

*The Role of Reflection in Changing Student's Conceptions About the Teaching Profession:
Navigate Towards Meaning Physical Education*

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Abstract

In initial Teacher Education Programs, students face a different reality than expected due to the opportunities to engage in deeper reflection and critical thinking. Therefore, this study explored the reflective dimension's role in changing students' initial conceptions about the teaching profession during the first semester of a teacher education program. One hundred and twenty-two students were involved in this study. At the end of the first semester, they were asked to write a reflection with the following question: "How do I feel that I am learning to be a teacher?" The document analysis was used for data collection, and data analysis was guided by Braun and Clarke's (2006) guidelines. Each coding phase ensured that the evolution of themes was transparent and traceable. The results indicate that future Physical Education teachers are unaware of the demands and complexity of the teaching profession, underlining that they are still learning how to become a teacher. Moreover, this study has shown reflection's positive impact and central role on teachers' ability to improve and question their practice. Reflection is now seen as a fundamental characteristic of becoming a teacher. Since reflection has a significant role in changing students' conceptions, the need for initial training to value continuous critical reflection is highlighted. Therefore, when reflection is considered, teachers can become career-long learners, letting them produce and preserve personal knowledge through the reflective process to promote meaningful Physical Education.

Keywords: Initial Teacher Education, Reflection, Physical Education, Teaching Profession

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Introduction

Innumerable changes have been made from a sociocultural and ethnographic perspective, adding complexity to our current society. Therefore, it is expected a higher preparation for future teachers, including the development of autonomy and the ability to reflect to overcome the constraints that could emerge from teaching practice. Teaching has never been as complex as it is currently, requiring greater preparation to promote quality teaching (Shulman, 2002). As a teaching profession, being a teacher involves a continuous process of discovery, learning, and reflection. However, the initial stages of the teaching profession are not only decisive in obtaining new knowledge but also have a strong impact on the conception of future practice.

In addition, less attention has been given to the relevance of initial teacher education programs in developing and promoting reflective and critical thinking. Current research indicates an evident dedication to investigating the teaching profession, but unfortunately, the initial teacher education programs still require further studies, especially when future teachers are considered. During this study, we aim to understand how complex the teaching profession can be, which requires a deeper interpretation in the early stages, where reflective thoughts and critical thinking are stimulated and promoted toward a meaningful teaching practice.

Reflection Conceptualized

The term 'reflection' has now become part of the language of teacher education, yet its importance has not always been recognized. It should be noted that although reflection and reflective practices have gained special and deserving attention in the teacher education curriculum, the concept as a process has been conceptualized in different ways with different implications (Mulryan-Kyne, 2021). These differences can trigger misperception that, consequently, has repercussions on teacher education since verifying its use in an uncritical and unreflected way is possible. Even more worrying becomes the scenario when the concept is not clearly defined. The term is ambiguous, and its use does not always have the same connotation (Zeichner & Liston, 1996). Consequently, transmitting it still becomes more complex (Jay & Johnson, 2002).

Despite having verified the existence of different interpretations for the concept of reflection, Loughran (2002) states that an element that a majority has in common is the notion of a problem (an intriguing, curious, or disconcerting situation). What the problem is, how it is framed in the specific context, and (hopefully) reformulated is a crucial aspect of understanding the nature of reflection and the value of reflective practice.

In brief, reflection must stop being seen as a set of techniques that can be packaged and taught to teachers as if they were robots. Thus, reflection stimulates critical thinking and the teacher's identity. As so, accepting everything that is seen, done, or heard without questioning seems absurd, given all the research that has been done in this field. By adopting a critical reflective process, the perception of reality is exposed to changes and may result in the transformation of the individual itself (Freire, 2001).

Reflective Dimensions and Levels of Reflectivity

The most common platform for demonstrating trainee teacher reflection within initial teacher education frameworks is before, during, and after teaching (Griffiths, 2000).

