Practical Guide to Tutor An End-Of-Degree Project

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Abstract

The tutoring of end-of-degree projects presumes that the tutor or supervisor will have to be a support for the student. However, it is presumed that students must have skills of sufficient level to develop the work by themselves, but is this true or do they still need tools to develop certain skills necessary for research? Besides, several obstacles that are common to most students have been detected, for example, what topic to choose, how to look for information, how to cite other studies, what is the research question or main contribution, as well as others derived from the expression and communication of the project. Sometimes, tutors do not have an established protocol for tutoring, but it is based on their own experience. For all these reasons, in the last year we have implemented a tutoring guide that makes students see their project as an achievement of steps to be overcome, and where both parties have the necessary tools to develop the research in an efficient way. This experience shows the usefulness of this guide from the perspective of the students.

Keywords: *Tutoring, end-of-degree project, Guide, Tools*

1. Background

The European Higher Education Area (EHEA) opens a space that favors the mobility of university students, as well as their employability in European countries. In this space, European universities set up the educational pacts signed in the Bologna Treaty [1]. One new requirement introduced in the degrees from 2010 was the compulsory research work to end the degree. Hereafter, we will refer to it such as the “end-of-degree” (EOD) project.

According to the EHEA, students should write an end-of-degree project consisting of an original, autonomous and personal work, under the guidance of a teacher, in which the knowledge and skills acquired throughout the degree are applied and developed, demonstrating that they have achieved the competencies provided in the study plan [6].

Although students are supposed to be prepared to carry out this project since they have allegedly acquired the sufficient skills during their previous training, unfortunately this is many times not the case. It is common for students to have had tasks based on the completion of reports during undergraduate training; however, these were usually carried out in groups to enhance collaborative work skills. Teamwork has been a fundamental activity in university education, due to the multiple advantages offered by this technique during working life [5]. The use of this technique requires that each participant assume a role within the team where their responsibilities are interdependent to those of the rest. In addition, not only technical knowledge is used on the topic to be discussed, but also soft skills such as leadership, coordination, conflict management, among others, are important [4]. Even in those experiences where the group does not work together and they are limited to a distribution of smaller tasks which will later be joined and will form the result, the students have feelings and motivations that will make them feel better. Students who participate in teamwork receive messages such as the following: *"the group helps me get the job done even if my contribution is not brilliant"*; *"if I don't know how to do a task the group will give me support"*; *"The result of the work does not depend exclusively on me"; "the amount of work I have to do is small”.*
However, when they have to face to the EOD project, they have to work on their own. . Besides, the EOD project should have sufficient scientific rigor; its workload is like any other subject (in most degrees it involves at least 6 ECTS credits); it can be published in an open access database, and it must be original and a good contribution to the field of study. Nevertheless, in this case they do not have the support of the teamwork [3, 4]. It is said that many of the soft skills that students have acquired in their groups will be very useful for the development of their EOD.

Following this line of thought, Figure 1shows the positive and negative emotions of EOD students from the moment they request a research area and a tutor until the moment in which they defend the work done.

