

TUTORING AND MENTORING PROJECT FOR FOREIGN STUDENTS OF FOREST ENGINEERING DEGREES

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Abstract

We present an innovative educational project dedicated to improve the academic performance of foreign students by enhancing the integration of international students during their academic attendance in the programs offered at Universidad Politécnica de Madrid's School of Forest Engineering (Spain).

After a first stage in the previous year in which a specific protocol of tutoring and mentoring for international students was designed, first results structured in multipurpose goals by recommendations and actions for the tutorial program in the first month of the 2012-13 academic year were provided. These tutorial activities were held by a group of interested professors and supported by a mentoring group of volunteer students. The application of a specific protocol was based on the experience of previous reports of former student's academic profiles with general information about their provenance, courses that they had applied, and new contributions provided by a survey performed in 2012 which evaluated the degree of satisfaction and performance of current and former foreign students.

Main results, discussion and conclusions after the application of this new protocol were provided in this communication. Results were analysed in order to detect the weak points that should be improved according to the survey's areas that were perceived to be low satisfaction and high importance. The improvements obtained were tested with the new tutorial actions that were applied. These results, recommendations and the protocol could be helpful for further actions to be developed in other universities.

Keywords: Higher Education, international students, surveys, forest engineering, innovative educational project, environmental science, academic advising.

1 INTRODUCTION

The Technical University of Madrid "*Universidad Politécnica de Madrid*" (UPM) has seventeen centres in three main campus and different locations in the city of Madrid (Spain). The Forest engineering school "*Escuela Técnica Superior de Ingenieros de Montes*" (ETSI Montes) is a medium- size center of the UPM with more than 1'000 students where it was given essentially a six-year forest engineering degree and a second cycle of environmental sciences, but throughout the academic year 2010-11 has started the new degrees in Forest Engineering according to the new EHEA system. Our school has its origin in studies of forestry that have been underway for over a hundred and sixty years and it was the first centre of Forest Engineering in Spain.

During the first year at university, new students use to live a period of adaptation to a new situation that implies different organization of tasks in their life. This new changes should be more severe in foreign students due to new habits in a different language and environment. The tutorial is a service given by the University that provides training, information and personalized guidance to students [1]. Tutorials are suggested for new students that have started their studies under the new European Higher Education Area (EHEA) [4],[5], but even more important for foreign students due to the difficulties that we have mentioned before [2] and the enrollment in different programs with a wide variety of subject offered in different faculties and diverse educational systems [6], [7]. Under these circumstances, tutoring constitutes a support for the adaptation of students to university and ICT applications for educational purposes could be helpful [3]. In the other hand, tutoring is an interesting tool for quality improvement for the professor in order to obtain valuable information regarding best practices actions and to identify any kind of needs or gaps in the educational program that could be hidden in a first glance.

All these difficulties can be considered for a foreign student and will be analysed in an innovative educational project that was created by professors of the ETSI Montes in 2011. The purpose of this project consisted in the execution of a preliminary protocol that it could be helpful in order to improve the quality of the exchange programs for foreign students in the future. This project should cover the weak points, previously detected by a survey among former foreign students that assisted to ETSI Montes in the last years.

2 METODOLOGY

The tutorial action should consider the recommendations suggested in the protocol [3] in order to identify the main topics that should be studied. The main characteristics of foreign students at ETSI Montes in the current and previous year will be compared since two different views: Information from the background of students that were provided by the former student's academic profiles with general information about countries and universities of provenance, sex ratio, courses that they had applied and their performance during the exchange program. In second place, a survey delivered to former foreign students. With this valuable information it could be possible to know which one could be the weak points on which, the project should pay more attention.

The main questions were organized in four groups regarding to 1) General information, 2) Accommodation and financial aspects, 3) Spanish language courses and academic aspects and 4) Aspects about innovative education in ETSI Montes.

3 RESULTS AND DISCUSSION

3.1 Characteristics of foreign students and host group of tutors and mentors at ETSI Montes

For the period of 2009-2012, corresponding to eight semesters, a wide variety of foreign students had studied at ETSI Montes. In total, 38 students from 15 different countries have assisted during 2009-2011 (Fig. 1-left) that indicates a higher proportion of EU countries like Italy (7) or Germany (6) joining *Eramus* program, which has been clearly patent in the current academic year (Fig 1-right).

