the warnings that came to my mobile phone from MultiScopic. The debate had gotten into"hot spots" and you got hooked on it. There was a kind of addiction to see what effects each new response would have.* (comments to the participant's reading of the report 7. June 2016)

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This ubiquity of which Weiser spoke to us in the early 1990s (Weiser, 1991), we see that it produces a"double" effect of the participant's experience that interferes with his or her experience in the near context or extends it into a new dimension:

> *I remember moments when I was doing something and I had an idea related to (Re)Produce and I wanted to share it quickly, and then I was watching the mobile phone ads to see what others were saying.* (comments to the participant's reading of the report 3. June 2016)

Easier coordination between participants

One objective of MultiScopic is to facilitate shared analysis of educational practice. This objective is reinforced by the possibility of intervention at any time and place.

> *It is not necessary to coordinate many people at a given time and place* (Interview participant 5 in (Re)Produce. May 2016)

A virtual platform may make it easier for several participants to intervene because they can choose the exact moment of their intervention, or even fragment it as much as possible or appropriate.

> *You can also access people who are physically not at hand, and then be able to work. The possibility of working with people from Palencia, Valladolid and Madrid would be much more complicated with another system* (Interview with participant 3 in (Re)Produce. May 2016)

The joint work between professionals from different cities becomes easier when everyone can intervene from their respective places of residence, so the coordination work is not so important here.

The knowledge generated is more accessible over time

Much of the knowledge generated in traditional training courses is lost, as dialogues, conversations or talks are often not stored anywhere. Instead, MultiScopic is an online platform that stores all posts generated by participants from the beginning of the community until the platform administrator decides to keep it active on the network. Therefore, any

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participant can come back months or years later to read what was said in a particular discussion thread.

> *Moreover, this is a knowledge that remains while the platform lasts, so it is possible to continue to build on what has remained in the platform* (Interview with participant 3 in (Re)Produce. May 2016)

Furthermore, this allows the knowledge generated months ago to serve as a starting point to be used later to continue building knowledge; quality knowledge that can be used to change teaching practice, following one of the features of the professional teacher training proposed by Jovanova-Mitkovska (2010). Professionals can re-view the videos of the practices or read the transcripts of what happened in the physical education lessons whenever they wish. For example, this material can be used in initial and in-service teacher training:

> *In order to analyze practices on some didactic units I ask the teaching students to read the thread about contact dance or the one about the career. They see that any topic in EF can generate multiple analyses and subtopics. I feel that this enriches their reflections and fills them with ideas for new analyses. They see that the EF has implications at many levels and come out, for example, from their usual comments about whether a class is good or bad because the children have had fun or not.* (comments to the participant's reading of the report 6. June 2016)

However, we know that this is complex, especially when the conversations are very contextual and have a lot of meaning for the participants at the time but can be lost over time:

> *Whenever I read some of the posts again, two things happen to me:*
>
> *Some conversations are very foreign to me, I can no longer remember exactly why the subject was being debated and it is difficult for me to follow the logic of what I want to say.*
>
> *Things I said, I would qualify them a lot because I don't think exactly the same at the moment.* (comments to the participant's reading of the report 4. July 2016)

In this sense, the platform has a witness purpose that allows to verify the evolution of the thought of the different participants in front of different subjects.

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Possibility of participation at appropriate times for each member of the community: asynchrony

In the same way that the advantage of the space element has been discussed, it occurs with the temporal element. In line with Armour and Yelling (2007), who point out the preference of teachers for flexible training activities in which they themselves can decide when to intervene, MultiScopic overcomes the temporary and spatial barriers that other forms of continuous training establish. The following excerpt from the interview confirms this statement.

> *It is possible to train from the distance and at any time* (Interview with participant 2 in (Re)Produce. May 2016)

One term that appears on several occasions is asynchrony, which refers to the possibility that MultiScopic offers of having its dialogues take place over a very wide range of time, something that does not allow a face-to-face face-to-face dialogue, for obvious reasons. This is one of the characteristics that Riding (2006) points out for this type of community of practice for professional development in teaching.

