

Master's Dissertation/
Trabajo Fin de Máster

CLIL IN PHYSICAL EDUCATION: STRENGTHS AND CHALLENGES

Student: Gallego Méndez, Julio
Supervisor: Dr. Luciano García García
Department: English Philology

November, 2020

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ABSTRACT

Faced with the new challenges and needs that arise in education in a globalized world, the Content and Language Integrated Learning approach has been postulated as one of the most successful bilingual education models. This methodological approach is the one that is currently more widespread and among the content subjects in which it is implemented is physical education. From this perspective, this Master's dissertation proposes a review of the scientific literature in this regard that allows a detailed analysis in order to clarify what are the main strengths and challenges of the implementation of this approach in the physical education subject. Finally, after exposing the main findings, some proposals are also raised that could help overcome the challenges or difficulties detected.

Key words: *Content and Language Integrated Learning; physical education; CLIL; PE.*

RESUMEN

Ante los nuevos retos y necesidades que surgen en la educación en un mundo globalizado, el enfoque de Aprendizaje Integrado en Contenidos y Lenguas Extranjeras se ha postulado como uno de los modelos de educación bilingüe de mayor éxito. Este enfoque metodológico es el que actualmente está más extendido y entre las asignaturas de contenidos en las que se implementa está la educación física. Desde esta perspectiva, este Trabajo Fin de Máster plantea una revisión de la literatura científica al respecto que permita realizar un análisis profundo sobre cuáles son las principales fortalezas y dificultades de la implementación de este enfoque en la asignatura de educación física. Por último, tras exponer los principales hallazgos se plantean también algunas propuestas que podrían contribuir a superar los retos o dificultades detectados.

Palabras claves: *Aprendizaje Integrado en Contenidos y Lenguas Extranjeras; educación física; AICLE; E.F;*

1. INTRODUCTION

In recent years, the world has undergone notable changes that have had their different repercussions in the different national societies. Undoubtedly, scientific and technological progress has allowed relations and communications between different societies and regions of the world to be possible and frequent. Hence, we could affirm, that one of the most notable consequences of these changes is what we call globalization. The possibility of traveling by plane from one side of the planet to the other, the fact of being able to connect by telephone with people who are thousands of kilometres away, or the appearance and expansion of the internet and its implications in our way of life have contributed to understand the world as we know it today: a globalized and interconnected world.

All these changes and possibilities associated with globalization have their implications and repercussions in the different areas of a society: economically, politically, culturally, and of course education is also affected by the phenomenon of globalization (Wells et al., 1998). However, these changes and challenges that globalization entails in education are not intrinsically positive or negative in themselves, but will depend on the proper management of them so that it is possible to obtain the greatest benefits that the globalized world offers, at the same time that possible weaknesses or inconveniences that may arise are minimized (Bakhtiari, 2011; Stromquist, 2002).

It is a widely accepted fact that one of the most notable needs that globalization has generated in the educational model is the introduction of bilingual education (García, 2011) and, consequently, nowadays most of the educational systems of the different developed countries have bilingual education as one of their main objectives. This need to implement bilingual education programs that enable students to be trained and prepared so that they can perform properly in a globalized world has been consolidated in recent years and has been widely accepted to the point that it is considered essential, while the monolingual education is beginning to be understood as an insufficient, incomplete educational model that does not respond to the real needs of the 21st century (Bergillos, 2007; Vez, 2009).

This idea that education should be adapted to the needs and challenges that globalized society entails is evident in the educational policy promoted by the institutions of the European Union. Already at the end of the last century, the European Commission

(1995) includes in the *"White Paper on Teaching and Learning. Towards the Learning Society"* that education in Europe must be one of the main tools to respond to the three great challenges posed by globalization: the impact of the information society, the impact of internationalization and the impact of scientific and technological knowledge. Furthermore, in this European consensus document, education is not only named as a general measure, but explicit reference is made to the notable need to improve the education in foreign languages of European citizens, establishing as one of the priority lines of action at the European level envisaged for 1996 (European Commission, 1995, p. 1): "Develop proficiency in three European languages".

This importance of foreign language learning is presented as the fourth general objective of the action plan for education designed by the European Commission, and in addition, multilingualism is referred to as "part and parcel of both European identity / citizenship and the learning society "(European Commission, 1995, p. 47). Finally, this document also defends the advantages of starting this bilingual or multilingual learning from an early age and reflects the aforementioned objective in several sub-objectives or aims, among which "Promote the learning of at least two Community foreign languages by all young people", " Spread the daily use of European foreign languages in schools of all levels" or "Foster awareness of Community languages and cultures, and their early learning" (European Commission, 1995, p. 49).

Faced with this reality, solutions and strategies are sought to improve citizens' proficiency in foreign languages so that they can successfully operate in the globalized world. And this is where bilingual (or multilingual) education stands as one of the most promising actions. However, until then bilingual education did not enjoy the long history it currently enjoys, so there were not many clear and solid approaches or strategies in Europe that allowed establishing a single generalized bilingual education plan with broad guarantees of success. For this reason, as Pérez-Vidal (2007) points out, the initial approaches taken for the implementation of bilingual or multilingual education programs in Europe were based on the experience and educational research that existed with respect to three main approaches: Canadian immersion programs, North American bilingual teaching models and European international schools (the latter stream less consolidated at the level of educational research compared to the previous two).

Thus, especially the previous experiences in bilingual education of the programs implemented since the 1950s in both Canada and the US were very relevant at the beginning of the bilingual programs in Europe, since these previous experiences confirmed the success of these approaches in learning foreign languages, which as mentioned above was one of the main objectives of European policies at the time. Furthermore, there was solid research on the advantages of implementing these educational programs to improve various aspects of the students' education, such as the linguistic, subject content, cognitive, and attitudinal levels compared to the traditional education (Perez-Cañado, 2012; Pérez-Vidal, 2007).

However, this does not mean that these bilingual education models were perfect since there were also numerous studies and investigations that pointed out to the different weaknesses of these approaches as limited improvements in the so-called productive skills (especially speaking) or difficulties in grammatical competence and vocabulary knowledge (Navés, 2009).

On the other hand, the experiences of bilingual teaching in the European international schools were also taken as a reference for the beginning of the implementation of bilingual programs in the education system within Europe. Nevertheless, in this case there were much less educational research evaluating the results and weaknesses of this approach, although some authors such as Wode (1999) or Beardsmore & Swain (1985) report the educational benefits of this model, affirming that there were even better educational results in certain aspects compared to the Canadian immersion programmes.