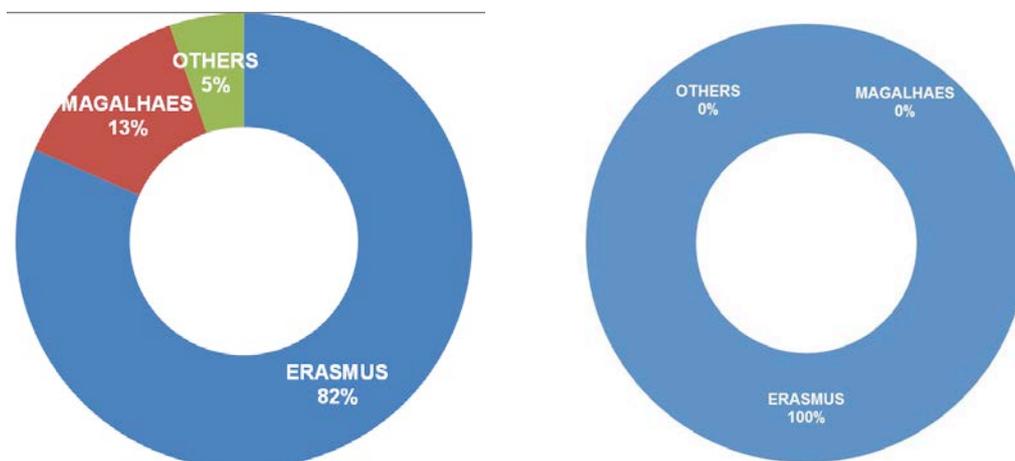


Fig. 1. Students by exchange program in the last three years (left) and in the current year (right).

100% of international students during 2012-13 are Erasmus students during the first semester (11 out 17 students during 2012-13)

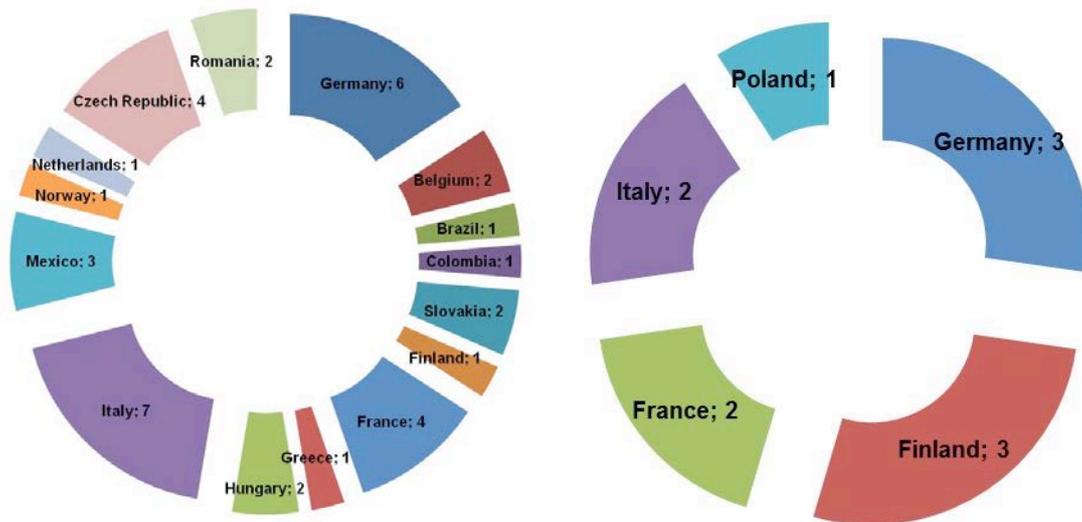


Fig. 2. Number of students and country of provenance in the last three years (left) and in the current year (right).

According to this information, an average of 12.7 foreign students visited the ETSI Montes every year in the different programs offered during the last three years. Meanwhile 11 students are joining the international program during the first semester in 2012. A total amount of 17 students are expected in the whole (first and second semester) academic year 2012-2013 [2].

The sex ratio was balanced (45% vs. 55%) without any significant differences between sexes (Fig 3-left) in the period 2009-2011, although a different trend has been detected in the first semester of 2012-13 (Fig. 3-right).

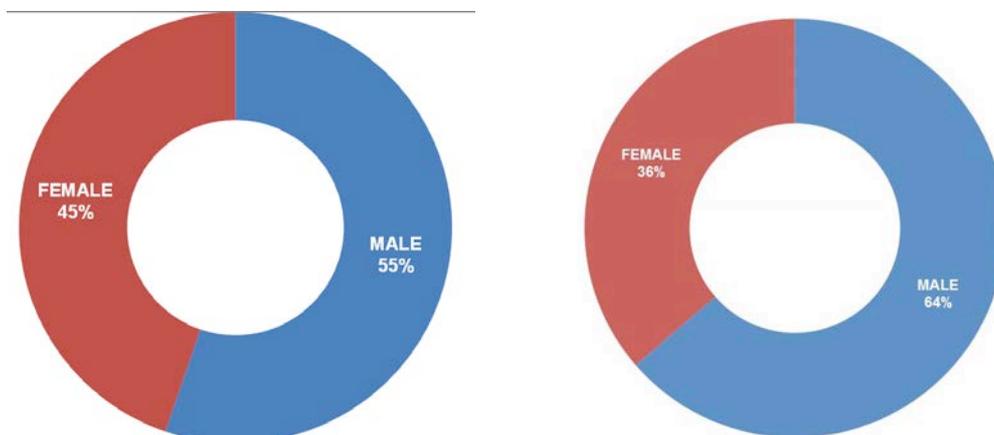


Fig. 3. Sex ratio in the last three years (left) and in the current year (right).

