Don Bosco Technology Center

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IT18

Business Analytics

Study on the Decreasing Population of DBTC College Cebu

Group Members:

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# Rationale of the Study:

The College of DBTC is constantly in a shortage of students, because only a small number of students enroll every year and due to the process of moving to a higher year that number only continues to dwindle. Especially in the cases on courses that are not so well marketed, in the Information Technology and the Industrial Engineering department. Because of this courses that dwell on Engineering tend to have more students in it.

This study aims to address this problem and may point out the keys in which to better increase the population of the department.

1.1 Business Objectives:

Organization:

The College Department:

College Dean

BSME

Chairperson

BSIT Chairperson

BSECE Chairperson

BSTE Chairperson

ABReEd Chairperson

The Education and Training Center:

VP Education and Training

BED Principalpal

College and TVED Pastoral Animator

TVED Directorpal

College Deann

Research and Communication Directorpal

Head of Student Affairs and Services Officepal

Registrar

Teaching and Support Personnel

College Dean

College Chairpersons

Student Affairs Officer

Guidance Counselor

College Full-Time Faculty

Part Time Teaching Personnel

College Librarian

Industry Liaison Officer

College Lab Technician

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## Key persons:

* College Dean
* Registrar Officer
* College Chairperson

The College Dean foresees all events that the College will be doing, with the assistance of the different Chairpersons. He also holds the records of each Faculty member. The Registrar has the documents for the school’s data such as the current population of the College and the other departments, and through these documents we can formulate and validate possible variables that would be needed for the study.

## Internal Sponsor:

The internal sponsor is the Instructor Mrs. Noreen Fuentes since she provides us with feedback if the data is understandable and has a relationship with the current situation.

The College Department of DBTC has a lower population compared to the BED or TVED.

Data:

This problem has been usually been placed in its marketing area and these possible factors in general form:

* Teachers
* Environment
* School policy
* Facilities
* Student Factors

These problems are usually expressed in their specific forms by the students in DBTC. The teachers are mentioned first because of the complaints of students ranging from incompetence, under qualification, abstentious attitude, lack of general interest, and the lack of full time teachers. Second is the Environment since most students complain that the geographical location of the school is not really accessible seeing as you need to go deep in a subdivision to get there. The policies are mentioned because students attribute the rigorousness of the school to be a hindrance to their education such as clearance signing. Also they can’t enroll in a course that isn’t offered by the school. The school also has problems with its facilities regarding the age of the machines that the students use. Student Factors are also considered such as subject availability, since courses are not always open the next semester, they tend to transfer due to that.

## Current Solutions Employed:

The problem of Teachers in regards to incompetence and under qualification is frequent training for specific faculty members. In regards to the number of teachers available is to provide part time faculty members to those subjects that are not taken in by the full time faculty due to their load. The policy for the opening of subjects is to distribute the cost of the subject to the students who wish to take it. These solutions provide the means for a student to still take a subject despite the lack of Full time faculty members and still get the training that they paid for.

## Disadvantages of the Solution:

The disadvantage of the current solution is the long term monitoring of part time faculty members. Sometimes subjects are held back due to the availability of the part time members.

## The User’s needs and Expectations:

The Users:

* The Students
* The Faculty

The Faculty sometimes faces subjects that have only 1 or 2 students enrolled, and is a requisite for these students to proceed to the next level. With the population currently low, the faculty has no choice but to open a underpopulated subject for the sake of the students. The student part is that failing these subjects means repeating a year due to the fact the subject is not open for enrolment due to the population count. Even then enrolment of these subjects might mean being under a Part time Faculty member which means training might not be that responsive.

## Business Success Criteria:

The Success Criteria is the increase in the population of the College by 10%.

## Assessor of Business Success Criteria:

The assessors of the criteria are the Dean, the Instructor, and the Administrator. The Dean would see the increase in population as an improvement especially the Instructor Mrs. Noreen Fuentes seeing that study will provide insights for future improvements. The Administrator will also see this as an indication that the College is doing well.

1.2 Feasibility Analysis:

## Data Sources & Domain Experts:

These are possible Data Sources:

* Registrar’s Office

The Registrar holds the Documents of each student currently enrolled in DBTC especially TORs and files needed for a student to transfer to other schools. They also hold a record of students who are currently dropped out due to policy concerns. Through this data we will be able to find the Benchmarks and the Population difference each year.

And The Domain Expert:

* The College Dean

The Dean is the only Domain Expert needed since he oversees all events, and activities of the College Department and knows its policies and Business Rules that it reinforces such as the School’s Core Values taught to the Students and holds the qualification data for the hiring and of College Faculty members.

## Availability of Tools (Hardware and Software):

Software Tools:

* The School Automate

The School automate is accessible in and out of the school, and is offline starting at 9:00 Pm. This allows us to view the subjects each course has wherever we are as long as there is internet connection.

## User Requirements:

## Assumptions:

We assume that our respondents are the following:

* 4th year BED students
* Graduating Students
* Transferees and Dropouts

We put the 4th year BED students in because of the fact that these students are shown how the College Department works, and how the currently enrolled students are doing.

## Constraints:

* College Scope

We are only targeting the College Department of DBTC, and so that is our main Constraint, so that we won’t border on getting data from the BED department.

## Risks:

The Risks involved in this study is that we need sensitive data from the school, especially documents for the College from the Registrar, also the Domain Experts might not have enough time for an interview. We might not be able to acquire the documents without proper consent even if we have permission from the Dean.

## Contingencies:

The Contingencies require us to send a letter of approval for the documents regarding the college only for use in this study, and that we would have to at least settle an interview with a Domain Expert at his/her time of appointment.

## List of Resources:

The List of resources available include the Domain Experts such as the College Dean and the Registrar. Most if not all of our base data would come from them especially in the area of Teachers and the current Population trend.

# 1.3 Data Mining Goals

## Analytic Goals:

## Problem Type:

## Success Criteria:

# 1.4 Cost – Benefit Analysis

# 1.5 Project Plan

## Review Points & Iterations:

First Stage: Feb 17, 2016

Second Stage: Feb 23, 2016

Third Stage: March 2, 2016

Fourth Stage: March 9, 2016

Fifth Stage: March 19, 2016