



Reflective Practice In Hybrid Training: A Way To Develop Teaching Practices In Physical Education And Sports (PE).

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Abstract. The ongoing debates on the knowledge and competences that teachers need to develop during their initial and in-service years of education are constantly prompting reflections on various approaches and strategies. This current trend is forcing PE teachers to rethink their practices in depth, to discover new pedagogical approaches and to familiarize themselves with the latest trends and innovations in their discipline, and to involve students in a process of self-analysis and critical reflection on their own actions, experiences and knowledge. The article seizes on this process in order to question individuals to take a step back and proactively examine their practices, beliefs, and values.

The in-service training of PE teachers is essential to develop their ability to articulate theory and practice, thought and action, leading to a better analysis and evaluation of their pedagogical practices. Blended learning, which combines online and face-to-face training, provides teachers with more time for reflection and flexibility in accessing resources.

The objective of this research is to understand how the pedagogical materials used in hybrid continuing education can promote the development of reflective practice among Moroccan PE teachers, taking as examples a national distance training and a regional face-to-face training, as fertile ground for the articulation between theory and practice and for the development of reflexivity.

Keywords: Pedagogical innovation, hybrid training, reflective practice.

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1 Introduction

Many people choose to pursue a career as a physical education teacher because of their passion for sports, previous sports experience, or genuine interest in physical education during their studies. While these reasons may be valid for practicing this profession, they alone do not guarantee the ability to teach effectively and help students achieve their learning goals. A true professional physical education teacher must have the scientific knowledge and skills necessary to be able to educate his students effectively. As well as the ongoing debates on the knowledge and skills that teachers need to develop during their initial and in-service years of training, there are constant reflections on various approaches and strategies that could improve the performance of university teacher training institutes. A paradigm shift has taken place over the past several decades in the fields of vocational training and education. Moving from competence to innovation is now at the heart of this change in training practices. The identity of a PE teacher, their connection to the school and the knowledge they impart are crucial aspects of their profession. These aspects evolve over time and experience. It is therefore essential for teachers to question and adjust them regularly. Continuing education offers an effective way to achieve this, by allowing them to reflect and update their knowledge and practices. One way to support this thought process is through blended learning. This approach not only gives teachers more time to reflect on their practices, but also gives them the flexibility to access training resources at their own pace. Schön (1994) has already argued that the continuing professional development of teachers must be the subject of a particular desire to set up training models that best respect the ecology of teaching practice. Research on this topic can contribute to the design of more effective hybrid arrangements for in-service teacher education. They can also identify the extent to which the teaching materials and communication tools used in the hybrid system promote reflective practice among PE teachers. To do this, three questions guided our research:

1. What is reflective practice and what does it consist of?
2. Is there a significant difference between the impact of online and face-to-face continuing education on the reflective practice of PE teachers in Morocco?
3. How do the pedagogical materials used in online and face-to-face continuing training contribute to the development of the reflective practice of PE teachers in Morocco?

2 Theoretical framework

2.1 Reflective Practice

For centuries, the themes of reflexivity and human thought have been the subject of extensive debate. In his book "How We Think," Dewey emphasizes the importance of experience in thinking. He argues that thought is rooted in experience and can only develop through interaction with the real world (Boutet, M. (2016)). Reflexivity is an

essential component of the teaching profession. It allows you to improve the quality of teaching, to develop your professional skills and to build a solid professional identity. It is a veritable "regime" that nourishes teaching practice and gives it its full meaning. Tardif (2012) emphasizes this well when he writes that "to teach is to be condemned to a regime of reflexivity on one's own professional activity and one's own identity" (Tardif, M. (2012). Reflective practice "develops through the practitioner's time and expertise over the course of the professional career, and it is built through the exercise of reflective analysis"(Lévesque, 2015). The reflective approach involves a distinct process of professional development. It requires the teacher to take a step back from his or her professional situation. This new posture is increasingly recognized as a crucial factor in improving one's performance throughout one's career or training. In order to grasp the essential essence of reflective practice, Schön (1994) explains it as a "spiral process that passes through phases of observation, action, and re-evaluation, beginning with a single, uncertain situation, which becomes clearer as one strives to transform it"(Schon, 1994),but at the same time it evolves as one seeks to understand it. For Philippe Perrenoud, "The reflective practitioner is a practitioner who watches himself act as if in a mirror and seeks to understand how he does it, and sometimes why he does what he does, possibly against his will"(Perrenoud, 2004), By engaging in a deep reflective approach, practitioners are able to detect discrepancies between their actual practices and the practices advocated. This identification is a crucial issue in reflective practice. Indeed, the analysis of these gaps allows practitioners to adjust their actions, acquire new skills and increase their professional effectiveness.