> *asynchrony: the possibility of flexibility and some possibility of a"temporary take-off" in the short or medium term.* (Interview with participant 6 in (Re)Produce. May 2016)

Some participants, on the other hand, have been inactive in the community for some time and when they have returned to it have managed to re-engage, with greater or lesser difficulty, as the asynchronous nature of the platform has allowed them to do so. In a traditional conversation or dialogue this is not possible.

These asynchronous and ubiquitous characteristics of this relationship lead to processes of interaction in "unfolding":

> *It has struck me several times that the heated discussions we had on the network did not transcend the conversations we then had face-to-face when I met with a participant. It was like"Vegas","what happens in MultiScopic stays in MultiScopic". It's like"splitting up"; you identify issues, debates and tasks with this online space and often you don't drag them into your face-to-face conversations with those same*

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> *people. It seems that there are some spaces and times for each theme.* (comments to the reading of the report by a participant. June 2016)

But asynchrony also presents its problems:

> *Many times you ask questions and they are not resolved. They're up in the air. It's something that doesn't happen so clearly in a face-to-face dialogue (although the other one could answer you evasively).*
>
> *There is a time of uncertainty between when an issue is raised and the other components give an answer. Sometimes, an urgent question arises to solve a problem of educational practice and no one answers you quickly. Although, it is true that, in general, when you ask for help, others tend to respond quickly, having personal time for the answers allows them to be somewhat more thoughtful and elaborate. However, that can also be a problem, because you want to give such an elaborate answer that you can't find the time to write it.*
>
> *Although it's convenient to be able to respond whenever and wherever you want, in the end, you know how we work, you tend to spend your time with commitments that require time and presence. It is true that those of us who intervened the most have taken time from anywhere and were hooked, but other members of the group admit that they did not participate because they could not find the time to respond.*
>
> *Sometimes you miss face-to-face contact. Although we have formed an interesting group, I think we would have another dynamic and relationship if the exchange were face-to-face.* (comments to the participant's reading of the report 3. July 2016)

This response shows how the participants experience the "clear-dark" nature of this type of dynamics and how any procedure has its repercussions and counterparts.

Possibility of interacting with participants at different levels of professional socialization

If it is difficult to bring together a group of professionals of the same professional level in person, the attempt to form a group of professionals at different levels is even more difficult. MultiScopic has allowed the coexistence of students in initial training, active teachers of Physical Education in primary schools, university teachers, even some *lurkers* -people who

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are part of the virtual community but their attitude is merely receptive- belonging to other professional branches.

> *A very positive aspect of MultiScopic is the possibility of sharing community with people at different levels of professional socialization: students in initial training, physical education teachers in schools, university teachers, etc.* (Interview with participant 7 in (Re)Produce. May 2016)

In (Re)Produce there is no rule that restricts access based on the level of professional socialization. In fact, experience in the CoPv is not a requirement for membership in the CoPv either.

> *There are no prior training or participation requirements in previous years. Newcomers can join the group together with experts, and once in the group, they can freely decide whether to continue and to what extent to participate* (Interview with participant 2 in (Re)Produce. June 2016)

Ease of extending a certain pedagogical vision and valuing its acceptance in the community

The group is generated from the vision on the educational value of the corporal in the school education of the Pedagogical Treatment of the Corporal (e.g. Bores-Calle, 2005; Vaca, 2007). This model was, in the case of several of the participants in (Re)Produce, a completely unknown approach. Through the practices shared by other professionals in MultiScopic, they have been able to gradually introduce themselves into its logic.

> *The original idea was to share a certain idea about EF (TPC) and see how it could be implemented in different contexts through teachers who may have shared ideas but not totally coincident. In this sense, MultiScopic requires being able to explain more, reach consensus, etc. If the other parties are not convinced that the model has not yet been fine-tuned, MultiScopic allows you to see what other people's response is, to see how convincing or unconvincing the model is, and to see what adjustments need to be made* (Interview with participant 6 in (Re)Produce. May 2016)

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This possibility of developing and extending a new pedagogy is in line with Armour and Yelling (2007) when they point out that professional teacher development should promote the creation of new pedagogical ideas that enrich the practice.