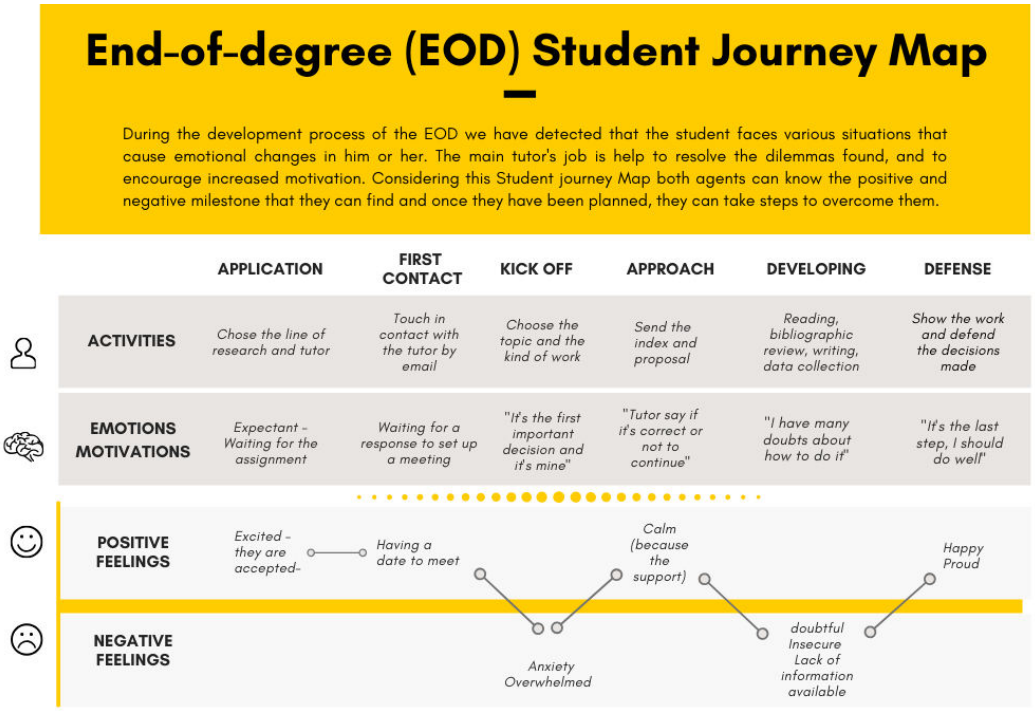

Fig. 1. End-of-Degree Student Journey Map. Source: Own Elaboration.

EOD students will have positive emotions in those moments when they interact with the tutor since this provides support, proposes improvements or corrections, and in some way,the feeling of collaborative work that have been experiencing during the degree is imitated. In addition, there is a positive feeling at the time of defence of the project, since students have eliminated all their fears regarding its completion, and they feel empowered for a challenge like the one he has just overcome. Happiness and personal pride are the most common feelings in this last phase.

Instead, there are two points where the tutor-student relationship should be optimized, since generally they tend to be those that lead more easily to the perception of student's negative feelings. The first of all is the lack of a closed line of work offered by the tutor. The pattern that the student has been following during the degree is to receive clear instructions to do a project, but in the mentioned situation, the student has to think the specific topic to be developed in the EOD and how, considering the knowledge area and experience of the tutor.

Students perceive this first task as a task of great responsibility since the originality of the work, the availability of data and sources of information to analyse the question posed, and even their motivation throughout the work will depend on the choice of the topic. Until all these doubts are dissipated, the student may feel anxious about this task. On the other hand, once the tutor has approved the topic and they have thought of a work structure, it is common for the student to have unpleasant sensations in the face of the doubts that arise from doing a job of this type individually: i.e. how to search for quality information in databases, how to properly cite, how to collect data and analyse the information, or simply, how to know if the writing style is adequate and understandable.

For all of the above, we want to provide tools that could facilitate the development of these phases, minimizing the negative feelings of the student and strengthening the tutoring relationship. These tools will be provided and developed in the following section.

2. Tools to improve the EOD student experience and results

Previous experiences as EOD tutors have made us understand that the initial phase, where students should look for a topic and plan the whole project, has been the most complex for them. For this reason, we prepare four files to fill in and try to clarify initial doubts or help students with their EOD.

1. **Systematic Student Guide.** The feeling of uncertainty is paralyzing at times, as ignorance exposes us to many unfounded fears. The first tutor-student meeting aims to discuss together what steps to follow in the development of the project.

   In this proposal (see figure 2), we divide the EOD project into 5 phases: contact; search for the idea; initial research on the topic; production of the manuscript and finally, defence and presentation. In this infographic, the student knows the tasks he will perform in each phase. Dividing a large task into several small ones makes the challenge easier to take on and speeds up its completion. On the other hand, at the bottom of the table are suggested tools that will be useful for the development of each task.

   In short, this could serve to reduce the negative feeling of anxiety or doubts during the development of the EOD project, since at all times they would have in mind the guide to follow.