2.2 Reflection on action

Action thinking is an ongoing process that requires teachers to constantly question and strive to improve. By reflecting on their practices, physical education teachers can create more effective and enriching learning experiences for their students. According to Lafortune (2008), reflective practice has three components: "one component of reflection and analysis of one's practice, another related to the transition to action, and finally, a final component referring to the construction of one's evolving model of practice"(Lafortune, 2008). The first aspect revolves around an in-depth reflection on his practice and its analysis. As a first step, the teacher needs to examine in depth a range of actions, interventions, approaches, skills, and knowledge. This is followed by a conversation with oneself or with a group of colleagues, with the aim of evaluating one's own performance at work. A common strategy used to foster the introspection needed to reflect on actions and exchange information among practitioners is the use of a peer or supervisor. This facilitation of the process allows for the development of "awareness and knowledge"(LE LARDIC, 2013). Similarly, teachers can analyze the actions of others and develop their thinking skills through this strategy. The second component requires the teacher to immerse himself in a reflective approach by applying the learnings resulting from reflection and analysis, and by continuously evaluating his actions throughout his professional practice. The third essential element for a teacher is to build, adapt and develop his or her own model of practice. To achieve this, they must be willing to engage in self-reflection by deliberately reflecting and questioning their actions. The

educator can only effectively reinforce this process in learners after having appropriated its principles himself (Dewey, *ibid.*; Korthagen, Kessels, Koster, Lagerwerf and Wubbels, 2001; Brouwer and Korthagen, 2005; Loughran, 2006; Brockbank and McGill, 2007; Donnay and Charlier, 2008)

The third essential element for a teacher is to build, adapt and develop his or her own model of practice. To achieve this, they must be willing to engage in self-reflection by reflecting and deliberately questioning their actions.

The driving force behind the approach remains a cycle of reflection (Dewey, 1933): 1) in the course of experience, a challenging situation "triggers" 2) an investigation, particularly through observation, which leads to 3) an analysis leading to 4) a restructuring of the understanding of the initial situation (reconceptualization), leading or not to 5) a different action.

Reflection is a process of transformation initiated by a triggering element, leading to a redefinition of one's understanding and which can have an impact on one's concrete actions. This conceptualization of reflection underpins our methodological approach to identify how we can support the reflective practice of PE teachers in a hybrid training.

2.3 The hybrid system

Blended learning involves more than just integrating digital learning into the curriculum, but also identifying specific learning objectives and opportune times that can benefit from digital integration. According to Garrison and Vaughan (2008), "Blended learning combines face-to-face learning with online learning in a planned and pedagogical manner, to form an integrated pedagogical approach." (Garrison et al., 2012). According to Albero (2010), the system is a complex structure that integrates technical, symbolic, and relational elements in which the actors and their activities are the centers of interest. We can simply retain a clear definition of hybrid training systems, which stipulates that "the hybrid training system is characterized by the presence in a training system of innovative dimensions related to distance learning. The hybrid system, because it presupposes the use of a techno-pedagogical environment, is based on complex forms of mediatization and mediation." (Albero, 2010). In other words, hybrid training takes advantage of digital technologies to offer a richer and more flexible learning experience than traditional training. This paves the way for "instrumentation of many different activities." (Peraya, 2006)