The"equalizing" effect of the platform: teachers and observers

Despite the fact that it exists in (Re)Produces two differentiated roles: that of the teacher who implements a Didactic Unit and exposes it to the rest and that of the participant who comments on the practices of others, both have the same status within the community. In fact, those who replicate the units in their classrooms are at the same time commentators of the same and/or other units, so the role of the participant depends on when they are participating. Be that as it may, the existing environment at (Re)Produce makes it easier for teachers to feel secure in sharing their work with other professionals, even though they may be judged positively or negatively.

> *Therefore, its main value is the possibility and the requirement to make something public in an environment where the proponents are only those who carry out, or vice versa* (Interview with participant 8 in (Re)Produce. May 2016)

Sometimes, the lack of participation of observers is due to the lack of commitment to contribute to the community. In this sense, MultiScopic did not have any pre-determined commitments or production targets. Anyone could participate freely when they considered it appropriate and be involved to the extent of their needs and possibilities:

> *I believe that the main advantage lies in its flexibility of access and participation. There are no schedules, no weekly tasks, no deadlines or goals, no problem of getting involved when and as much as you want or joining the group at any time. Similarly, there are no prior training or participation requirements in previous years. Newcomers can join the group together with experts, and once in the group, they can freely decide whether to continue and their degree of participation.*
>
> *This is its advantage, but at the same time it is the origin of the problems of functioning, continuity and systematic development of certain themes* (Interview with participant 2 in (Re)Produce. May 2016)

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In principle, this flexibility may be interesting, but at times this lack of orientation and systematicity also presents problems and leads to the abandonment or participation as a "lurker" of some members of the community. Among the pros of this flexibility is the adjustment of the debate to the interests of each participant and the feeling of being accompanied by other professionals:

> *I think (Re)Produce is a useful tool as it meets the needs of teachers. It gives them the freedom to conduct the debate wherever they want and they have the support of a community of professionals who accompany them in their doubts and reflections.* (Interview with participant 2 in (Re)Produce. May 2016)

Even if it is an apparent freedom, because the group does not always answer the concerns and there is self-control in the interventions in terms of a certain "social desirability":

> *It is another matter whether the needs of each one are truly answered by the group or whether each one manifests his or her authentic needs. There may be a certain amount of self-control and many times it is avoided to take the debate to the topics that one would like to see because it is not too heavy. For example, I would like to talk more about the specific details of the students' personal learning processes, but this involves information sheets that are difficult to write and difficult to read. Then you go a little further and put the dialogue on an interesting level of topics, but maybe it wasn't the one you really wanted.* (Interview with participant 2 in (Re)Produce. May 2016)

Discussion

The exchange of experiences, knowledge and information through a virtual platform allows its professionals to mutually enrich each other by finding facilities that do not exist in the more traditional continuous training processes such as seminars, courses or workshops. Even when comparing an "informal" virtual community of practice with distance learning models, there are several advantages of the former over the latter (Harvey, Cohendet, Simon and Dubois, 2013), however, as Yanchar and Hawkley (2015) show, there is a paradox that