Though, despite the positive educational results confirmed regarding this type of bilingual methodologies, different authors state that the conditions of the context in which these models have been implemented are too specific. Hence, it is not enough to reproduce or transfer the same model as a generalized option at European level, as this does not guarantee that it is specifically adapted to the conditions and needs of the different education systems (linguistic and sociocultural context) along Europe (Gallardo et al., 2009).

1.1. Content and Language Integrated Learning

Precisely due to this need to propose a bilingual education model that could respond to the specific needs and characteristics of Europe, arises what is called *Content and*

Language Integrated Learning (CLIL), which is considered “(...) a European label for bilingual education” (Bergillos, 2007, p. 28) since it is strongly linked to the reality of bilingual education in Europe.

This CLIL model is considered to have been promoted in 1996 by UNICOM, the University of Jyväskylä (Finland) and the European Platform for Dutch Education. Moreover, since its appearance it has been valued as the most appropriate solution and response for bilingual learning and teaching in Europe, so its implementation in different education systems and countries in Europe has been growing exponentially, to the point that it is currently the predominant approach of bilingual education in the member states (Perez-Cañado, 2012).

Thereby, there have been numerous authors who have proposed a definition to the term CLIL in order to clarify its meaning and its main features. Thus, among all these definitions, the one elaborated by Marsh & Langé (2000) takes special relevance, since it strongly and concisely reflects the main characteristics of this bilingual education approach: “a dual-focussed education approach in which an additional language is used for the learning and teaching of both content and language ” (Marsh & Langé, 2000, p. 2).

Undoubtedly, this dual approach is the main feature of the CLIL model, since it clearly distinguishes it from other types of approaches, achieving a very specific interaction between different elements that are integrated in the teaching-learning process in a holistic way, and that were defined by Coyle (2007, p. 549) as “the 4Cs Conceptual Framework”: content (subject matter), communication (language learning and using), cognition (learning and thinking processes), and culture (intercultural understanding and global citizenship).

For all these reasons and for its specific characteristics, CLIL has consolidated in recent years as the main model for the implementation of bilingualism in Europe, being the educational approach that is carried out in most of European bilingual schools (Fernández-Barrionuevo & Baena-Extremera, 2018).

1.2. CLIL in physical education

One of the main features of CLIL is the teaching and learning of the content subject in a foreign language, instead of being limited to the teaching of the foreign language only

in the linguistic subject. In this sense, bilingualism programs based on CLIL methodology have been implemented in the different content subjects of the different educational levels (mathematics, social sciences, natural sciences, music...). The physical education subject has also been selected with relative frequency as one of the content subjects in which to carry out CLIL and, although the relationship between CLIL and physical education in the scientific literature does not have a particularly relevant place, there are numerous references that allow us to provide information in order to understand how this interaction works and what are its main aspects that should be taken into account (Coral & Arribas, 2013; Salvador-García et al., 2017).

Thus, one of the first issues that we should take into account when we analyze this interaction is that the physical education subject has very specific characteristics that significantly differentiate it from the rest of the subjects: the spaces in which the sessions take place (outside the classroom, schoolyard, wide spaces, etc.), the nature of the contents that are taught in this matter (eminently practical, manipulative and based on experience and movement) or the materials that are normally used (numerous and varied). All these features have an important impact on the way in which students interact with each other and with the teacher, so all these aspects should be considered when choosing physical education as a CLIL subject (Fazio et al., 2015; Ramos & Ruiz-Omeñaca, 2011; Salvador-García et al., 2017).

However, this does not mean that the implementation of CLIL in physical education is necessarily a bad idea, but rather that all these conditions of the subject should be taken into account in order to guarantee the academic success of the implementation of this bilingual approach in physical education. In fact, there are several authors who argue that physical education constitutes an ideal environment for learning the language and they ensure that the linguistic objectives are perfectly compatible with the objectives of the matter subject, so it should be taken into account as a potential subject in the implementation of bilingual educational plans in order to take advantage of all the opportunities it could offer (Bell & Lorenzi, 2004; Clancy & Hruska, 2005; Ramos & Ruiz-Omeñaca, 2011; Salvador-García et al., 2016; Salvador-García et al., 2017; Solomon & Murata, 2008).

Therefore, faced with this dilemma, different experiences collected in the scientific literature on educational matters have been raised with the intention of shedding light

on the convenience and compatibility of bilingual learning in the subject of physical education. In addition, the intention has been to analyze as much information as possible regarding this topic, so the study has not been limited to practical experiences but also more theoretical researches have been selected that address the interaction between CLIL and the subject of physical education from another perspectives.

2. OBJECTIVES

In relation to what has been exposed in the previous sections, the aim of this MA dissertation is to analyze the different existing scientific literature regarding the implementation of CLIL in physical education in order to clearly expose which are the main strengths and challenges and in this way to be able to contribute with some proposals aimed at overcoming the weaknesses or obstacles identified. Thereby, this main objective could be divided into different objectives which are set out below:

- A. To analyse the existing scientific literature regarding the implementation of CLIL in physical education.
- B. To identify which are the main strengths and challenges of the implementation of CLIL in physical education.
- C. To conclude with some proposals that could help to overcome the difficulties or challenges of the implementation of CLIL in physical education.

3. METHODOLOGY

In order to carry out the analysis of the existing scientific literature regarding the implementation of CLIL in physical education, an initial search has been carried out in different scientific databases, introducing the following keywords: "*CLIL*", "*PE*", "*physical education*" and "*Content and Language Integrated Learning*".

After that, a detailed analysis of the different results obtained has been done, selecting those papers that focused on the implementation of the CLIL approach in the physical education subject. Only investigations focused on the elementary and secondary level of education were analysed. It is important to clarify that not only the initial results of the search in the scientific databases have been taken into account for the analysis, but also that the investigations that have been accessed through the specialized bibliography cited or recommended in these first researches initially analysed have been considered for the study. This fact is justified since one of the main objectives of

this MA dissertation is to carry out a broad analysis of everything collected in the scientific literature regarding this topic.

Then, the different selected research studies have been analysed in depth and the main perspectives and evidences regarding CLIL in physical education have been identified. These evidences have been classified into two general groups: strengths and challenges.

Finally, after having identified the main strengths and pitfalls according to the scientific bibliography, in the conclusions section some proposals or ideas are raised that could allow the detected challenges to be overcome.