2.4 The hybrid system and the development of reflective practice in PE

One of the key objectives of hybrid mismatches is to actively involve the learner in the construction of his or her knowledge. The trainer guides this process by proposing prolonged asynchronous reflections, accompanied by confrontations with other theories. This allows the learner to consolidate the knowledge acquired in the classroom and enrich it by giving it a more complex and meaningful perspective. The use of a hybrid approach promotes the development of a reflective practice of PE teachers, as it allows them to continue to reflect on their actions even outside of class, while benefiting from the support and pedagogical resources provided by the trainer. This gradually

promotes autonomy and the ability to self-evaluate, which are crucial for maintaining an active lifestyle throughout their lives. A hybrid system consists of learning activities that can take place at three key moments (Hernandez & Lhommeau, 2014).

The hybrid learning system is distinguished by its unique structure, divided into three distinct and complementary phases: before, during and after the face-to-face interaction. This innovative approach leverages the strengths of online and face-to-face learning to provide a rich and engaging learning experience. Online preparation before the face-to-face meeting with online activities (Reading documents, watching videos, participating in virtual discussion forums, etc.). Face-to-face collaboration and interaction bring learning to life through collaborative, interactive and practical activities (group discussions, case studies, simulations, team projects, etc.). These interactions promote the concrete application of the knowledge acquired online and allow you to benefit from the expertise and direct support of the teacher.

The hybrid training system involves the integration of a variety of learning methods, face-to-face and remote, which work on different "synchronous or asynchronous" times while offering tutoring that is best suited to the needs of learners. This approach requires mastery and commitment on the part of educators and learners. Numerous studies in the field have highlighted the different ways in which innovation is integrated into teacher education. Among the most innovative approaches are those that seek to create scenarios that facilitate the development of professional skills among trainees. The selection of the most suitable tools depends on various factors: the training objectives, the target audience, the availability and the technical skills of the trainers and learners. Distance learning platforms have gradually been developed to support this new training approach. Online learning provides valuable flexibility for teachers to progress at their own pace. Deschryver et Lebrun (2014) emphasize that hybrid systems, designed according to a pedagogical vision centered on learning, promote the exploration of multiple interactions and encourage learning through complementary resources and spaces for accompanied reflection. Watch demo videos and focus on the specific skills they need to progress. (Deschryver & Lebrun, 2014) ; The approach can take many forms to meet the unique needs of each teacher.

3 Methodology

Our goal is to understand the extent to which hybrid online and face-to-face continuing education has enabled participants to develop their reflective practices. We will assess the satisfaction of participants in two types of continuing education in PE in Morocco: a national distance learning course and a regional face-to-face training at the Tangier-Tetouan-Al-Hoceima academy. Our analysis will focus specifically on the use of online and face-to-face teaching materials to support communication and the development of reflective practice among teachers.

3.1 Analysis of the results of Distance in-service training of physical education and sports teachers in Morocco

Based on the results of Nezha Zahir's 2019 research entitled: Towards skills engineering: the case of e-learning in-service training for physical education and sports teachers in Morocco. Research that is part of pedagogical engineering and uses a social constructivist approach. The main goal is to design an effective distance learning activity by encouraging interaction and collaboration between learners. An experimental research methodology was adopted to confirm the main hypothesis that in-service distance education can be an appropriate response to the in-service training problem of PE teachers and an advantageous option for the development of their professional skills. The training was organized by the Directorate for the Promotion of School Sports DPSS in Morocco. This training started on 16 May 2016 and was closed at the end of June 2016. The experimental system involved 286 PE teachers. They opted for the ministry's e-learning platform called "Collab". The training covered areas such as refereeing and team training like football, basketball, volleyball, handball and rugby as priorities for multiple reasons. In particular because of the availability of training content in these sports as well as the strategic desire of the Ministry to develop these sports within schools.

