

Full Length Research Paper

Formative evaluation in Physical Education initial teacher training courses

Francisco Gonçalves

E- mail: franciscojmg@gmail.com.

The main objective of this study was to analyze the study plans of every institution offering teaching majors in Physical Education and Sports in Portugal, in order to determine the existence of formative evaluation issues in initial formation of future teachers. The sample was constituted by the curricula and study plans of every Physical Education and Sport teaching majors offered in every Portuguese university, as well as polytechnic Institute (graduate Schools); amounting to 29 higher education institutions. The returned data were 100%. Collected data were submitted for a descriptive statistical and a content analysis, using the *NVivo* software. Eleven (37. 9%) of these institutions were higher schools for education, private colleges were also eleven and seven were (24.2%) state universities. Related with formative teaching approach, data suggest the existence of discrepancies between initial teacher training models for physical education nationwide, both in content and structure. There are, however, similar training mechanisms with defined standards, according to each Institution. There is also no evidence of consensus between the institutions, when it comes to the contents related with formative subjects. Students' success is proportional to the quality of the teaching and learning process.

Key words: Education, student, learning, evaluation, physical education, teaching.

INTRODUCTION

Current pedagogy, committed to the development of the student, bears in mind the construction of the man of tomorrow. The school takes part in the process of changing society, and as an institution it should open itself to the community (Ademoh, 2010). The school must revise its action process, organizing and planning tasks that place the student at their core (Hall and Smith, 2006).

This paper will follow a few guidelines, namely the evaluation of students' learning, programs, methodologies and strategies. It will also address the areas of teacher and institution evaluation. Evaluation has come to fill a progressively important role in all fields of human activity, and in areas so diversified as the educational. This investigation work will focus on the issue of evaluation on the educational sphere, in other

words, the evaluation of learning and teaching.

The work of the teacher includes verifying and judging students' productivity, evaluating teaching results. Every teacher should bear in mind that some students learn faster than others. Accordingly, each teacher should be able to recognize the differences among students, helping them overcome difficulties and move forward in their learning. Student productivity reflects the work developed along the process, being preponderant in school routine and assuming an educational character (Darling-Hammond, 2006).

While carrying out the whole evaluation process, teachers must bear in mind that, evaluation is collecting the necessary information for an improved performance (Arafat et al., 2010). It is an excellent regulator of the entire teaching and learning process. It is the conscience

of the very own educational process (Fossey, 2007). The teacher should therefore have a basic knowledge concerning the regulation of the teaching and learning process through evaluation.

The purpose of evaluation is to collect, analyze and interpret the elements, assembled over time, relating to a teaching product or system, in order to answer the following question: to what extent are teaching goals achieved?

Evaluation should be perceived as a review process for previously defined goals. It derives from the very process of teaching and learning, working as a mechanism that confirms if the intended goals are effectively achieved (Wharton-Michael et al., 2006).

Evaluation allows an accurate and assertive identification of problems that, properly analyzed, can be solved bearing in mind student's success as the final product (Atilla, 2010). Problem analysis gives ways to a decision making focusing on pedagogical efficiency (Howell and Nolet, 2000).

Generally speaking, evaluation is connected with the collection of data, interpretation of such data and, ultimately, with consequent decision making (Jenkins and Curtin, 2006).

Below, some of the key factors that underlie the idea of general accountability will be summarized, when developing a learning improvement oriented evaluation (Gonçalves and Aranha, 2011):

- i) Students should be actively involved in the evaluation process;
- ii) Feedback is fundamental and indispensable to the improvement of the process;
- iii) Evaluation should be used to regulate learning;
- iv) Students should develop self-assessment skills;
- v) Evaluative information should be obtained by diversifying strategies, techniques and instruments;
- vi) Evaluation influences student motivation and self-esteem, affecting learning, which in turn influences evaluation (evaluation – learning – evaluation cycle).

For all this factors to come together, one needs to pay attention to some aspects: a progressively educational and constant evaluation should be developed; the quality of absorbed information should prevail over quantity; evaluation should assume more relevance and classification should be relegated to a second plan; evaluation strategies, techniques and instruments should be diversified, maintaining a certain distance from emphatic test administration (Biswajeet and Saro, 2009).