4. RESULTS

Although the study of the CLIL approach in physical education is not as widespread as in other subjects, it is true that in recent years the scientific literature that addresses this issue has grown considerably (Salvador-García et al., 2017). For this reason, we can affirm that there are enough studies on the implementation of CLIL in this subject to be able to analyse the main aspects related to this approach, although, without a doubt, it would be convenient to continue carrying out different studies in this regard that would allow increase the existing information regarding this matter and would provide solidity to the studies already performed (Ní Chróinín et al., 2016; Salvador-García et al., 2017).

Furthermore, many of these researches are mainly based on theoretical analyses, although in recent years more and more experimental researches are being accomplished based on educational experiences of CLIL in physical education with students at schools. Thus, as mentioned above, taking into consideration what the main goals of this MA dissertation are, both types of investigations have been considered: those which approach the matter from a more theoretical perspective, and also those based mainly on experience, since it is understood that these different views can contribute to obtain a comprehensive and detailed idea of the main aspects of CLIL in physical education.

If we analyse the different theoretical and practical research on the subject, it is difficult to find only arguments for or against the implementation of CLIL in the subject of physical education. Thus, most studies show both positive aspects and difficulties or

challenges that arise in the implementation of the CLIL approach in this subject. Nevertheless, it is true, that some studies put the focus more on the positive aspects while others focus more on the difficulties (Ó Ceallaigh et al., 2017). Moreover, we could state that this is precisely the intention of this MA dissertation, not to give a personal opinion on this issue but to draw conclusions based on what the scientific evidence and the body of research objectively contribute, valuing both the positive and negative aspects.

As mentioned above, in order to try to facilitate the reading and understanding of the analysis performed here, the evidences found regarding CLIL in physical education have been classified into two main groups that collect the main positive aspects and the main weak points or pitfalls. Thereby, in the following subsections, detailed analyses are carried out on these aspects, documenting always the sources from which this evidence has been obtained.

4.1. CLIL in physical education: main strengths

As a starting point for this section, it is convenient to consider the main general benefits already attributed to the CLIL approach, in which we could say that there is some consensus in this regard. This research really seeks to analyse the advantages of the implementation of CLIL specifically in the physical education subject, but undoubtedly it is advisable to know what is stated in a general way regarding the benefits of CLIL in order to be able to contrast later with what is collected in the studies strictly referred to the physical education area.

When reviewing the literature about CLIL approach and its benefits, one of the positive aspects that many authors and researches agree on is that CLIL has a positive impact on language learning, use and development on students (Gallardo et al., 2009; Martínez & Gutiérrez, 2009; Moreno, 2009; Ruiz & Zenotz, 2015; Várkuti, 2010; Whittaker et al., 2011).

On the other hand, other interesting aspect in relation to the benefits of CLIL is how this approach affects the learning of the contents of the non-linguistic subject. Regarding this issue, the scientific evidence seems to show that CLIL not only does not negatively affect the content of the subject matter, but also improves the acquisition of these contents (Jäppinen, 2006; Serra, 2007; Ullmann, 1999; Wode, 1999).

Coyle et al. (2010) point out to the cultural component as another of the main advantages of the introduction of CLIL, that is, this approach prioritizes and highlights culture as an essential element during the language learning process, which in turn increases one's own culture and multicultural knowledge and allow create links between them and language. And this and this same perspective has also been defended by numerous authors (Griva, & Kasvikis, 2014; Hélot & Young, 2006; Van de Craen et al., 2008).

Finally, another of the main positive aspects of CLIL that can be found in the scientific literature is a higher level of cognitive activation during the learning process, which has a clearly positive impact on it (Jäppinen, 2006; Lamsfuß-Schenk, 2002; Navés, 2009; Van de Craen et al., 2008; Wolff, 2003).

Thereby, these pointed assertions could be understood as the main assets of CLIL in general, according to the current scientific evidence. Although they are not the only positive aspects that have been pointed out, they do coincide in numerous authors and researches, which is the reason why it has been decided to show here as the main strengths of the CLIL approach without denying that there are a variety of outstanding benefits in addition to those listed here. Therefore, at this point, it is time to start analysing the different evidences regarding the advantages of applying CLIL in physical education classes, in order to be able to contrast and compare with what has already been stated.

4.1.1. Movement facilitates language acquisition

Regarding language acquisition, Bell & Lorenzi (2004) indicate in their research how the physical education subject can facilitate the learning of a second language. For this purpose, they begin by analysing which are the main factors that can contribute to the learning of this second language, and then focus on practical examples that demonstrate the contribution of physical education to these objectives. In this line, the authors point to the movement as a positive and different element offered by this subject for learning the language in an eminently practical way (Bell & Lorenzi, 2004, p. 48): "Movement itself affords numerous opportunities for physical educators to connect physical activity to vocabulary "; arguing also that the movement education, dance, and rhythmic activities can all be used to help students to connect written and verbal information in a creative way. Moreover, they make direct reference to examples

of activities that have been shown to improve language learning, such as dramatic performances or the practice of choreographies guided by instructions in the target language.

This interpretation of body movement as an aspect that contributes to language acquisition has also been exposed by other authors such as Coral (2010), who defends movement as an essential aspect in the achievement of communicative competence in any process of learning a language; Asher (2003), who assures that the application of movement (total physical response) during CLIL physical education classes significantly improves language comprehension; or Alias (2011), that defends the learning of the language through didactic methodologies based on movement and games.

A very particular and interesting justification for the implementation of CLIL in this subject is the one supported by Bothman (2013, p. 2): “Physical education class is an excellent time to acquire knowledge from other content areas, as neurogenesis, the development of new cells, is happening and the whole body is engaged in learning, especially for second language acquisition”. Therefore, this author links the physiological benefits of movement (neurogenesis) with an improvement of the language learning process, especially with the foreign language.

In the same vein, Coral (2013) focuses on movement as an essential component of learning the target language, referring to this movement as a fundamental scaffolding tool in the learning process. Thus, this author assures that learning tasks that combine the use of target language along with body movement are enormously advantageous for students. Furthermore, in other research, this same author analyses the contribution that Physical education in CLIL makes to English oracy, and concludes that “(...) is larger than expected” (Coral, 2012, p. 17). As well as Devos (2012), who also mentions the importance of movement as a scaffolding in the language learning process and states that from this perspective students acquire language through the construction of meaning based on experience.

Torres-Outón (2019) states that the character eminently playful, dynamic and flexible (through movement) of the physical education subject causes the desire and need to communicate. Therefore, the transfer of oral language learning in physical education

classes, occurs naturally, as opposed to the more artificial and elaborate process of learning a foreign language per se.