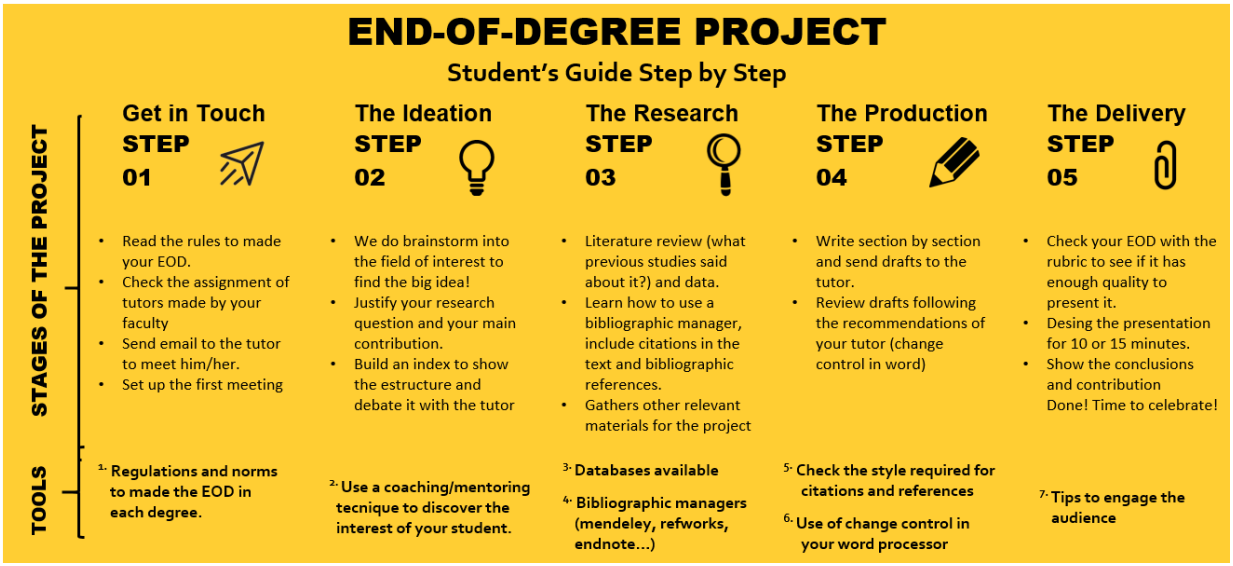

Fig. 2. Systematic Student Guide. Source: Own Elaboration.

2. **Student profile.** In this file, the tutor can set a deadline taking into account students availability, know their current motivations through the subjects they liked the most and the least, their future motivations according to the type of job they would like to do, and also their strongest skills and others they want to improve.

   This sheet allows tutors to help students during a session based on coaching, that is, not making the tutor imperative decisions but asking and letting students make the decisions that determine the direction of their work. It is true that with this information, it is not possible to determine the topic on which the EOD project will be carried out, but it does allow to brainstorm possible ideas derived from the present and future interests of the students, as well as their strongest abilities.

STUDENT PROFILE				
Name and Surname			Degree	
Email adress			Telephone (opt)	
	TIME	**STRENGTHS**	**WEAKNESSES**	**FUTURE**
RELEVANT INFO	Desired date to finish the EOD project:	Mention 3 areas/subjects that you like the most during the degree	Mention 3 areas/subjects that you like least during the degree	What would you like to work on in the future?
	Time availability (any limitation)	Which are your strongest skills?	In which skill do you need more suport?	What problem would you like to solve? What topic would you like to cover?

Fig. 3. Student Profile. Source: Own Elaboration.

3. **The ideation file.** This file helps to make a proposal for the topic by answering the W's research management matrix (*What? Why? Where? Which?*). Once students answer these four key questions, they can start with the initial bibliometric search to find out what is known so far about the topic and the most relevant authors who have dealt with it. This is a very effective tool to start focusing the work and generate a tentative index, which will allow them to go to step three, the investigation.