Teachers should master formative evaluation, because this evaluation must accompany the entire teaching and learning process, identifying successful learning experiences and flawed ones, so that the latter can be overcome and students can achieve proficiency and

success. Another vital aspect deals with the importance of feedback for student performance throughout formative evaluation, serving as a response to the performance data. This evaluation moment is the only way the teacher can orient the student, by interpreting his performance and letting him know what he is doing well and what he is doing wrong. This (formative) evaluation moment is the most accurate account of students' performance, and through it every step of the process is visualized and included in the classification of students' proficiency/performance (Smith, 2001). Obtaining a double feedback is therefore the purpose of formative evaluation. In the first place, it provides a feedback about the student, what stages he overcame and the difficulties he encountered. In the second place, it provides a feedback about the teacher, letting him know how program evolves and the obstacles it faces. By assessing how the teaching and learning process evolves, formative evaluation helps the teacher adjust his teaching tasks to student learning in the course of the classes (Weston, 2004).

Self-assessment is one of the pillars of formative evaluation, as it regulates the teaching and learning process. It enables the recognition of mistakes and helps finding alternative solutions.

To possess pedagogical knowledge teachers must detain a specific understanding of the subject-matters they are ascribed to (Stufflebeam and Wingate, 2005):

- i) Subject-matter content knowledge;
- ii) Pedagogical content knowledge;
- iii) Curriculum content knowledge;
- iv) Knowledge of values and norms;
- v) Procedural knowledge.

Different training models and programs have to follow certain epistemological assumptions and are subject to social, cultural and ideological constraints, distinctive in each professional occupation (Bozkurt, 2010). Different training programs and models assume different perspectives and follow different assumptions, creating different understandings of the teaching occupation and its role (Ann et al., 2006).

MATERIALS AND METHODS

The purpose of the present work is to analyze the study plans from every Portuguese higher education institution with a teaching major in Physical Education and Sports, in order to examine the existence of evaluation related subject-matters. The returned data were 100%, from the entire population; and this assigns a high degree of reliability to the obtained results.

In the present study, statistical measures were done by *NVivo 9* (for a qualitative analysis), *Excel 10* (for a quantitative analysis), and *SPSS 20* (for a quantitative analysis). Computer based content analysis programs, like *NVivo* for content analyses, are an

increasingly pressing requirement, resulting from the demand for a higher degree of coherence between the different stages of scientific work. In this sense, the credibility of disclosed results has been more and more substantiated, so that new theories, based on the resulting conclusions, can be formulated.

A documental analysis was performed in order to withdraw conclusions based on the objectives proposed. This content analysis was performed on every curricular program and was based on the study plan of each institution.

The content analysis method allowed implementing a previously outlined instrumental plan. Its application was very effective in the sense that it allowed us to examine, without human interpretation or influence, how prospective teachers are trained. Therefore, unreliable surveys, questionnaires or interviews were completely excluded from this study. Through documental analysis, programs are facts, agreements and guidelines, nearly binding teaching guidelines for teachers and learning guidelines for students.

The typological of each course was analysed: degrees, namely in defined goals, curricular organization, pedagogical and scientific dimensions.

The following hypotheses were formulated:

H₁ – Study plans for teaching majors in Physical Education and Sports have subject-matters that comprise the teaching of evaluation.

H₂ – Different educational institutions have different curricular structures and study plans.

Portuguese higher education institutions reveal some asymmetries. It is important to note that: most of these institutions are located in the coastline and many of them are located in the North; there are 1763 undergraduate degrees: 647 in state universities, 58 in Catholic universities, 299 in private universities, 532 in public polytechnic institutes and 227 in private polytechnic institutes.

RESULTS

In this study, every Portuguese institution offering initial training in Physical Education teaching major was analyzed, amounting to twenty nine. There were 11 higher schools for education (37.9%), 11 private institutions and 7 state universities, corresponding to 24.2%. All subjects included in the initial training process were analyzed.