Christopher et al. (2012) also found in her research that learning the language through body movement (during classes based on sports activities) had a significant positive impact on the expressive and communicative ability of students in the target language. As well as Schilling et al. (2006), who value positively the benefits of learning based on movement and motor games stating that being active and moving improves child's attention span and capitalizes on verbal, visual, and kinaesthetic language learning; especially in the elementary education stages.

4.1.2. Increasing interactions between students

It is a widely accepted fact that physical education is a subject that has characteristics that are particularly different from the rest of the subjects, this is due to various factors such as the type of content that is addressed (of an eminently practical nature) or the type of methodology, spaces or materials (Fazio et al., 2015; Ramos & Ruiz-Omeñaca, 2011; Salvador-García et al., 2017). And all these differentiating aspects seem to have an impact on another of the elements identified in the implementation of CLIL in this subject: the interactions that occur between students during classes (Torres-Outón, 2019).

According to Rottmann (2006), using physical education as a content subject to develop a language increases and encourages student interactions, improving the frequency and variety of these interactions naturally. This interaction among students is considered a necessary condition for learning the language and is closely related to the so-called *4Cs framework* which is based on methodologies focused on cooperative learning, verbal interaction and socialization (Chiva-Bartoll et al., 2015).

Similarly, Mateu (2013) also states that physical education through CLIL provides practical real-life situations that increase the oral interaction between students and emphasizes the importance of designing tasks that optimize and foster oral interactions of students in the target language. Rodríguez-Abreu (2010), defends too that physical education is an ideal vehicle to facilitate language learning through movement, due to its functions of knowledge, communication and relationship.

One of the most relevant research about the analysis of these interactions among students during physical education classes through CLIL is the one carried out by Coral & Lleixà (2016), in which this aspect is considered as one of the main positive aspects of the implementation of this CLIL approach in this subject, admitting that it has a special impact on the improvement of learners' oracy. In fact, the authors take this parameter as a quality indicator to take into account for the design of educational tasks in the area of physical education through CLIL, in order to guarantee the success in learning the target language.

González et al. (2013) confirm that the activities proposed by the CLIL method from the physical education subject favour interaction and constant participation of the students, which has an impact on a significant construction of new learning both in the target language and in the content of the subject. Which coincides with what was stated by Torres-Outón (2019) about the need and desire of students to communicate with each other during physical education sessions.

In the same way, there have been several researches that confirm the increase in interaction between students as a relevant aspect of the implementation of CLIL in the physical education subject, since this usually translates into a greater implementation of the oral interaction in the target language in real-life situations and this undoubtedly contributes to the acquisition of the language (Hernando et al., 2017; Ramos & Ruiz-Omeñaca, 2011; Salvador-García et al., 2018).

4.1.3. Improves students' motivation

The motivation and predisposition of the students is one of the main factors for the success of the teaching-learning process (Coral, 2010; Salvador-García et al., 2018).

Alias (2011) highlights the potential of didactic methodologies based on games and movement for learning the target language, and precisely bases this argument on increasing student motivation. Similarly, Hernando et al. (2017) argue that students like the idea of having physical education in English because they learn it from an entertaining and different way for them, that is, in general there is a positive predisposition and motivation towards physical education through CLIL, which would have a positive impact on their learning.

According to Coral (2010) the intrinsic motivation of students for movement is one of the key factors in the implementation of the CLIL approach in physical education, therefore, this author encourages teachers to take advantage of this motivation and recalls that it is the teacher's job to choose didactic strategies that allow maintaining and optimizing these initial levels of students' motivation. Similarly, Christopher et al. (2012) state that the levels of motivation of students towards language learning increase when it is done from the physical education subject (in this specific case through sports), enabling them to become more confident language learners and observing that students "(...) become receptive to learning new words, phrases and sentence structures(...)" (Christopher et al., 2012, p. 28).

On the other hand, Ó Ceallaigh et al. (2017) also indicate a notable increase in the motivation of students to learn the language when CLIL is carried out in physical education and they conclude in their research that this increase in motivation is mainly due to the opportunity offered by this subject to put into practice linguistic learning in useful and functional situations and contexts in which students understand the meaningful use of the language, also detecting higher levels of confidence for learning among students. Zindler (2013) states that applying CLIL in physical education classes makes students perceive the learning experience as new, interesting and attractive. And moreover, this fact together with providing an immediate purpose for language learning, could notably increase learners' motivation.

It is interesting to note that other authors such as Ramos & Ruiz-Omeñaca (2011) also refer to this functionality and pragmatism of the contexts that are reproduced in the physical education subject as one of the main aspects that contribute to increasing student motivation in the language learning process: "Thus, when learning developed in physical education can be endowed with a functionality extrapolated to real life outside school, something fundamental when trying to educate for life." (Ramos & Ruiz-Omeñaca, 2011, p. 158). And they reflect on the introduction of learning the target language in the physical education subject, stating that the resulting combination of high intrinsic motivation that usually occurs in classes, what is taught in them, the novelty of the introduction of the language with an instrumental sense, and the personal experiences of the students can permeate the learning of the language of additional interest and motivation.

González-Víllora et al. (2013) propose an innovative and interdisciplinary proposal between the areas of physical education and English (following similar principles to the CLIL approach), designing a theoretical-practical proposal based on teaching English and the contents related to sports practice in the physical education classes with elementary school students. Thereby, the researchers conclude that there is a notable improvement both in the academic performance of the students and in the levels of motivation towards both subjects, and they justify these improvements because of the practical situations integrated in the physical education sessions, which favour the motivation of the students.

Torres-Outón (2019) highlights the intrinsic motivation it generates in students as one of the main causes indicated by different reference authors, in relation to the choice of physical education as a great content subject for the learning of the target language. Thus, this author argues that the level of motivation of students towards physical education classes is usually high, which predisposes them towards a more active use of the additional language.

A similar vision on the origin of this motivation of students towards learning the target language in the area of physical education is provided by Fernández (2011). This author justifies the high levels of motivation in students towards language learning in physical education due to what he calls "The realism of physical education" (Fernández, 2011, p. 30), that is, students link language learning to practical situations similar to those of their real lives outside of school, and especially when they play, an activity that is closely related to their free time; so that their motivation towards language learning is increased exponentially in this content subject.

A very interesting point of view is the one exposed by Heras & Lasagabaster (2015) who state that physical education through CLIL approach could help reduce gender differences in motivation to this subject, exposing too the positive effect in both genders on the acquisition of technical content-related vocabulary.