WHAT DO YOU KNOW ABOUT THIS TOPIC?			
About what topic would you like to research? Do you have any experience in it?			
RESEARCH MANAGEMENT MATRIX			
WHAT is the research question?			**WHY** is this topic relevant / original?
WHERE can you find the data?			**WHICH** method are suitable to analyse them?
BIBLIOMETRIC SEARCH			
Keywords			
Relevant authors in this line of research *SOURCES: Orcid, GoogleScholar, Scopus, researchGate, etc.*			
What is known about it until now? What would be your contribution?			

Fig. 4. The ideation file. Source: Own Elaboration.

4. **Guidelines for Evaluation.** It is an evaluation rubric to know the level of rigorousness and its relation to the desired final grade. When students know this from the start of the EOD project, it is easier to know exactly what level the project is at all times, and they have the opportunity to improve those weakest points. Despite keeping this in mind during the project, it is advisable to revise this checklist in phase 5 before making the final submission of the project.

GUIDELINES FOR EVALUATION			
LEVELS	**☐ LOW (C)**	**☐ MEDIUM (B)**	**☐ HIGH (A)**
Purpose of the work	☐ The project does not present objectives, nor does it justify the topic. It is a mere collection of information.	☐ It presents clear and ambitious objectives, some unrealistic.	☐ The project presents clear and justified objectives, addressed professionaly and realistically.
Theoretical Framework	☐ The project has no theoretical framework, nor does it deepen the knowledge of previous works.	☐ The theoretical foundation is well structured but the number of references seems insuficient.	☐ The theoretical foundation is well structures, contains sufficient references and includes personal contributions.
Research Question	☐ Research question has already been addressed in other studies and the contribution of this work is very low.	☐ Research question is well justified.	☐ Research question is well justified and it is clearly detailed in an hypothesis, identifying the variables affecting the research.
Quality content (data and information)	☐ The student does not make a contribution of new content.	☐ The content (data and information) collected in the End-of-degree Project are sufficient to address the topic.	☐ The content (data and information) collected in the End-of-degree Project are of great quality and quantity, which allows to address the topic profesionally.
Methodology (data analysis)	☐ The student does not explain the methodology used or it is not suitable for the type of analysis.	☐ The methodology suits the needs of the project.	☐ The methodology is adapted to the needs of the projects. The project explains the collection of data as well as the analysis or tests performed.
Conclusions	☐ Weak conclusions or not related to the topic.	☐ Conclusions related to the topic, without discussion or personal opinion of the student.	☐ Appropriate conclusions, elaborated in a personal way, discussing previous results.
Writing and cohesion	☐ The text is complex to understand, unclear or appropriate technical language is not used.	☐ The text is easy to read, a simple presentation of the information is made using short sentences.	☐ The text is easy to read, it is cohesive (elements of cohesion between paragraphs) and it presents technical language supported by visual descriptions.
Use of references	☐ The project hardly includes references, so that the student does no rely on any previous work to prepare the theoretical framework.	☐ The project presents sufficient references in certain descriptive parts, but it does not present an analysis of previous works.	☐ The project presents sufficient references along the research, it exposes an analysis of the results of previous works and generates an original contribution.
Format	☐ The project does not follow End-of-degree project regulations (length, format, font, abstract, table of contents...)	☐ The project does not follow some End-of-degree Project regulations (length, format, font, abstract, table of contetns...)	☐ The project follows the End-of-degree Project regulations (lenght, format, font, abstract, table of contents...)

Fig. 5. Guidelines for evaluation. Source: Own Elaboration.

3. Conclusions

Previous experiences as tutors have made us understand that the initial moment when students look for a topic and plan their EOD project is the most complex for them due to the uncertainty and fears they face. For this reason, we have prepared four files to fill in in order to clarify initial doubts or help

students with their EOD project. The aim of using these tools are twofold. On the one hand, tutors manage to alleviate the negative feelings that many students develop in the choice of the idea and in the development of the EOD project. On the other hand, we have been able to experience greater efficiency and better results from our students when they have had these tools in mind, since it reduces uncertainty, streamlines the task by being a cluster of small sequential tasks, and helps to meet the established objectives.

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