Schön (1987) distinguishes ‘reflection-on-action’ and ‘reflection-in-action,’ which involve rational thinking that leads to reasoned judgment about correct, appropriate, and deliberated actions or responses. As Schön (1987) mentioned, ‘reflection-in-action’ is related to thinking during the teaching process. Therefore, this dimension of reflection allows continual interpretation, investigation, and critical conversation with oneself about the problems that may emerge from practice (Sellars, 2017).

When it comes to ‘reflection-on-action,’ this involves taking the opportunity to draw on the professional knowledge base more explicitly. Moreover, it can be used in two ways: 1) to develop the teacher’s understanding; 2) to test and develop the knowledge base (Thompson & Pascal, 2012). Nevertheless, it seems crucial to mention ‘reflection-for-action,’ an aspect of reflective practice that Schön did not discuss. It refers to planning, thinking ahead about what is coming next, and using the experience to make the best use of available time resources (Thompson & Pascal, 2012).

Van Manen (1977) identifies three of them. At the first level (technical reflection), the main concern is with efficient means to attain a given objective. The rationality of the ‘best choice’ is defined based on the principles of technological progress. At the second level (practical reflection), it is assumed that every educational choice is preoccupied with analyzing and clarifying individual and cultural experiences, assumptions, and presuppositions to orient practical actions. The third (politico-ethical), and highest level, reflection is now focused on the nature of social conditions necessary for raising the question of worthwhileness in the first place. At this final stage, reflection requires a constant critique of domination and repressive forms of authority. On the other hand, it calls for moral and ethical criteria by considering social and political contexts (Hatton & Smith, 1995).

Reflection in Initial Teacher Education

There is a significant and growing literature on reflection, reflective teacher, and reflective practice, particularly in teacher education. Reflection and reflective practice are increasingly being discussed and promoted as a crucial part of initial teacher education programs (Minott, 2019; Zeichner, 1983). This highlight that has been given towards reflection stems from a belief that not only encourages and facilitates the linkage between theory-practice but also promotes critical thinking (Calderhead, 1989). Therefore, reflection is key to the teacher’s professional practice (Day et al., 2022).

Its impact is notable and essential, given that it contradicts technical rationality. If followed rigidly, it reduces practitioners to technicians whose only role is to implement research findings and theoretical models without reflecting on them (Thompson & Pascal, 2012). Therefore, it is essential to promote opportunities to reflect that is systematic and conscious, where teachers can develop their capacities and have a deeper understanding of their teaching processes (Lizana & García, 2022).

Research in teacher education programs shows that reflection should not be perceived as separate from ongoing coursework. More specifically, it is not simply a periodic pause for thought or a course requirement that teachers can forget as they go to work in schools (Thompson & Thompson, 2023). To conclude this perspective, reflection in initial teacher education programs is not a replacement for theory; however, it needs to draw on this as part of the reflective process. Reflection provides an opportunity to apply theory to professional practice (Sellars, 2017).

Traditional Physical Education approaches have been criticized for triggering gaps in theory practice and not correctly preparing pre-service teachers for their teaching process. As so, this perspective encourages future teachers to follow the rules in their teaching instead of making their own decisions to adapt the management of the class, the instruction, and the contents according to the needs of the students (Forzani, 2014; Grossman et al., 2009). However, there has been a more ambitious outcome for initial teacher education.

Moreover, in initial teacher education, cycles of deliberate practice and reflection provide Physical Education teachers at the beginning of their careers with an opportunity to systematically engage in the different dimensions of reflection. Since they usually have little experience, developing adaptive competence is fundamental. It becomes possible, given the contribution of reflection, since it allows adaptations based on the needs of students and the context that reflects teaching situations (Xie et al., 2020).

Furthermore, it has acknowledged the importance of working towards a critical and more democratic Physical Education, where reflection is a fundamental basis of pedagogical practice (Brasó i Rius & Torredadella Flix, 2018). For this reason, Physical Education institutions must stimulate students' reflective capacity and promote its importance, encouraging permanent monitoring and evaluation of practice.