Alonso et al. (2015) establish that, as can be deduced from the systematic observation of the physical education teachers who teach this subject in bilingual schools, although learning L2 can be complex, through the area of physical education it will be less difficult, since we have high motivational levels on the part of students, as they have fun and play while learning. Furthermore, they also confirm these statements with the

results of their bilingual practical proposal carried out in physical education, ensuring that: "The development of the practical proposal was very positive, achieving a very high motivation and involvement among the students"(Alonso et al., 2015, p. 119).

In short, the motivation of students towards learning the language during physical education classes has been one of the most studied and outstanding factors regarding the implementation of CLIL in this subject, there are numerous researches that report high values of motivation of students during bilingual physical education classes (Cepero et al., 2013; Chiva-Bartoll et al., 2015; Salvador-García et al., 2017).

As a final reflection, a clear indication of the relevance and priority place occupied by the motivation of students towards language learning in bilingual physical education classes, is the existence of specific tools officially validated to evaluate the motivation of students during bilingual physical education classes (Baena-Extremera et al., 2012).

4.1.4. *Linking learning to culture*

The possibilities that the implementation of CLIL in the area of physical education offers to link the learning process with culture has been pointed out as another positive aspect by some authors. Despite the fact that in this case there are few researches that analyse this point from this content subject, since this has a great relationship with the fundamentals of the CLIL approach and the so-called *4Cs framework* (Coyle, 2007) and is supposed to be one of the main strengths of the CLIL methodology in general (Coyle et al., 2010), it has been considered relevant the mentioning of this issue in this section of the MA dissertation.

Chiva-Bartoll et al. (2015) clearly introduce the analysis of the cultural component in the application of CLIL to the physical education subject through a proposal with a critical pedagogical approach that allows accentuating the cultural, critical and dialogical richness of the subject, remembering that: "In the physical education subject, contents are a cultural object both for its scientific character as well as for its practice and social repercussion" (Chiva-Bartoll et al., 2015, p. 112). Thereby, these authors, as well as Salvador-García et al. (2016), choose to propose didactic approaches focused on contents intimately linked to culture such as typical sports.

Especially relevant in this regard is the proposal by Alonso et al. (2015), in which the CLIL approach integrates the contents intimately related to Anglo-Saxon culture and

the physical education subject. And they achieve this by developing a playful proposal on popular and traditional English games that allows working on learning the target language in physical education while focusing on the cultural component so relevant to the CLIL approach.

We could conclude about this topic that, although it is assumed that the culture-based approach should be present whenever CLIL is implemented in any content subject, there are some authors who highlight the potential of physical education in this sense, affirming that elements and contents of this subject such as body expression, non-verbal language, typical dances or traditional sports and games are a great opportunity to link culture to the target language learning (Salvador-García et al., 2017).

4.1.5. Development of key competences

Finally, another of the aspects referred to in the different researches that analyse the application of CLIL in physical education is the contribution of this approach to the development of the so-called key competences.

Thus, from the current European and Spanish educational perspective that is structured or based on key competences, the analysis of how the implementation of CLIL in the physical education subject can contribute to the achievement of these competences has special relevance. Then, one of the most relevant researches in this sense is the one carried out by Coral et al. (2016) that evaluates the effects of the CLIL approach in physical education classes for the improvement of key competences, with positive results ensuring that this subject as put students in contact with the physical, social and cultural environment, through actives methodologies and in varied contexts could contribute in a privileged way to their acquisition.

Salvador-García et al. (2016) also point to the physical education subject as an ideal environment for the development of key competences and state that the CLIL approach would undoubtedly contribute to enriching the learning experiences offered by this subject. As well as Alonso et al. (2015), who detailed how their proposal through CLIL in physical education contributed to the development of the different competences.

Coral (2013) also makes mention of key competences in his analysis of physical education through CLIL, and argues that, although this subject has traditionally been

related only to the development of some competences, its contribution to the achievement of certain competences has been underestimated, since the great variety of contexts and activities that it proposes, together with the interactions between students that it fosters and the great motivation it supposes for the students, constitutes a powerful tool for the development of key competences traditionally associated with other areas such as foreign language competence, linguistic communication competence or cultural competence.

4.2. CLIL in physical education: main challenges

In the previous section, the main positive aspects pointed out by the scientific literature in the implementation of CLIL in the physical education subject have been analysed in detail. Thus, all these advantages and strengths must be taken into account and should serve as encouragement to continue carrying out these CLIL proposals in the subject of physical education. However, this does not mean that in the implementation of the CLIL approach in this subject, difficulties or challenges may not also arise. And so, these pitfalls must be faced and overcome by teachers and students, therefore they must be considered whenever educational experiences in this line were implemented.

Thereby, in this section of the MA dissertation we are going to analyse what are the main challenges or difficulties that arise from CLIL in physical education, taking as a reference for this objective what has been exposed in the scientific literature regarding this issue.

4.2.1. Reduces students' engaged time in physical activity

As previously mentioned, movement and physical activity are essential elements of the physical education subject. Precisely these aspects contribute to a great extent to the differentiated character and educational potential of this educational subject and contribute too to the acquisition of healthy habits by the students, as well as to their integral development.

In this sense, numerous researches highlight the need for movement and action to play a necessary and inherent role in physical education classes and propose variables such as motor-engaged time or students' engaged time in physical activity to evaluate and control levels of physical activity and the time during which students are moving in

physical education sessions (Cuellar & Carreiro, 2001; Campos et al., 2011; Del Villar, 2001; Pieron, 1999; Salvador et al., 2016; Siedentop, 1988).

Gómez & Nuñez (2007) affirm that the motor-engaged time is a measure that can provide direct information not only on the use of the physical education classes but also give an idea of the physiological impact that this class has on the students, and therefore, of the positive impact that this subject can have on the health of the students' bodies.

Other author, Recio (2003), relates the motor-engaged time to the success of the teaching-learning process, stating that a higher motor-engaged time means more time for the student to experience motor skills and execute and perform the motor task, so this directly affects the student's learning level. In addition, this author concludes that a higher motor-engaged time translates into more significant learning among students.

At this point, and considering the widely confirmed importance of this variable, it is worth asking whether the application of the CLIL approach in the physical education subject can jeopardize students' engaged time in physical activity. In the scientific literature we can find different investigations that try to shed light on the matter, evaluating if there is truly a reduction in the time of physical activity of students during the physical education sessions in CLIL, or if on the contrary this variable is not seen affected by the implementation of this bilingual methodology.