3.1.1 Appréciation des supports pédagogiques :

The analysis of **Table 1** shows that participants found the educational resources and communication tools available to them to be rather beneficial, others expressed some reservations. They appreciate being able to use a variety of media such as videos, frequently asked questions, messaging, discussion forums, live chat, agendas and graphics, as it allows them to adopt the method that suits them best and to learn at their own pace. Learners recognize that these resources are useful for assimilating knowledge. Videos help to visually capture key ideas, messaging facilitates one-on-one exchanges with tutors, forum encourages peer-to-peer interactions, chat allows for real-time conversations, calendar organizes deadlines. However, some felt that some sections could be improved. (Zahir, 2019)

		Pas de réponse	Satisfaisant	Peu satisfaisant	Pas satisfaisant
Foot-ball	arbitrage	3	10	0	2
	entraînement	2	15	2	0
Basket-ball	Arbitrage	1	13	6	1
	entraînement	1	7	9	1
volley-ball	Arbitrage	0	16	5	2
	entraînement	0	15	2	0
Hand-ball	Arbitrage	1	9	4	0
	entraînement	0	9	9	2
Rugby arbitrage		0	4	1	0

Table 1: Nezha Zahir 2019 Towards skills engineering: the case of in-service distance training for physical education and sports teachers in Morocco p; 238

3.1.2 Communication preferences:

The data in **Figure 1** provide valuable insight into communication practices in sport, particularly with regard to learner/tutor interactions.

Synchronous communication has a positive impact on learning: 47% of respondents express satisfaction with the use of synchronous or real-time communication. They like this mode for its speed of exchange and the responsiveness of the tutors. While synchronous interaction is the preferred medium, a number of 26% of respondents also appreciated the asynchronous mode, highlighting the need for a diverse offering. The combination of modes is appreciated: 40% of participants choose a hybrid approach, combining synchronous and asynchronous modes for their communication. This flexibility allows them to tailor their communication to their needs and preferences.

In summary, the results of this study show that the participants in this training have varied expectations in terms of communication. It is therefore essential to offer educational devices that offer a combination of synchronous and asynchronous modes of communication, in order to promote reflective and personalized learning.

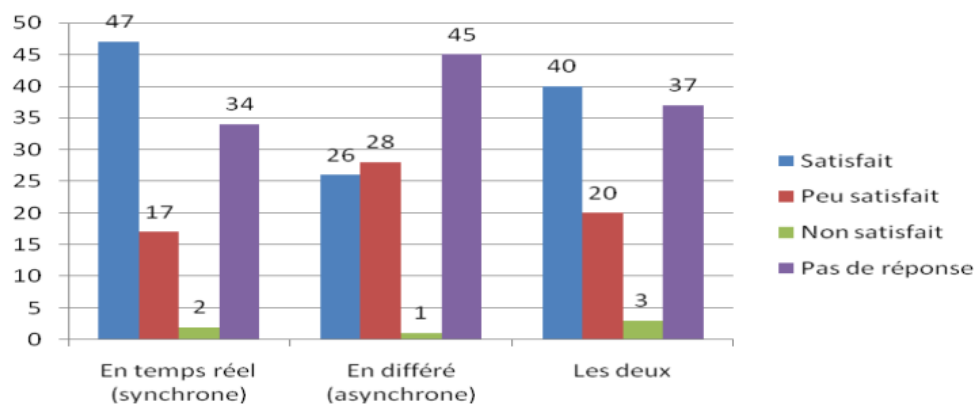


Figure 1 : Nezha Zahir 2019 Vers une ingénierie des compétences : cas de la formation continue à distance des enseignants de l'éducation physique et sportive au Maroc p ;238

3.2 Face-to-face training: the case of the in-service training of PE teachers carried out in the Regional Academy of Education and Training Tangier Tetouan Al Hoceïma.

As part of the continuing education organized by the Tangier Tetouan Al Hoceïma Regional Academy of Education and Training, which began in January 2022, I had the opportunity to participate as a trainer in a training course for PE teachers. The main objective of this training, which brought together 210 participants, spread over all the delegations in the region, was to equip teachers in the effective management of sports centres at the elementary level.

