Factors influencing low graduation efficiency rate in Computer Engineering degree: A qualitative Analysis

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PROBLEM

Universities graduate annually a certain number of professionals. Some of these professionals finish their studies in the time suggested by the University; others take a longer time to accomplish their studies because of personal, academic or institutional factors that delay students

AIM

The purpose of this research is to determine what factors influenced computer engineering students to end or delay their career studies.

METHOD

This study was made on an Ecuadorian university. The qualitative method was applied through surveys and semi structured interviews. University students and graduates' experiences were collected to be later categorized
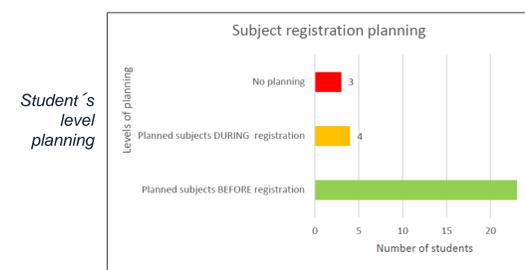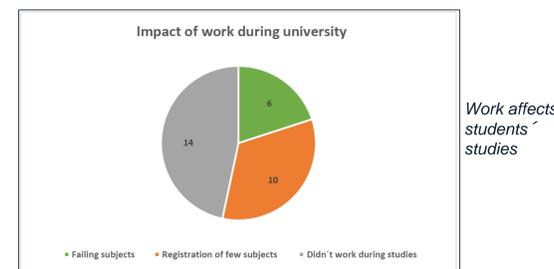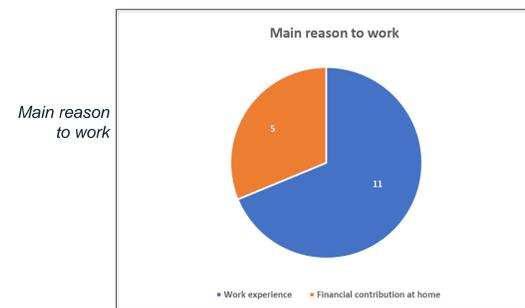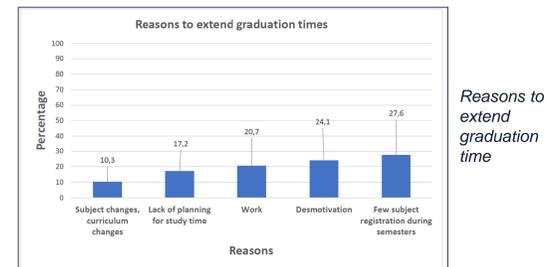
The methodology applied a qualitative analysis with a descriptive purpose. The methodology is divided into the following phases:

(1) Selection of participants
(2) Recollection of Information through a survey and a semistructured interview application
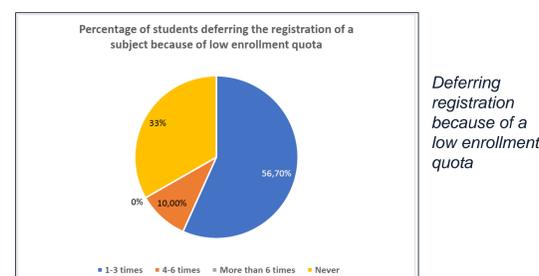(3) Information analysis.

Participants are eleven graduated professionals and nineteen actual students, from level 400, who have not yet graduated from the Computer Engineering career. Graduate participants will correspond to two periods: from 2011-IIT to 2018-IIT; and from 2012-IT to 2019-IT.

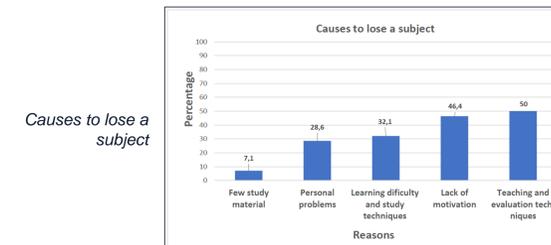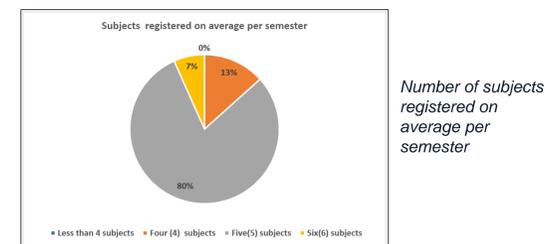## RESULTS SURVEY

Motivational Factor

Reasons to extend graduation time

Main reason to work

Work affects students´ studies

Student´s level planning

Institutional factor

Deferring registration because of a low enrollment quota

RESULTS SURVEY

Academic Factor

Number of subjects registered on average per semester

Causes to lose a subject

RESULTS INTERVIEW

The interview was applied, and the comments were classified; Six categories were found

Category: Interest and Motivation

"I've always loved creating things, developing software, apply imagination to creation".

Category: Modality of graduation and curriculum changes

"I graduated by thesis, and this took me a year and a half. I worked immediately after finishing the curriculum subjects, for me it was more important. When I was a student there was no capstone project modality, I am sure that If I had that, it would have saved me a lot of time."

Category: Schedules

"The curriculum subjects schedule is not varied, there is no facilities, this breaks the students planning. The schedule per subject should be in the morning, afternoon and night"

Category: Commitment.

"I took all the subjects according to the curriculum program, thanks to that and not failing any subject and not being forced to work part time or full time, I have been able to advance and finish the curriculum program. If I had to work, I may not have finished, I was a teaching assistant during three semesters. I validated two levels of English and digital collaboration tools course, however, this did not affect my graduation time."

Category: Planning of subjects and dedication hours.

"I had a plan A and plan B at the time of registration, this helped me to select carefully the subjects in the registration process, I tried to accomplish registering the subjects that belong to each semester in the curriculum program"

Category: Work or extra activities

"My colleagues, consider they can learn more outside than inside the university, they feel they need to gain experience before they get out there to work for real"

CONCLUSIONS

Considering the survey and interview responses, both the motivational factor and the academic factor influence GE.
Furthermore, the results show that the percentage of student who do not work is almost 48%, the other 52% are interested in working and gaining experience. The academic career program should promote the design of working semesters. This assures that the student is working within the academic environment and within professional supervision, carrying out paid internships that balance work and studies at the same time. Another interesting option is the encouragement for the development of incubators. They give students more options to perform professionally inside the campus