García-Calvo (2018), compares in his research the implementation of the physical education session in two groups of students: one of them based on CLIL methodology and the other with traditional non-bilingual methodology. This author concludes that in the non-bilingual group physical educational classes are associated with a teaching style based on managerial methods more focused on the teacher than on the students, where the game has a minimal presence at the curricular level and there are low levels of motor-engaged time. While in the CLIL group, a constructivist methodology is used based on the game, with non-directive work techniques, promoting teaching styles through search and guided discovery and resulting in increased motor-engaged time levels. However, the limitations of this study can be discussed insofar as it associates with each type of teaching (bilingual vs non-bilingual) a specific teaching style, when it is understood that this may depend to a great extent on the decisions of the teacher in each case, on a personal level.

On the other hand, Martínez & García (2017) carried out a research to analyse the relationship between the introduction of bilingual CLIL methodological approach in physical education classes and motor-engaged time in schoolchildren in the Region of Murcia (Spain). Thereby, the authors concluded that there were significant differences in this variable between both groups of students, probably due to the implementation of the CLIL model in the physical education subject.

In the same vein, Coral et al. (2017) investigated levels of motor-engaged time between groups of students who received CLIL-based physical education classes and compared them with the recommended by health authorities and with what previous studies showed when this subject is taught in the mother tongue. Thus, in this research authors detected that: “motor-engaged time in physical education lessons applying the CLIL approach was, on average, 41.86%, which is lower than what is generally recommended by educational authorities for physical education classes” (Coral et al., 2017, p. 1). Furthermore, these authors suggest that these lowers levels of physical activity time during classes could be due to “the excessive use of language support materials such as flashcards to facilitate communication or the types of physical activity involved in the lessons” (Coral et al., 2017, p. 1). Although these authors state the need for further research on this issue to consolidate the validity of the obtained results.

In reference to the introduction of the bilingual methodology in the physical education subject, Molero-Clavellinas (2011) holds that teachers should not fall into excessive theorizing of the subject as a consequence of the need to learn vocabulary and grammatical structures necessary to be able to interact and communicate in a foreign language. Since this excessive theorization would lead to a notable decrease in the time of physical activity of the students, drastically reducing the levels of movement during the classes. Therefore, the author proposes the interdisciplinary and integrated work as the backbone of the bilingual project of school, which will favour the eminently practical nature of the physical education subject, with all its great advantages.

About the same topic, Gruber (2015) states that, although there are numerous proven benefits of the implementation of CLIL in the physical education subject, this fact should not be disregarded that the use of a foreign language increases the complexity of the teaching-learning process in this matter subject. In this research, the author concludes that: “students’ feedback reveals that the movement time is perceived to

suffer from the tuition in a foreign language to some extent” (Gruber, 2015, p. 200), and exposes that this pitfall had already been previously pointed out by other authors such as Rottmann (2006), who argues that the extra complexity derived from the introduction of a foreign language in physical education classes could contribute to a decrease in the time of movement and physical activity of students during the sessions of this subject.

In conclusion, we could affirm that there is some controversy on this point in the scientific literature, although there are several authors and researches that suggest or conclude a decrease in the students’ engaged time in physical activity during physical education classes based on the CLIL approach. Therefore, this aspect should be specially considered as a possible challenge to overcome in the implementation of this type of bilingual programs in this content subject.

4.2.2. Could produce negative emotions in some students

Although most of the researches carried out in this regard seems to make clear the positive perception of students towards physical education through CLIL, certain studies have suggested that in some cases this introduction of the target language in the subject could produce a certain rejection among the students. However, the existing body of evidence in this regard is not too remarkable, although it is considered interesting to also expose in this section some of these analyses as a possible weakness or challenge to overcome in the application of CLIL in this subject content.

In this line, Emmanouilidou & Laskaridou (2017) reported that some students were initially sceptical or reacted negatively at the beginning of the implementation of CLIL in physical education classes, and they justify this attitude because the students thought it would be much more difficult and that they would have to carry out a very great effort to understand the contents of the subject, compared to physical education classes conducted in the mother tongue. Nevertheless, these authors add that this situation was only temporary since after several weeks: "(...) their attitudes started changing as they began to feel safer, more confident and more accustomed to using language for and through learning" (Emmanouilidou & Laskaridou, 2017, p. 60).

Salvador-García & Chiva-Bartoll, (2017) detected good levels of motivation among most of students in physical education through CLIL classes, although they pointed out: “However, there were specific cases in which language could affect negatively to

some particular students” (Salvador-García & Chiva-Bartoll, 2017, p. 1136). Therefore, they concluded that teachers should consider that every student is unique and, consequently, the introduction of language learning in this content subject could have different effects in each student, sometimes unwanted. This conclusion had already been stated previously by Ramos & Ruiz-Omeñaca (2011), who also point out possible negative effects in some specific cases (minority) in aspects such as motivation, that should be taken into account by teachers.

On the other hand, Fernández-Barrionuevo & Baena-Extremera (2018) performed a research in order to detect the possible differences between girls and boys regarding their perception of foreign language learning and physical education in CLIL contexts. For this purpose, they carried out a statistical analysis on the collected data and concluded that there are significant differences between both genders towards foreign language learning and physical education.

Thus, the results showed that in general, the average levels of motivation towards learning the foreign language were higher among female students and considerably lower among male students, while the levels of motivation towards physical education were high among male students and lower in female students. Furthermore, these patterns were repeated inversely when measuring the demotivation or boredom variables, that is, generally boys had higher levels of demotivation towards learning the language and girls towards physical education.

Therefore, these results could mean that the implementation of the CLIL approach in the physical education subject could lead to a certain level of demotivation or boredom among students either towards learning the target language or towards the physical education subject itself (depending on the gender).

However, the same authors propose solutions in their conclusions in order to try to address this possible difficulty in physical education through CLIL: the main idea would be to take these results as an opportunity and not as an obstacle, thus they propose to take advantage of the high levels of motivation towards physical education in male students to make learning language more attractive, and vice versa in the case of female students, using motivation through language learning to increase physical education motivation. In conclusion, the key point will depend on the ability of the teacher to take advantage of the motivation of his students and be able to find an

optimal balance between language learning and physical education in the CLIL approach of this subject (Fernández-Barrionuevo & Baena-Extremera, 2018).