In order to evaluate the participants' prerequisites and to identify the problems encountered in the management of sports centers, we opted for the use of the Ishikawa diagram, also known as the 5 M diagram. This visual tool has proven to be particularly relevant in identifying the root causes of dysfunctions and proposing concrete solutions.

The activity took place in the form of working groups, thus promoting the active involvement of teachers. Each group was tasked with building an Ishikawa diagram by identifying the different causes (M) that can hinder the proper functioning of sports centers. These cases were classified into the following categories: Labour; Method; Hardware; Middle; Matter.

3.2.1 Analysis of the results and implications:

The analysis of the Ishikawa diagrams made by the groups highlighted a multitude of problems encountered in the management of sports centers. These problems concerned in particular the lack of training of teachers in the use of equipment and the

management of activities at the primary level. Insufficient financial resources for infrastructure maintenance and the acquisition of new equipment. The difficulty of maintaining the security of the premises and supervising a large number of students. The lack of coordination between the different actors involved in the management of sports centres.

Analysis of the results (**Table 2**) reveals a very positive adoption of the Ishikawa diagram by participants. This tool has proven to be particularly effective in fostering critical reflection on practices, encouraging collaboration among colleagues and identifying specific areas for improvement. Nearly 83% of respondents (sum of the responses "Somewhat useful", "Somewhat useful" and "Very useful") highlighted its impact on their ability to analyse their practices in depth, while just over 91% highlighted its contribution to taking a step back and sharing experiences. About 89% specifically mentioned its usefulness in identifying areas for improvement in the operation of sports centres, and almost 93% considered it a versatile tool, adaptable to

Affirmation	Pas du tout utile	Peu utile	Assez utile	Plutôt utile	Très utile
L'utilisation du diagramme d'Ishikawa m'a encouragé à réfléchir de manière critique sur ma propre pratique.	5%	10%	30%	45%	10%
Le diagramme d'Ishikawa m'a permis de prendre des reculs et de partager mes expériences.	2%	7%	25%	50%	16%
Le diagramme d'Ishikawa m'a aidé à identifier des axes d'amélioration pour le fonctionnement des centres sportifs.	3%	8%	28%	47%	14%
L'utilisation du diagramme d'Ishikawa m'a motivé à collaborer et interagir avec mes collègues pour analyser la situation.	4%	9%	27%	46%	14%
Je pense que le diagramme d'Ishikawa est un outil utile pour la réflexion professionnelle des enseignants qui peut être utilisée en ligne et en présentiel.	1%	6%	24%	52%	17%

different contexts.

Table 2: Completed by the design and training team of the Primary Level Sports Centre Management Module 2023

3.2.2 Other findings:

Many participants insisted on the importance of creating WhatsApp groups to facilitate exchanges and the sharing of ideas given the insufficient time devoted to training.

One of the participants said that "At one point, I had a particularly hard time identifying the human factors causes. I suggest that more time may be needed for this exercise, particularly to further analyze the interactions between the different elements. Once I got home, several other ideas crossed my mind. I disseminated them in the party's WhatsApp group, which opened a new debate that helped to enrich our thinking on the subject."

4 Discussion

La présente section présente des éléments d'analyse pour vérifier comment les outils utilisés en formation hybride influencent la réflexion pédagogique des enseignants.

4.1 The diversity of teaching materials:

The use of different educational resources such as videos, forums, chats, promotes the exchange of experiences and the collective construction of knowledge through forums and group activities. The alternation of synchronous and asynchronous modalities makes it possible to respond to different learning styles and offers great flexibility to learners and gives them a lot of resources, which allow them to assimilate concepts effectively and to benefit from personalized support. Deschryver and Lebrun (2014) emphasize that hybrid systems, designed according to a pedagogical vision centered on learning, promote the exploration of multiple interactions and encourage learning through complementary resources and spaces for accompanied reflection.