The provenance of students and the name of the main universities of Europe regarding to forest engineering and environmental sciences are displayed in Fig. 4. In the last semester, the tendency is the same compared to the average of the last years with a higher attendance of North and Central European countries.

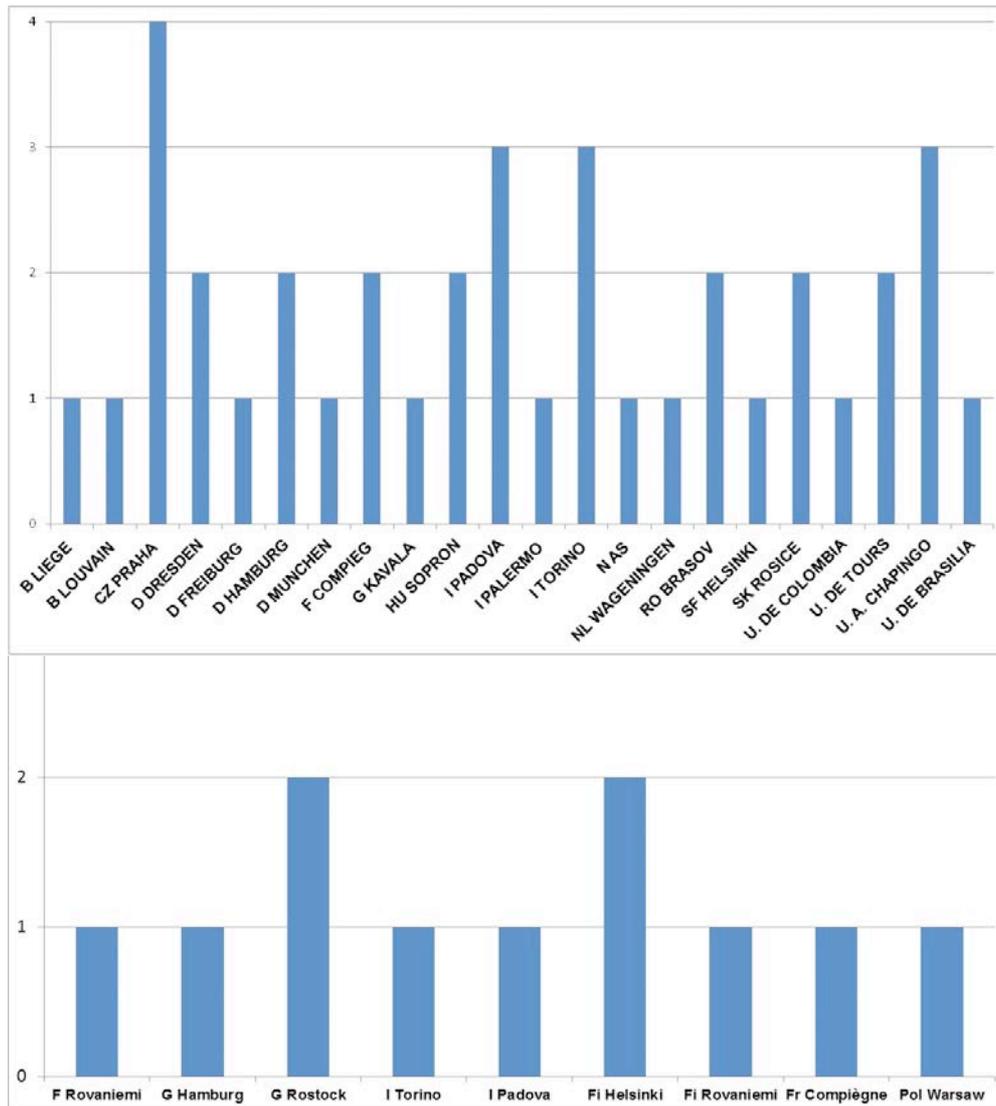


Fig. 4. Home university of provenance in the last three years (upper) and in the current year (lower).

3.2 Results provided by surveys in foreign students and host group of tutors and mentors at ETSI Montes

3.2.1 Survey: foreign students:

The questionnaire was answered by 18% of the former *Eramus* students. It was sent by email as a Word text file in the first trimester of 2012 and due to the lack of answers, it was uploaded to a web site and the link was sent by email with a slightly increment on answers. The first group of questions regarding general information and personal assessment showed that 71% of the students assistant during one semester, while the rest stayed for a year (fig. 5), considering it (Fig. 6) as “excellent”.