Finally, Garcia-Calvo et al. (2019) also analysed the levels of fun and boredom of the students regarding physical education classes through the CLIL approach, focusing on the age variable. And they concluded that younger students display higher levels of satisfaction than older ones, although the researchers revealed that in general: "Students' satisfaction is more related to fun rather than boredom in bilingual physical education " (Garcia-Calvo et al., 2019, p. 316). Nevertheless, these results should be considered when implementing CLIL in physical education with older students in order to propose different actions that could increase student's satisfaction.

4.2.3. Insufficient preparation of physical education teachers in CLIL

This last challenge or difficulty detected in the implementation of CLIL in the physical education subject does not focus on the students but on the teachers. Thus, in this regard Faya-Cerqueiro (2012) analysed the perspectives and opinions of future physical education teachers towards the introduction of bilingual methodology in their classes and concluded that, although around 60% of future teachers showed intention to carry out the bilingual approach in this subject, 30% of these affirmed to feel insufficiently prepared or trained for this purpose.

Fernández-Fernández et al. (2005), also implemented a research focused on this topic. In this line, they studied the perception that teachers (including physical education teachers) involved in bilingual programs have about this methodological approach. And they conclude that, although the initial motivation of teachers towards this approach is very high, the motivation and desire to work of the teachers could be undermined by misinformation and a lack of planning.

One of the most relevant studies in the analysis of possible deficiencies in the training of physical education teachers in the implementation of bilingual programs is the one carried out by López-Sánchez et al. (2018). These researchers designed their study with the aim of knowing the opinions of physical education teachers about bilingual physical education and whether they felt qualified to teach the subject in the foreign language. Thereby, the results showed that: "70% of the teachers declared that they were little or very little prepared to impart bilingual instruction" (López-Sánchez et al., 2018, p. 15).

Therefore, the researches indicate that most of the teachers in the sample presented positive opinions towards bilingual physical education, although they did not have much experience teaching bilingual and were not sufficiently prepared to provide bilingual instruction. Finally, they concluded that it would be advisable to design and implement educational programs in order to improve the qualification of physical education teachers to provide bilingual instruction, verifying the effectiveness of these programs (López-Sánchez et al., 2018).

As a final reflection, the aspects pointed out by the aforementioned authors show that to some extent there could be deficient levels of teacher training when implementing the CLIL approach in the physical education subject. And this fact can constitute a barrier or difficulty that must be overcome since there have been many experts who have pointed out the great importance of teacher training for the success of bilingual education programs (Martín-del-Pozo, 2013; Martínez & García, 2017; Ramos, 2007; Travé-González, 2013).

4.2.4. Could lead to increased teacher workload

Closely related to what was addressed in the previous section, we find the references of some authors who suggest that the application of CLIL in the physical education subject could cause a notable increase in the excessive workload of the teachers of this subject, with all the negative consequences of this situation.

It is a widely noted fact that when CLIL is implemented in content subjects such as physical education, teachers not only have to prepare the contents and lessons of this subject but also introduce the linguistic aspects and integrate them with content objectives, the need to develop materials due to the lack of specific bilingual materials for this subject as well as design the appropriate scaffolding in order to facilitate the learning process for students (Coral, 2013; Gómez & Jiménez, 2012; Ramos & Ruiz-Omeñaca, 2011). Thus, all this could be translated in an increasing workload for the physical education teacher, sometimes untenable.

Emmanouilidou & Laskaridou (2017) also mention this excessive increase in the workload and planning time of physical education teachers when the bilingual approach is introduced in this content subject, stating that this may lead to a decrease in teacher motivation or performance. However, they point to the proper coordination and organization of teaching teams as a key factor to overcome this obstacle.

One of the researches that focused more on this possible pitfall is the one implemented by Salvador-García & Chiva-Bartoll (2017), who defend the great benefits of the introduction of the CLIL approach in the physical education subject but warn that this could lead to a notably increase in the workload of the teachers of this subject. Furthermore, they add that this fact, together with the lack of acknowledgment of these teachers involved in CLIL, could cause that: "(...) the good functioning of the educational process could be diminished due to teacher burn-out and demotivation"(Salvador-García & Chiva-Bartoll, 2017, p. 1136). And they conclude by highlighting the importance of the administrations taking measures as soon as possible in this matter in order to try to overcome these challenges and to avoid the worsening in the motivation and dedication of CLIL teachers.

Therefore, based on the conclusions of the different studies and authors exposed in the previous paragraphs, the excess in the workload of physical education teachers should be considered as one of the challenges or pitfall that could arise in the introduction of the CLIL in this content subject.

5. CONCLUSIONS

In the previous sections of this document, the different aspects, studies and results of the numerous investigations reviewed in the scientific literature regarding the implementation of physical education through the CLIL approach have been analysed in detail. During this review process, an attempt has been made to extract the most relevant information from each of the researches with the intention of being able to summarize the main findings and contributions of each work as well as to compare them with each other as a discussion.

Thus, in order to continue with the structure established in the previous sections, the conclusions referring to each of the points indicated in the section of objectives of this same document are exposed here. Then, although they are first presented in an expositive and interrelated way, all these conclusions are also shown in a more schematic way (specially these regarding to the second objective).

Therefore, about the named objective: *"To analyse the existing scientific literature regarding the implementation of CLIL in physical education"*, the main features of this revision are exposed here and are the aspects that could give an idea of how is the state of the art in science in this regard. Thus, despite the fact that the scientific

analysis of the application of the CLIL approach in the physical education subject is not a topic with longer trajectory or extension, when carrying out the present review of the literature it has been possible to find numerous researches that either directly or indirectly, focus on this interaction between physical education and CLIL.

Consequently, this fact reflects that there is a growing interest on how to obtain positive benefits in foreign language learning from the physical education subject, and since CLIL is the most widespread bilingual method in Europe and Spain, in recent years different researchers have focused their attention on evaluating the synergy that occurs between CLIL and this subject.

In this sense, we could find different types of approaches towards the study of this subject: on the one hand, some of the analysed investigations are based on direct interventions with students at schools to verify the effects of CLIL in physical education; however, on the other hand, other researches are based on carrying out analysis from a more theoretical approach based on the experiences implemented by other authors or even from theoretical studies of what could be the most efficient educational methodologies in relation to the learning of the foreign language in physical education. Thereby, an attempt has been made to collect information from all the heterogeneity of the studies since this could contribute to obtaining a more global, complete and realistic idea of what is currently known on this matter.

At this point, it is necessary to synthesize all the development of the information analysed throughout this MA dissertation in order to draw our own conclusions that could provide new relevant information based on what science currently says about the implementation of CLIL in physical education. Furthermore, one of the main purposes of this paper is to be able to serve as a theoretical reference that could facilitate the implementation of bilingualism in this subject, considering the main key aspects that guarantee the success of the teaching-learning process.