4.2 The use of specific tools:

Through the collective work on Ishikawa diagrams, teachers have been able to benefit from considerable mutual enrichment. Discussions, reflections, sharing of experiences and different perspectives on things bring out finer perspectives and clarify more innovative solutions. This method, based on problem solving and group work, develops teachers' management and organizational skills. At the same time, it encourages them to enter into a dynamic of reflection in action, to experiment with new practices, to evaluate their effects and to adjust their actions accordingly. This iterative cycle of reflection-action-evaluation forms the basis for continuous and sustainable learning. Most studies exploring the concept of reflective practice highlight the extent to which the cognitive and analytical aspects of professional activity are considered crucial for the improvement of practices. However, thinking is not a skill that can be learned on its own or in

isolation. This requires deliberate development and supervision, especially during initial training and possibly continued in continuing education. Perrenoud insists on the fact that reflective practice is essential to the autonomy and responsibility of teachers in the face of contemporary challenges. It encourages the development of a reflective posture in teachers by emphasizing reflective action as a key element of teaching work. It also stresses the importance of encouraging and supporting this practice through various means such as practice analysis seminars, discussion groups on professional problems and methodological support (Perrenoud, 2004).

4.3 The hybrid system and reflective practice

The hybrid system, which combines face-to-face and online modalities, offers fertile ground for cultivating the reflective practice of PE teachers. This pedagogical approach, which combines direct interactions and digital tools, promotes in-depth metacognition and a critical analysis of practices. To ensure its success, it is essential to take into account certain elements:

The quality of the teaching materials: The resources offered must be adapted to the needs of the teachers with a variety of resources that allow the trainees to enter into an iterative cycle of Reflection-Action-Evaluation based on collaborative tools and reflective activities.

Support for trainers: The role of the trainer must go further than that of facilitator or facilitator of exchanges. It should offer activities that encourage teachers to implement new practices and to evaluate them. Discussion forums and group activities contribute to the exchange of experiences and the collective construction of knowledge. Individual exchanges with a tutor also allow teachers to benefit from personalized support in their reflective process. According to their previous work, Charlier, Deschryver and Peraya (2006) proposed a common framework for the analysis of hybrid mismatches. In this regard, they defined a hybrid training system as follows: "by the presence in a training system of innovative dimensions related to distance learning. The hybrid system, which involves the use of a techno-pedagogical environment, is based on complex forms of mediatization and mediation. (p. 482). According to Hy-Sup researchers (Deschryver, Lameul, Peraya and Villiot-Leclercq, 2011), there are five cardinal points in the design of a hybrid device:

- Distance and interaction management: This implies that you have to plan the time spent in person or remotely; organize their temporal order as well as the type of corresponding activities. These elements vary according to a given pedagogical approach.
- Student support: Three types of support are essential: cognitive (support for the construction of knowledge), affective (support for commitment and motivation) and metacognitive (to develop self-regulation of learning).

- Mediatization: This refers to the techno-pedagogical environment that implies its design, production and implementation. The choice of the right media as well as the script are decisive.
- Mediation: These are exchanges between learners, tutors and accompanying resources.
- The level of openness of the system.

5 Conclusion

Reflective practice is an essential element for the professional development of PE teachers. With it, they can analyze and improve their methods from a critical perspective. In a hybrid training setting, reflective practice plays a key role in linking theory to practice. It makes it possible to cultivate a proactive and adaptable professional posture, to improve the quality of teaching, to meet the individual needs and expectations of students and to contribute to the development and professionalization of teachers. Thinking in action plays a crucial role in enabling teachers to reflect, examine, take action and evaluate its interventions to ensure quality teaching. The hybrid system offers physical education teachers a multitude of resources and pedagogical tools that allow them to analyse professional situations online (watching videos, analysis grids), to participate in discussion forums and collaborative working groups. In the classroom, teachers can discuss their analyses with peers and trainers, and receive individualized feedback. The use of online resources, interactive learning modules and demonstration videos promotes access to a wide range of techniques that help PE teachers improve their profession. This hybrid approach also fosters collaboration between teachers, as they can share experiences, discuss practices, and find common solutions to the challenges they face.

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