Private Institutions have the highest number of subjects, with an average of 44.5, followed by universities with 43.4. Higher schools for education mark the highest discrepancy, with an average of 40 subjects in their study plans. This evaluation field seems important to analyse because, teacher evaluation is a complex task. First and foremost, it requires a specific profile from the evaluator. In other works, not every teacher is capable of evaluating. The evaluator should be someone with specialized knowledge, enormous sensibility, empathetic communication and analytical skills, teaching experience and a heightened sense of social responsibility (Stewart, 2007). He has to be an attentive professional, capable of listening, clarifying, encouraging and helping to find

solutions, giving opinions and also negotiating, orienting, establishing criteria and assuming the risks attached to the consequences of his actions (Gonçalves and Aranha, 2011).

Higher schools for education have integrated teaching practices, that is, students are exposed to real teaching situations during their graduation and not only in the final internship stage of initial teacher training, usually observed in universities. The higher schools for education of Beja and Oporto possess the lowest number of evaluation related subjects (only one). On the other side of the scale, the higher schools for education of Coimbra and Leiria possess 8 and 5 subjects, respectively.

By analysing the institutions that offer Physical Education and Sports initial teacher training, it becomes clear that state universities largely surpass higher schools for education but they fall behind private institutions, which seem to give more attention to evaluation related subjects in their curricular plans. Increasing teaching quality implies raising the number of evaluation related subjects when training prospective teachers.

After a quantitative introduction, a qualitative approach was adopted, treating this work like a compilation, re-compilation, comparison and expression classification work, and favouring comprehension according to the expressive system in concern. The adoption of a systematic and theoretically oriented logic for the treatment of this information was preferred. The analysis comprised essentially three stages: categorization, categorization verification and the construction of type aggregations in each category.

Starting with the exclusively evaluation related subjects, several significant features were identified, namely some teaching methodology cases, type of contents taught and even the means to achieve established goals.

McNeill and Krajcik (2007) underline the lack of institutions training professional experts that are prepared for teaching evaluation.

Teacher's training influences teacher's performance substantially. Decision making should emanate from a sustained and solid theoretical basis – training – as opposed to an empirical process. Thus, teaching mistakes (including evaluation mistakes) should not take place exclusively in the work field. Some of them can be avoided with a simple reminder during graduation. It is therefore highly important that evaluation related training is perceived as a teaching priority, not only in theory but also in practice (Howell and Nolet, 2000).

Teachers need to be experts in some areas, highlighting the authors, planning, pedagogical intervention and evaluation. A good teacher's performance can only be achieved if the teachers master

the most basic aspects of their professional occupation (Paulsen, 2002).

Teacher's training should be oriented in order to provide them suitable decision making tools concerning the need and the abilities of their students, especially when it comes to evaluation, considered by many to be the core of the entire educational process. Additionally, teachers should be able to pass to their students the elements that will help them strengthen, rectify and encourage their learning, improving efficiency and letting them assume an active part in the learning process (Sproule, 2002).

In teaching majors this should be a priority, since it is the most important element in the work of prospective teachers. For this reason, university needs to systematically review curricula, bearing in mind the latest and most significant advances in the investigational field, making sure that the new teachers are able to apply educational objectives (Mohr, 2004).

Pedagogical policies in higher education must include teacher's training, promoting their adjustment to social challenges and especially providing them problem solving skills, so they can gradually become real pedagogical mediators. For that to happen, universities should develop a closer relationship with employing entities, putting an end to a long-lasting inertia (Chall, 2002).

Conclusion

The teaching and learning process should underline the educational role of evaluation, the importance of student retention, the reinforcement of teacher and student's roles, and the articulation between the student's evaluation system and the evaluation of the teaching system.

Concerning the problem raised in this study, it can affirm that it is important to evaluate, because everyone has been or will one day be evaluated. Moreover, evaluation is too important to be neglected when training prospective teachers, especially considering its two purposes: regulation and classification.

When transmitting knowledge, theory always exceeds practice. Consequently, initial teaching training is clearly focused on the theoretical level, promoting knowledge but relegating action to a second plan. There should be a bigger concern with the correlation between knowledge and action, because *knowing*, *knowing how to do* and *doing* are closely interconnected.

Initial training can place the prospective teacher in a situation where he can anticipate his professional future, allowing him to develop better skills. It can also give him a sustainable and conscious understanding of the teaching and learning processes, as well as human

development and motivations. Moreover, the performance of simulation trainings in probable professional situations enables the development of self-knowledge when faced with new realities.

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