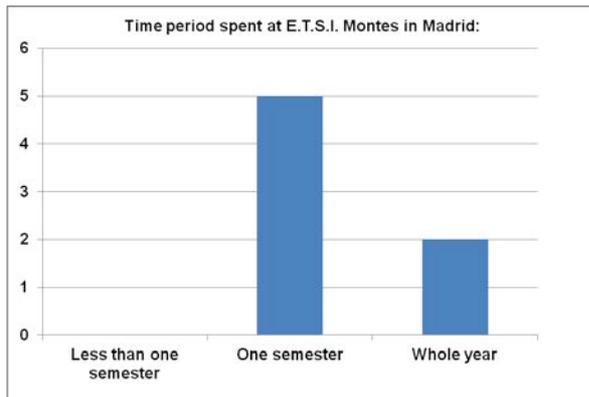


Fig. 5. Time period spent at ETSI Montes

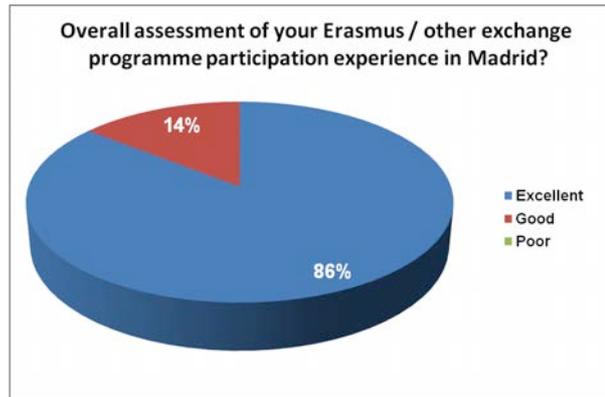


Fig. 6. Overall assessment of the exchange program

The reasons of the stay at ETSI Montes (Fig. 7) were: course attendance (56%), internship (33%) and PhD (11%). The relationship with the students of the host University is considered as good (57%) and excellent by 43%, which it is a good result; although it seems that it could be improved (Fig. 8).

The reasons why they chose the ETSI Montes were varied (Fig. 10), but all related to the aims of an exchange program. Another interesting point is the difference in the sex ratio (Fig. 9) of the students who answered the survey (71% female vs. 29% male). The first group of questions ends with a final question: Would you recommend your colleagues ETSI. Montes (UPM) to participate in one of the offered exchange programmes?. They agreed in 100% with this question, which it is a very good result for the faculty.

