ISSOTL INTERNATIONAL SOCIETY for the SCHOLARSHIP of TEACHING and LEARNING

Final Degree Projects based on a multidisciplinary Problem-Based Learning methodology

Edorta Santos-Vizcaino, Rosa Berraondo Juaristi, María Yolanda Fernández de Aránguiz Guridi, Águeda Fernández de Aránguiz Guridi, José Ángel Ruiz Ortega, Mirari Ayerbe Díaz, Begoña Lecea Arana, Edorta Martínez de Marigorta Izaga, Rosa María Hernández Martín, Manoli Igartua Olaechea, Aiala Salvador Martínez, Karmele Colom Aristondo

e-mail: edorta.santos@ehu.eus

INTRODUCTION

Final Degree Project (FDP) is an activity that students carry out at the end of their training process, being the opportune moment for them to demonstrate their professional qualification (1). However, during the last years, some important aspects to be improved have been detected in the Faculty of Pharmacy of the University of the Basque Country (UPV/EHU). By means of a statistical analysis (multivariate logistic regression) of the most important characteristics in FDPs, we found that most of FDPs contained knowledge of a single module of the curriculum, usually barely connected to any of the professional possibilities of the degree (Fig. 1).

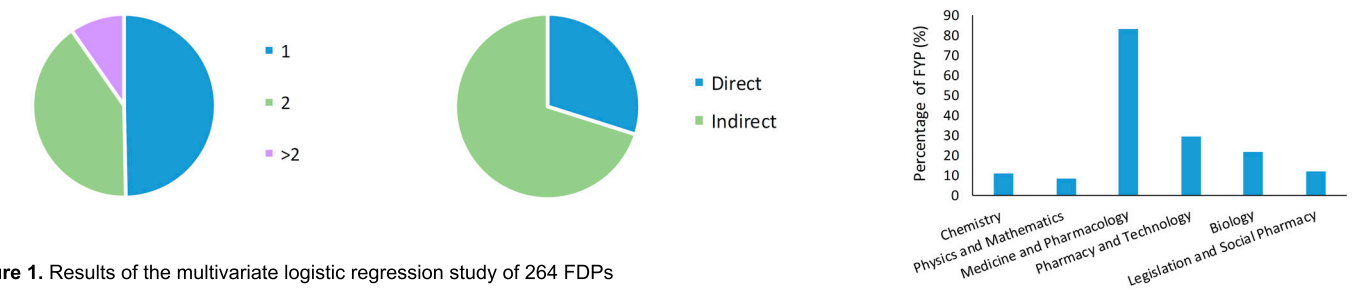

Figure 1. Results of the multivariate logistic regression study of 264 FDPs

OBJECTIVES

The present project proposes an intervention to solve observed deficiencies and improve the execution dynamics of the FDP.

METHODOLOGY

- A teaching group that is involved and participates in the proposal, elaboration, direction and evaluation of the FDP.
- Multidisciplinary teaching group formed by specialists in different subjects of all the courses of the degree (Table 1).
- Use of Problem-Based Learning (PBL) (2) applied to different professional possibilities (Table 2).
- Methodologies and evaluation tools (3) to work and quantify the achievement of some of the most relevant cross-curricular competencies (Fig. 2).

OUTCOMES

- Allows integration of specific competencies from very different areas, which provides an enriching and unusual global perspective in the FDP.
- Strengthens the coordination of teaching groups, originality and creativity of the FDP, the active role of students and teachers, and a direct relationship with professional opportunities.
- It favors the application of a PBL methodology among different areas of knowledge.

Figure 2. Cross-curricular competences worked and evaluated.

FUTURE PERSPECTIVES

This idea can be extrapolated not only to other degrees, but also to the creation of larger teams in a wider scenario such as the Campus and/or the University:

- Training courses at the University
- Video tutorials on-line

REFERENCES

1. Uema S, et al. Ars Pharm, Vol 41(4), (2000): 415-420.
2. Freeman S, et al. PNAS Vol 111 (23),(2014): 8410–8415.
3. Fernández de Aránguiz MY, et al. Ars Pharm, Vol 55(4), (2014): 15-21.

Table 1. Coordination of the teaching group

Subjects	Course
Physical Chemistry and Instrumental Techniques	1st and 2nd
Immunology, Microbiology and Parasitology	2nd, 3rd and 5th
Organic and Medicinal Chemistry	3rd
Pharmaceutical Technology, Pharmaceutical Care and Dermopharmacy	4th and 5th
University Hospital of Álava (Txagorritxu)	external professional
Rivero Pharmacy Office (Vitoria-Gasteiz)	external professional

Table 2. Real scenarios worked so far

Pharmacotherapeutic monitoring of an elderly patient with diabetes mellitus type 2 + hypertension + diabetic foot
Pharmacotherapeutic monitoring of a four-year-old child with mild atopic dermatitis and syndrome of oral allergy to peach
Pharmacotherapeutic monitoring of an elderly patient with painful arthropathy in hips, knees and, occasionally, in right foot and wrists
Study and treatment of a 10-year-old child with dyspnea episodes, who goes to the hospital emergency service for serious respiratory fatigue
Diagnostic study and treatment of an elderly hospitalized patient that presents analytical data and bone injuries compatible with multiple myeloma
Development of an antitumoral agent based on nanotechnologies in the pharmaceutical industry
Development of an intradermal anti-flu vaccine combined with an immunomodulator in the pharmaceutical industry

ACKNOWLEDGMENTS

Authors thank the Educational Advising Service (SAE/HELAZ) from the University of the Basque Country (UPV/EHU) for having funded this work (PIE 45 2017-18).

Scan to discover !