Objectives

In initial teacher education programs, students often face a different reality than expected due to the opportunities to engage in deeper reflection and critical thinking.

Therefore, the main goal of this study was to understand the role of reflection in initial physical education teaching programs, explicitly considering the context of the master's degree of Physical Education in Elementary and Secondary Teaching Education from the conceptions of future teachers. As a specific goal, we intended to explore the reflective dimension's role in changing students' initial conceptions about the teaching profession during the first semester of a curricular unit.

Methodology

Context

This study occurred in the Faculty of Sports of the University of Oporto (FADEUP) during the 2021/2022 academic year, specifically at the end of the 1st semester of the master's degree in Physical Education in Elementary and Secondary Teaching Education. At the end of the second year, Physical Education teachers can apply for schools once they finish their practicum training and defend the internship report.

This master's degree is often characterized as a context of good practices, where reflection and critical thinking are often developed and stimulated in future Physical Education teachers. For this reason, future teachers gain their own voice in the teaching process.

At the Teaching Professionalism curricular unit, future teachers' reflective dimension was stimulated through individual and group reflection and the contribution of class discussion, supportive learning environments, and reflective written documents. Moreover, at the end of the first semester, future teachers were asked to write a final reflection about how they are

learning to become teachers, mentioning changes (or not) in their position and understandings regarding the teaching profession.

Participants

At the very end of the first semester, one hundred and twenty-two (122) future teachers answered, through individual reflection, the following question: “How do I feel I am learning to be a teacher?” Additionally, the contribution of all semesters in their professional development was also incorporated in the final reflection.

Data Collection

The data of the present study emerged from the 122 participant's final reflections. Given the nature of data and the qualitative nature of this project, it is considered that there is a dynamic relationship between the natural world and the subject. More specifically, an inseparable link between the objective world (context) and the subject's subjectivity that cannot be translated into numbers and deals with phenomena. For this same reason, the analysis will be guided by Braun and Clarke's (2006) guidelines for the use of thematic analysis.

Document analysis is reported as a non-reactive source, allowing to obtain information after long periods where documents (reflections) can be considered a natural source of contextualized information since they appear in each context and provide information about it (Kripka et al., 2015). In this way, the data collected through the analysis of future teachers' individual reflections will contribute to understanding the role and importance of reflection in initial teacher education programs.

Data Analysis and Credibility

Due to the nature of the data, it is considered that there is a dynamic relationship between the natural world and the subject. In other words, there is an inseparable link between the subject's context and subjectivity that cannot be translated into numbers and deals with phenomena. For this same reason, the analysis will be conducted using thematic analysis by Braun and Clarke's (2006) guidelines. Each phase of the described coding and theme development process ensured that the evolution of themes was clear and traceable, which helped ensure the rigor of the research.

Initially, the data was familiarized through repeated reading and the use of initial notes in search of meanings and patterns. The documents (final reflections) were read line by line, and the initial codes were written in a column attached to the respective document. Patterns were sought throughout the data set and subsequently grouped into themes (Braun & Clarke, 2006). A more inductive and data-oriented approach was privileged, recognizing the role of researchers in co-creating themes (Braun & Clarke, 2006).

Finally, the themes were reviewed after a detailed identification of different possibilities, and the internal and external homogeneity was verified (Braun & Clarke, 2006; Joffe, 2012). There was also an attribution of names to the themes, identifying the respective essence so that the excerpts were coherent and internally consistent in each theme (Braun & Clarke, 2006).

Considering the qualitative nature of this study is relevant to reinforce that the aim is to comprehend and understand the phenomenon in specific contexts (Patton, 2002). Therefore, our goal was not to seek universal generalizations and unidirectional patterns but to privilege the involvement and personal role in the research. Following the thoughts of Golafshani (2003), it is crucial to demonstrate that studies are credible and trustworthy.