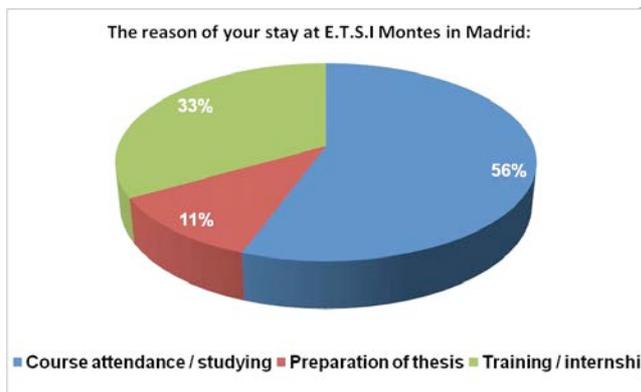


Fig. 7. Reasons of the stay at ETSI Montes

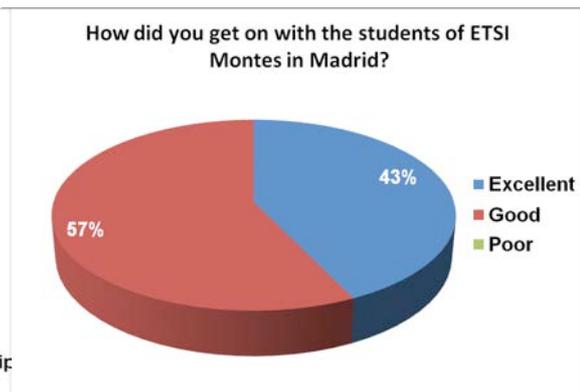


Fig. 8. Relationship between Erasmus and students

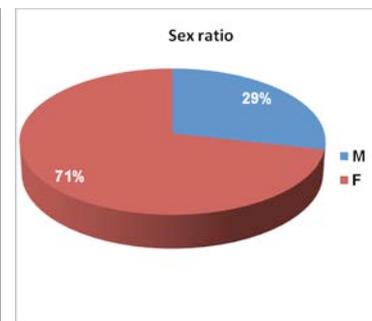
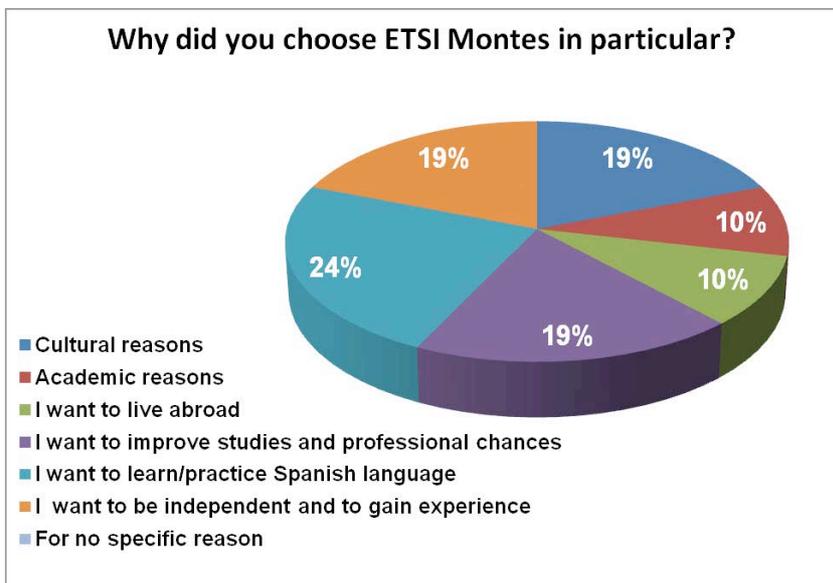


Fig. 9. (above) Sex ratio of the students who answered the survey

Fig. 10. Reasons to choose ETSI Montes.

The second group of questions regarding accommodation and financial aspects showed that 86% of foreign student were living in shared flats (Fig. 11) and the find the accommodation by themselves on internet or by asking friends (Fig. 12). It is noticeable the lack of information about accommodation by the foreign student office at the UPM.