On the other hand, regarding the objective: *“To identify which are the main strengths and challenges of the implementation of CLIL in physical education.”*, the main benefits and challenges indicated by the scientific literature have been widely investigated, considering the different views of numerous authors and expert researchers in the field. Consequently, these strengths and challenges are summarized below.

According to different researches, the main strengths of the implementation of CLIL in physical education are:

- Movement facilitates language acquisition.
- Increases interactions between students.
- Improves students' motivation.
- Linking learning to culture.
- Contributes to the development of key competences.

Similarly, the main challenges presented by the implementation of CLIL in physical education have also been identified:

- Could reduce students' engaged time in physical activity.
- Could produce negative emotions in some students.
- Insufficient preparation of physical education teachers in CLIL.
- Could lead to increased teacher workload.

Nevertheless, it is important to consider that, although these strengths and challenges indicated here have been extracted from the scientific literature, not all have the same level of evidence. This is due to the fact that, while some of them are widely assumed and have a great support of numerous researches, others may be more limited insofar as they are only indicated by a small number of authors or based on a limited number of investigations, or even respond mainly to possible effects that have been suggested theoretically. In any case, this fact does not mean that there is a lack of scientific validity, but rather that some of them must be contrasted by carrying out new investigations that allow a more solid evidence.

However, it has been decided to include them in this MA dissertation because it is considered that they provide more relevant information about the current state of CLIL in the subject of physical education and that it could also be useful to know where future lines of research in this field could continue and what main aspects should be taken into account in the design and implementation of this type of bilingual programs in the area of physical education.

Finally, in relation to the objective: *“To conclude with some proposals that could help to overcome the difficulties or challenges of the implementation of CLIL in physical*

education.”, in the next lines some key aspects that could help overcome the challenges outlined above are propounded.

One of the pitfalls widely pointed out by various researchers is that the implementation of CLIL in physical education could reduce students' engaged time in physical activity. According to Molero-Clavellinas (2011) one of the solutions to this problem would be for teachers to be aware of not falling into an excessively theoretical approach or based on linguistic aspects in this subject, so that he proposes the interdisciplinary and integrated work as the backbone of the bilingual project of school, which will favour the eminently practical nature of the physical education subject, with all its great advantages.

Another important factor to consider avoiding this unwanted reduction in the time in which students are moving during physical education sessions would be to prioritize teaching styles and techniques that promote greater student involvement in the learning process such as those based on the constructivist approach, guided discovery and problem solving, in line with what was stated by García-Calvo (2018).

However, these measures may not be enough to overcome this obstacle, which is why the need to prioritize levels of physical activity during classes could be considered as a priority aspect (related both to success in learning and to improving the health of students). So, for this purpose, protocols and tools for objective measurement of physical activity could be considered that allow teachers to obtain reliable feedback on this parameter and thus be able to act accordingly when the levels are not adequate (for example changing the methodology or prioritizing this aspect over the linguistic one in some specific moments of the course). Anyway, these are only initial proposals, but it is necessary to carry out more studies in this regard that allow confirming measures that really lead to overcome the difficulties associated with reducing the time of physical activity during CLIL classes.

Another challenge that has been pointed out in the CLIL in physical education is that it could produce negative emotions in some students. It is fair to point out that in this case there is great controversy in this regard, since, as has already been explained, most researches show a general improvement in student motivation when CLIL is introduced in this subject. However, this possible pitfall has been collected since several authors point out that, despite this general improvement in motivation, in some

specific cases some students could react negatively to this change, developing emotions such as anxiety, fear or demotivation. Therefore, although they are very few cases, these possible negative repercussions should be considered in order to try to overcome this difficulty with different strategies.

One of the possible solutions in this case would be to increase the individualized monitoring of students by introducing tools that allow us to know what their emotions are towards the subject and learning, in order to detect in time the minority of students who may feel negative emotions and act accordingly as soon as possible. In fact, a positive aspect pointed out by Emmanouilidou & Laskaridou (2017) is that normally these students who initially react negatively to CLIL in physical education change their perspective later, so if these difficulties are detected and adequately addressed, they could be exceeded. In short, teachers should put focus on the detection of these negative emotions among students to be able to act in this line.

On the other hand, regarding the insufficient preparation of physical education teachers in CLIL, actions should be taken especially at the administration level. In other words, administrations should guarantee solid training programs for physical education teachers that allow them to be adequately trained in the implementation of the CLIL approach in the physical education subject. In addition, teachers could also supplement these official training programs with updating measures that allow them to maintain the functionality in the bilingual teaching practice at school. Thus, applying these two types of measures together (specially that referring to administration) it is feasible to think that the possible problem of under-training of physical education teachers in CLIL could be overcome.

Finally, the last of the challenges mentioned is also closely related to the previous one: could lead to increased teacher workload. Thus, the proposals that are put forward to overcome this difficulty are also related to aspects of organization and management, although not only on the part of the administration. In this sense, one of the key factors to avoid an increase in the workload of teachers is that the administration guarantees enough human and material resources to carry out CLIL implementation in physical education.

However, this measure by itself would surely not be enough to avoid this excessive workload of physical education teachers when implementing the CLIL approach in their

classes. Therefore, another key aspect to overcome this pitfall is the proper organization and coordination of all the professionals involved in the bilingual teaching process. This has already been raised by different experts as one of the aspects that must necessarily be considered in the implementation of the CLIL approach to guarantee the success of the results, and without a doubt it would be a measure that will directly affect the workload of teachers (Pavón & Ellison, 2013; Pavón et al., 2014).

As a final reflection, after having reviewed the current evidence in the scientific literature regarding the implementation of the CLIL approach in the physical education subject, and also having analysed in detail which are the main strengths and challenges, it can be stated that the benefits of the application of the CLIL approach in this subject are widely demonstrated, so it should be seen as an opportunity from which we should make the most of its potential.

However, it has also become clear that during this process of introducing CLIL in physical education, different challenges or difficulties may arise which, if not adequately addressed, can lead to a loss in the quality of the teaching-learning process. In short, all agents involved in the implementation of these types of programs should analyse these key points and design measures in order to act on the aspects that are necessary.

Finally, it is important to note that it would be necessary to continue designing and conducting researches focused on this issue so that scientific evidence could be increased regarding many of the aspects involved in this process and, above all, these findings could be applied and transferred to daily practice at schools.

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