To reduce the possibility of incorrect interpretations, data triangulation was privileged, which allowed to clarify and reach a consensus on the meanings obtained through observation or interpretation (Patton, 2002). Apart from this, a continuous evaluation by the researchers (peer debriefing) was also guaranteed by periodic meetings to discuss points of view. Also, encouraging constant critical analysis, questioning formulated ideas, and reviewing research procedures were considered (Strauss & Corbin, 1998). Finally, there was a permanent combination between the data and the ideas and interpretations of the intervening researchers. As a result, it allowed an in-depth understanding of the phenomenon set out to investigate.

Findings and Discussion

Through the interpretative analysis, it was possible to highlight two fundamental topics: 1) reflection as a path to rediscover the teaching profession; 2) reflection as a mean to change beliefs and initial conceptions about the teaching profession. These topics will be presented and discussed below.

Reflection as a Path to Rediscover the Teaching Profession

These four months were not only relevant but also essential to change future teachers' perspectives on the demands of the teaching profession. At the beginning of the academic year, future teachers demonstrated to have a general and wide perspective of what it meant to 'be a teacher', however throughout the classes and through reflective habits, they seemed to understand the profession as highly complex, which was not taken into perspective. Through future teachers' reflections, the meaning of teaching education is way more complex, which leads to the difficulty of simplifying the term that has been widely recognized (Kiss, 2012). Moreover, Altet (2001) refers to the teaching profession as a relational practice with multiple interactions limited by unique, complex, and predictable situations.

“Being a good teacher is not just about these perceptions, so throughout the semester, I was able to learn and idealize that the profession is much more complex than what I was particularly willing to find.” –NS

“In order to define a good teacher, I am now able to recognize that I cannot mention all the aspects due to the complexity of the teaching profession.” –RS

As seen before, teaching is a complex activity influenced by various factors (pedagogical content knowledge, beliefs, capabilities, students). Therefore, focusing solely on one factor may not be helpful in deeply understanding the complexity of teaching (Uzuntiryaki-Kondakci et al., 2017). Due to this complexity, future teachers also pointed out an initial reality shock that was not easy to overcome. Mahmood (2013) mentioned that beginning teaching is challenging and complex.

Moreover, moving from the role of the student to the teacher can be disconcerting. Indeed, research indicates that most student teachers experience a reality shock when they encounter

the complexity of a classroom during their practical training. Sometimes, this is sufficiently severe to terminate their teaching career aspirations before graduation (Rots et al., 2010).

“Since the first day of the semester, there has been a constant reality shock, but the idea of what it means to be a teacher has been taking shape.” –AF

“In short, the reality shock is a crucial moment where we leave the role of being a student and start to act like a teacher. It is scary but thrilling at the same time.” –SG

During this reality shock, future teachers assumed double status (students and teachers) and reinforced the need to start thinking and act adopting the teacher’s lens. In this case, they ensured the teaching-learning process was not reduced and influenced by past experiences as students.

“Firstly, I changed from a student to teacher view. With this transition came the notion of responsibility that is present in teaching and the need to reflect and think about all “whys.” –MA

“I think I acquired another vision of what it means to be a teacher. I feel that I have fallen into a reality that I did not consider before because my perception was more of a student rather than a teacher.”

Additionally, the role transition triggered a greater awareness of the link between theory and practice in the teaching profession. Despite the first year of this master's program has a strong theoretical component, through which they learn the specific skills of each subject, they also mentioned the need to contextualize, adapt and reflect according to the surrounding environment. Therefore, Physical Education future teachers highlight the need not to act and make decisions without critical thinking and not to follow "recipes."

“Exactly what we are doing right now, we are learning how to be professors by trying to increase our theoretical knowledge, but also associating it, later, with practice.” –GA

How conceptions of future teachers and their teaching practices are intertwined is an urgent theme in the research on teacher education. New experiences and contexts can trigger new thinking, which means that experimenting with teaching practices can be a starting point for teachers to reconceptualize their thinking about teaching. In this sense, developing skills in a particular context can be relevant at that moment and lead to a change of conceptions later on (van den Bos & Brouwer, 2014).