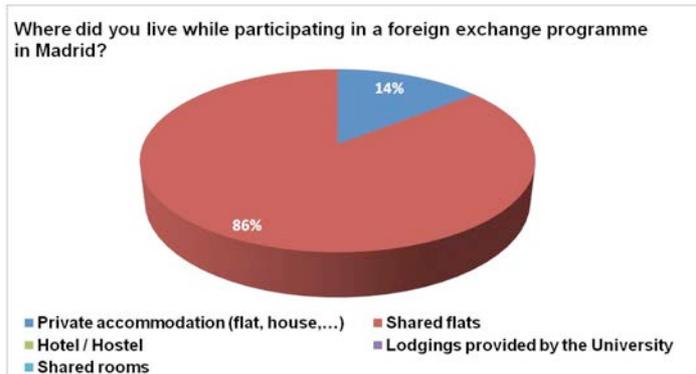


Fig. 11. Accommodation during the internship

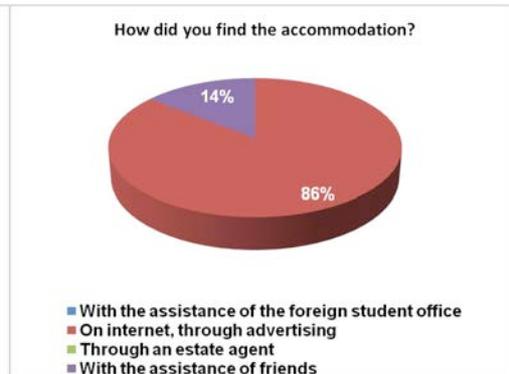


Fig. 12. Flat hunting support

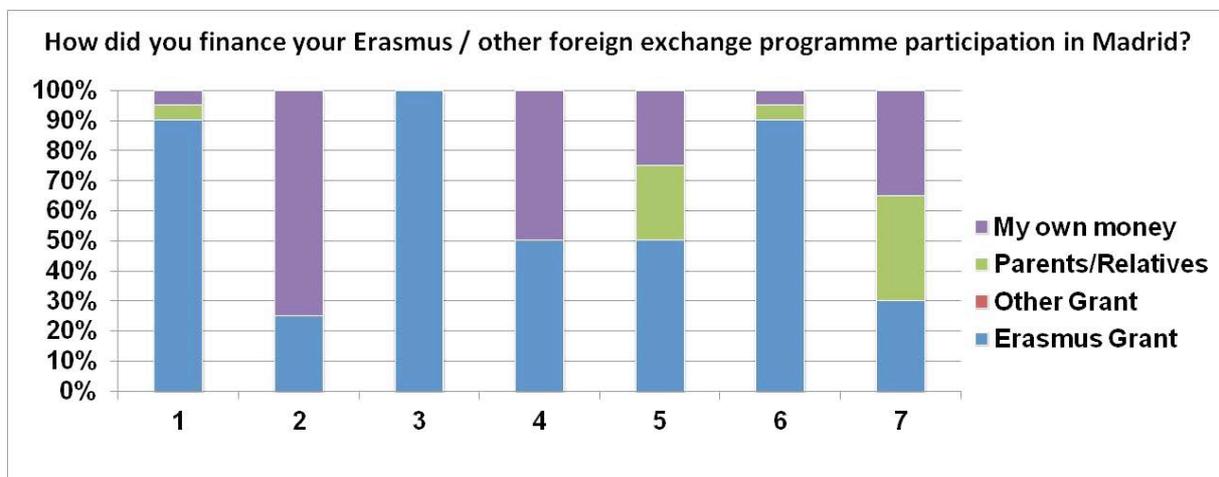


Fig. 13. (above) Sources of funds during the internship

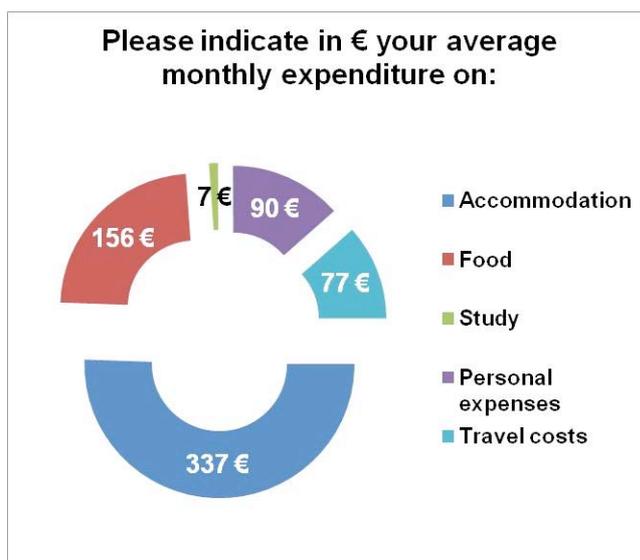


Fig. 14. Monthly budget distribution

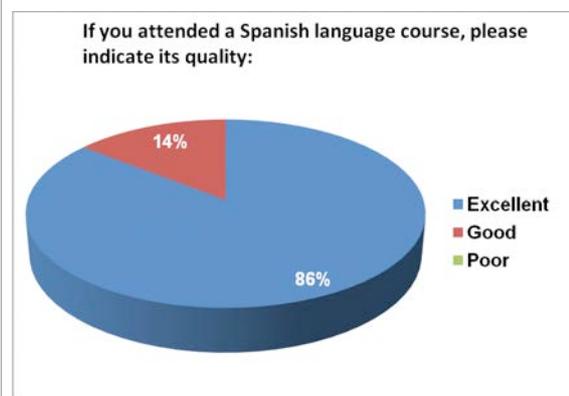


Fig. 15. Quality of the Spanish language course

Another important point for the students was where they raised funds (Fig.13) and the distribution of the monthly expenditure during the internship (Fig. 14). According to (Fig. 13), the financial resources

were diverse and Erasmus grant covered from a 90% to 20% of the total expenses. The reason of this difference could be explained in Fig. 14 by the monthly budget distribution. The range of money spent every month ranged between: 440 € - 950 €, depending on the student, with an average of 667€/ month and near to a 50% of that money (337€) for accommodation.

The following group of questions corresponded to the language communication and academic aspects. The quality of the Spanish language course provided by the UPM was assessed as excellent by 86% of the students (Fig. 15) and they agreed (Fig. 16) that they have improved their knowledge of Spanish language (43% significantly and 43% greatly improved), despite of a poor previous knowledge (Fig. 17) by a 43% of the participants.