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informal learning can be facilitated through some protection of the community under an institution. Since time is a scarce asset that professionals continually allude to as a barrier to participation in training processes (e.g. González-Calvo and Barba, 2014; Villegas-Reimers, 2003; Zepeda, 2013), a community like (Re)Produce allows participants to regulate their interventions knowing that communication is established asynchronously, making it possible to participate in moments of greater availability, either simply by reading the contributions of other teachers or by adding comments to the discussion threads. However, the asynchronous nature of this communicative exchange brings with it a certain problem for the participant, especially when dealing with long and dense texts or unresolved discussions or problems, something that does not occur in more directed or institutionalized formation communities (e.g. Clarke, 2009; Hou, 2015; Pareja Roblin et al., 2014). The socialization processes are carried out in a more fluid way by avoiding personal encounters, the computer medium being an agent of equality between teachers and thus diluting to a great extent the differences in professional position or experience that undoubtedly appear in face-to-face events, although all new participants follow a period of"socialization" in the community as Dennen (2014) points out and the participants self-regulate their interventions seeking a certain"social desirability" coinciding with what is recorded in works such as those of Tseng and Kuo (2010). However, as Evans and Bellet (2006) point out, the ideal would be a mixed model with certain face-to-face meetings from time to time that could foster links between members. The knowledge that is generated in this online community of practice remains constant when it is recorded in the platform, being available to the participants at any time for their consultation or for the continuation of a previous discussion. The teacher who develops professionally using this medium observes in him a component of freedom that allows him to select the most similar topics, at the same time that he can regulate his participation and vary its intensity and frequency according to his needs and interests, although this flexibility and lack of clear objectives or tasks to be fulfilled may cause the abandonment or lack of active participation as indicated in the works of Balcaen and Hirtz (2007). In response to the demands of the existing literature on vocational training, (Re)Produce is a means of linking theory and practice by its purely experiential nature on which a conceptual discourse is built

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that is fed back by practice itself, while at the same time enriching it in a communal way along the lines of previous experiences (Korthagen, 2010; Pareja-Roblin et al., 2014). (Re)Produce allows a virtual approach to a school reality that in many educational fields remains too far away. The Physical Education lesson is the centre of the debate and the engine of the reflection that starts from the reality of the classroom, thus bringing the practice closer to the professional in initial or ongoing training.

Conclusions

The results show how participants perceive the ambivalence of a voluntary CoPv (it is not part of any initial or continuing training course or seminar), in which there are no requirements for participation (students and professionals at different levels of professional development are mixed), nor concrete objectives (beyond providing a place for shared analysis of educational practice).

	ADVANTAGES	PROBLEMS
Asynchrony and ubiquity	Remote participation Easy coordination	Personal contact is missing Laxity in coordination Double experience (being in"reality" and in"virtual reality").
Discussions written on the platform	Knowledge accessible in time. Witness to the change of thought of the participants. Being a written exchange can lead to further elaboration of the discourse. Possibility of reclosing in time. Possibility of using the dialogues to generate new debates in the training	Contextualized knowledge, generated in debates and with little meaning over time. Writing takes time. Pressure of"what is written" that can lead to self-control or non-intervention

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	of other professionals.	
Flexibility, voluntariness and openness	We talk about what each participant is interested in. Each one intervenes according to his needs.	There are interventions that remain unanswered. Some participants take on a"lurker" role. Lack of systematicity and continuity in the development of the themes.
Shared knowledge	Construction of shared knowledge. Introduction to a shared vision of Physical Education.	

Advantages and Problems identified by the participants at this CoPv

In contrast to more structured formulas of initial and ongoing formation, a more "informal" and open community, such as (Re)Produce, allows for an adjustment of the debate to the interests of each participant (underlined by the possibility of asynchronous intervention), which can sacrifice systematic participation or continuity in the development of the themes. This openness and mix of people at different levels of professional development helps to socialize in a shared way of seeing Physical Education, although the need for communication to be established through writing limits the interventions (by time and by the pressure of what is written). This permanence of speeches, in addition to being an element of pressure and self-censorship, allows us to return to the issues, to join the debate with the new participants or to use the dialogues as material for the debate in teacher training. Virtuality can lead to a doubling of the experience of the participants, who maintain a type of relationship in the face-to-face interactions and another in the platform. This is an interesting phenomenon that we will explore in future work. The study shows that each structural decision (voluntary or obligatory, presence or virtuality, synchronous or asynchronous interventions...) has multiple implications that are experienced differently by each participant in the form of possibilities or problems.

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As a future line of research, we intend to compare these results with those of some other community of practice hosted by MultiScopic that has a mandatory nature (communities made up of teacher training students who study some of the degree subjects), with some mixed in terms of exchanges (face-to-face and virtual sessions), and others of a more structured nature (with a more specific programme and objectives).

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