During the classes on Teaching Professionalism, future Physical Education teachers were asked questions to trigger reflection and stimulate critical thinking about their pedagogical practice. As so, it was the reflection that allowed to rethink initial conceptions about the teaching profession, which led to the concept of reflective practice. Thorsen and DeVore (2013) describe it as complex, not only because teachers need to reflect on aspects of teaching and the content knowledge but also because teaching methods used daily, such as planning and executing adequate and relevant lessons and understanding cultural identity and that of their students.

The initial questions allowed future teachers to (re)interpret the role of reflection over time, giving it due value and recognition.

"The impact that reflective habits have on the teacher's ability to improve and perfect their practice constantly was a concept that was not present in my ideology of "being a teacher." –PA

"I consider the process of reflection relevant and fundamental to evolve as a professional, which initially was not even something questionable for me and which started to make perfect sense." –BF

"In this way, I also understood that reflective capacity is not just a characteristic of a good teacher, but a necessary condition for the full exercise of the profession." –TL

Future Physical Education teachers mentioned the reflective dimension as essential to the teaching profession. Generally, the existence of a reductive conception is evident at the early stages of the teaching profession. Over time, the understanding of future teachers followed the perspective of Perrenoud (2001), who attests that the teaching profession is complex so that the teaching professional can adapt to the complexity of each situation and systematically seek new solutions. It is essential to point out that, due to the complexity of the teaching profession, future teachers mentioned that “they still have not learned to be teachers” and stressed the need for continuous training in teacher education. In his way, it is essential to train future teachers capable of learning from the past and proper in the present and future.

Reflection as a Mean to Change Beliefs and Initial Conceptions About Teaching Profession

Through the reflections of future Physical Education teachers, it was possible to perceive that at the beginning of the curricular unit, their conception of learning to be a teacher ended in initial training. Also, they were secure that at the end of the year of the professional practicum would be fully prepared for all adversities, challenges, and issues that would arise in the most diverse professional contexts. However, through the privileged reflexive habits during the curricular unit, changes were made in their understanding since lifelong education was recurrently mentioned in their final reflections.

"It is curious to find that the initial formation is, as the name indicates, initial. My training will never be finished and will be subject to constant tests throughout my career." –GB

"I am aware that being a teacher is formed over time, that I still have a long way to go, and that, despite the training and preparation that this course offers, I will never be fully prepared for all the scenarios I will encounter in practice." –PT

Although learning had not been seen as a lifelong process before 1980, nowadays is essential to succeed (Laal et al., 2014). The final reflections of future teachers trigger an appreciation of lifelong education, allowing them to be the principal actors of their teaching process through the transformation of their belief system, self-knowledge, self-image, and becoming open to change and professional development (Lima et al., 2015).

In this way, it is recognized that lifelong education can have a strong and positive impact on improving pedagogical practices and, most important, adding quality to Physical Education teaching programs (Junior & Tassoni, 2013).

Reflection allowed future teachers to understand and clarify that the teaching process is plural and unfinished simply because it begins and never ends. Thus, future teachers will learn “step by step” and reinforce the need to renew theoretical knowledge.

“A teacher never reaches a maximum point of knowledge and expertise, thus finding himself in a process of constant reconstruction.”

“As for specific knowledge, I think that no professional can say that he owns the absolute truth. As in any area transversal to Education, it is important for educators to keep up to date as there are always new theories, new knowledge, new approaches, and teaching methods over the years...”

Reflection was also relevant to change future teachers' initial beliefs about the role of Physical Education teachers. Initially, and as seen above, the main purpose was focused on teaching and, more specifically, the transmission of technical abilities.