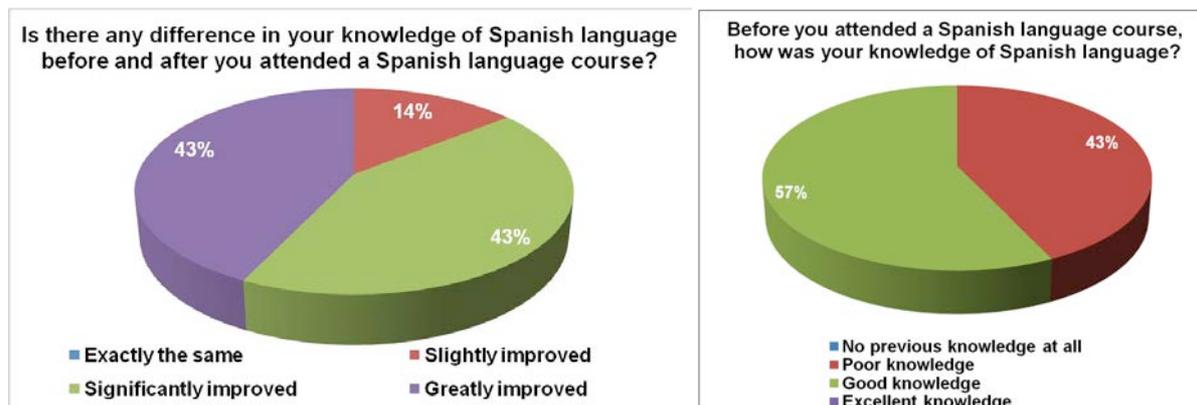


Fig. 16. Improvement of skill level after language course. Fig. 17. Previous knowledge of Spanish

According to the results, the Spanish language course was successful and fulfilled its purposes.

The next group of questions regarding academic aspects showed that students were satisfied about their academic process (Fig 18) (71% good and 29% excellent) and 71% of them were helped by the Departmental coordinator when they need (Fig. 19). According to these results, a tutorial action could increase the results obtained in both questions about the academic process and department's support.

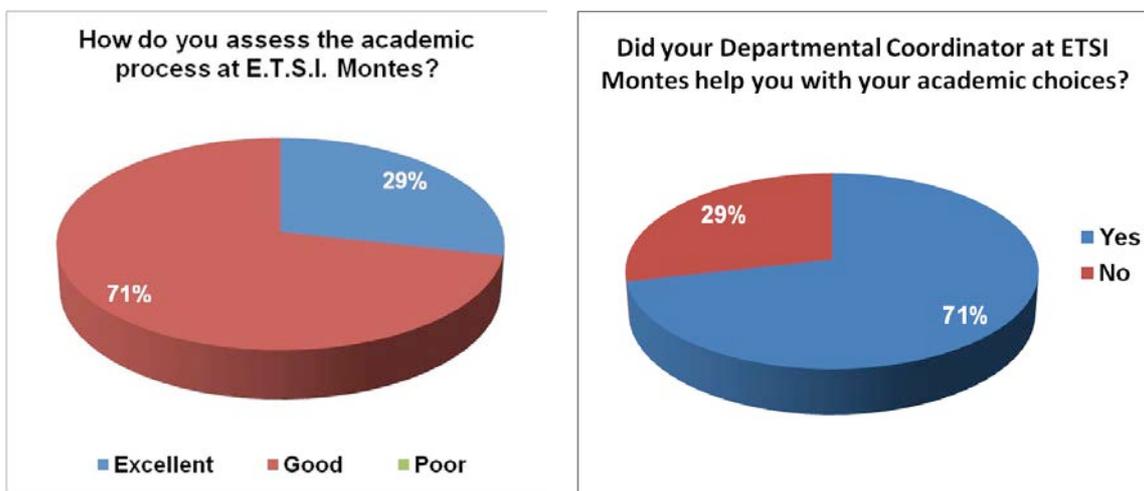


Fig. 18. Self-evaluation of the academic process. Fig. 19. Departmental coordinator's support

Nevertheless they considered by 100% of answers that it was easy to contact the Departmental Coordinator and the quality of his / her help was good. In general, they were pleased with the information provided about the academic calendar and the language courses, meanwhile an improvement about the information regarding to accommodation, students associations' activities and courses' program could be suggested (fig. 20)

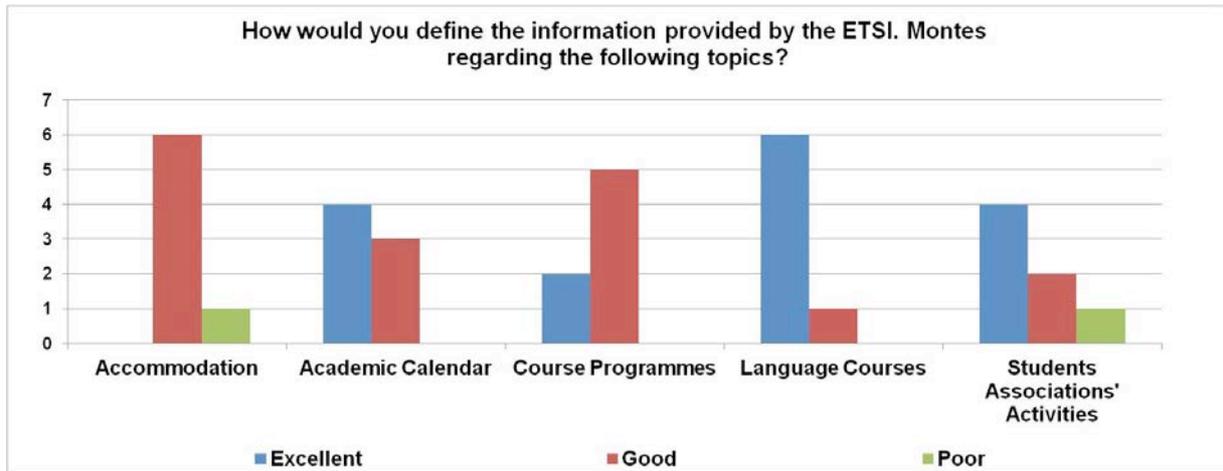


Fig. 20. General assessment about the information provided by ETSI Montes

This results show that there was a good planning regarding the previous targets and the final results that it could be understood as a good coordination between both foreign students offices of the faculties. Although still there are some individual unbalanced cases that could be improved (See Fig. 21 examples 2nd and 3rd).

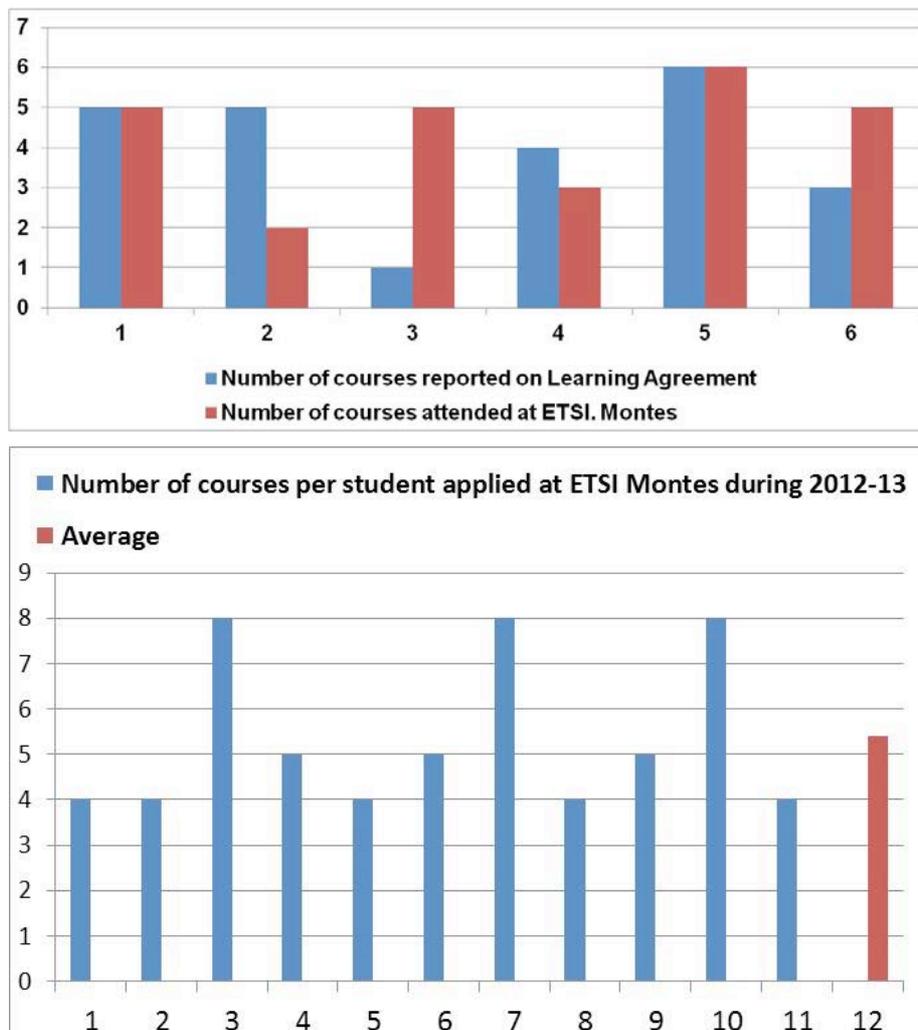


Fig. 21. Individual examples of students regarding the number of courses proposed before the internship and courses finally attended at ETSI Montes in the last three years (upper) and in the current year application (lower).

4 CONCLUSIONS

There was a significant difference between students that attended in the current year and previous years regarding the welcome program, informative sessions and visit to the facilities. While the former students demanded this kind of activities, the current students were pleased by the information given during the welcome program of the last semester. This difference could be explained due to the activities that were provided by the foreign students office at ETSI and the members of the innovative educational project "Tutoring and mentoring protocol for foreign students of engineering degrees in forestry, forest engineering and environmental sciences" during the last year that confirms the idea of a closer activity with the foreign students during the first weeks at ETSI Montes.

At the end of the academic year, a new survey will be performed regarding to the success of the tutorial action during the current year. We hope that this innovative educational project could be helpful for further tutorial actions to be developed in our faculty and other universities.

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