“I did not have any perception or knowledge to understand that the word teacher is much more than giving classes and making assessments.” –PA

“(...) because I had in mind that I would only have to teach, pass on the contents and then leave without having to worry about anything else.” –FS

This initial way of thinking about teaching in Physical Education leads us to an education focused on technique, seeking physical excellence and not intellectual. Related to technical rationality, this perspective consists of instrumental problem-solving made rigorous by applying scientific theory and technique (Schön, 2001). For this same reason, it is evident that future teachers initially believe that to achieve excellence, some standards and recipes can be followed rigorously and applicable to all pedagogical institutions. This way of thinking, as described below, shows that this conception changed over time. Through individual and group reflection, future teachers could prioritize reflective teaching.

“I thought that there were recipes and standardized learning situations. I finally understood that it is necessary to doubt, criticize, evaluate, and, above all, reflect.” –MB

“Right now, I have a completely different view of what it means to be a good teacher. Instead of certainties, I have more doubts... because being a good teacher is very relative, and there is no magic formula that applies to all contexts” –JC

Following this perspective, it was also possible to understand a turning point in the way future teachers perceive their teaching towards the future. Therefore, they prioritized student-centered approaches and decentralized the teacher from the protagonist and the main person responsible for transmitting knowledge. This student prioritization allows them to reflect on issues raised by colleagues or the teacher and, consequently, to actively participate in creating their own knowledge (Bosco, 2020). In short, the teacher acts as a facilitator of the teaching process and adjusts it to the needs of the students.

“Your role, as an educator, is to guide your students to reflect on their role in the world and how they can act on it.” –AP

“(…) education is an anthropological project, and the student is the center of your action as teachers.” –LT

During this curricular unit, reflection also allowed future teachers to change their initial beliefs about the clarity of the teaching profession. After a few months, it was possible to understand the difficulty in clarifying what “being a teacher” means due to the complexity of this profession.

“Despite this, I believe that there is no universal definition, converging on several aspects, characteristics, and competencies associated with the teaching profession.” –BR

“The difficulty I felt in creating a definition for what it means to be a competent teacher was due to the fact that any attempt to respond to this statement would be a step that reduces the nature of the profession.” –SM

Not less importantly, at the beginning of the curricular unit, future teachers demonstrate not to be open to ear other’s opinions and reflections in groups. In some cases, they hold the idea of knowing everything. Therefore, some opinions and advice were not initially taken into perspective.

“As many of us, I thought I was absolutely right. I was not interested in the opinion of others.” –DC

This way of thinking did not last over time. Their experiences through reflection allowed considerable changes. Therefore, at the end of four months, there was an appreciation of collaborative work, group reflection, sharing, and exchange of experiences that became fundamental in favor of more significant learning and professional development opportunities. Therefore, there is an obvious need for a community in which it is possible to share teaching experience, especially with novice teachers (Attard & Armour, 2005).

“In addition, I am able to value even more the conversation with more experienced colleagues, as there is an exchange of knowledge.” –TL

“In addition, these dialogues will help me to enter the circle of professionals and create a healthy work environment conducive to good practices.” –AR

To summarize, the final reflections of future Physical Education teachers reinforce the importance of interacting with other members of the school community by sharing information and creating bonds and relationships that have a positive impact on learning. In the process of becoming teachers, the need for initial teacher education to value continuous critical reflection, both individually and collaboratively, to be an integral part of daily professional practice is emphasized.

Conclusion

Since reflection has a significant role in changing students' conceptions, the need for initial training to value continuous critical reflection is highlighted. When reflection is considered, teachers can become career-long learners, letting them produce and preserve personal knowledge through the reflective process to promote meaningful Physical Education. Moreover, in becoming teachers, critical reflection, both individual and collaborative, must be seen as an integral part of daily professional practice.

Initial teacher education programs should provide opportunities to reflect and develop critical thinking to prepare future teachers more effectively for what it is to be a physical education teacher (Day et al., 2022). As future research, it would be interesting to comprehend the behavior of these future teachers during the practicum training and understand if the changed perspectives and beliefs maintain in practice.

These results reinforce the importance of reflection in the curriculum of initial teacher education is crucial and will allow future teachers to interpret, question and understand the pedagogical practice so that it is given due meaning.

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