

## Ratio and Modalities of Degree Obtention of University Health-Related Discipline's Students. An Approximation

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### ABSTRACT

**Objective:** To characterize educational outcomes of seven generational cohorts of students and their preferred options for professional qualification, to create a strategic design that helps to increase degree obtention rates.

**Methods:** A nonexperimental, descriptive approach was employed. Study subjects were picked by convenience, 258 files of student's who had completed the career requirements for the 2006 to 2012 generations were selected. Data gathered was processed and analyzed with SPSS software.

**Results:** Through data analysis was determined that of a total population of 350 students of the 2006 to 2012 generations, 73.71% (258 students) completed their career requirements obtaining the graduate status, while 68% (238 students) obtained their degree, as a result 92.25% of graduate students earn an university degree.

**Conclusion:** A 68%-degree obtention ratio shown by a health-related program at an university in southeast Mexico is above the nation's average.

**Keywords:** Degree obtention ratio, Degree obtention modalities, University, Educational Outcomes.

### INTRODUCTION

In Mexico, one subject that is frequently addressed on different levels of the public administration is the concerning drive to improve education quality; in other words, it is crucial for the nation wellbeing that the existing education system attends the academic demands in a globalized context, through the formation of professionals capable of transforming their productive, social, and economic environments, professionals who have teambuilding, problem solving, technology and communication skills, and who also possess the ability to innovate and take ownership of their surroundings, Mexico's future, is on a large degree depending on this educational system quality. (OECD, 2019).

This is the reason why it is necessary to keep a high educational outcome ratio, which is a metric approach to evaluate education quality, since it is, the parameter selected by Higher Education Institutions (HEI) to measure their productivity, this parameter is also used as a tool

to assign operative budgets among public universities in Mexico (López, et. al. 2008).

Educational outcome is determined by the student's academic effort while moving and completing each academic course of their curricular plan in an average time, set as a baseline to earn a bachelor's degree, and is defined as a quantitative relationship between enrolled student body and graduated student body within a generational cohort. Is usually presented as an average and as an internal index for the education institution efficiency. It is comprised by the proportion of students who having enrolled on an academic program, finish that program in the allowed time set by the academic plan (Peinado & Jaramillo, 2018).

This is the main reason why every graduate student must obtain a qualification diploma, since it is an indicator used HEI to measure their academic programs 'productivity (Toscano, 2015), this criteria is also used in budget

## Ratio and Modalities of Degree Obtention of University Health-Related Discipline's Students. An Approximation

allocations for public universities in Mexico (Navarro, Gómez, & Torres)

However, many graduate students never conclude their qualification due to a variety of reasons or psychosocial risks (Luna, 2011) revealed that the reasons that affect the qualification process are the following: academic planning, organization, direction, and control, also the coaching and follow up of the whole academic process, thus generating a problem which translates in to a low qualification index in HEI, which even though does not have the same magnitude in every institution or career, it does have an impact on an academic program's demand. Due to this situation, there are two main approaches that HEI have adopted to help increase their statistics, on one hand diversifying their qualification and degree obtention modalities, and on the other hand, using palliative measures

through extracurricular support (Espinoza, 2018)

This is the main reason why many universities have broadened their qualification/degree obtention modalities far beyond the thesis, they have proposed to recognize their graduate students academic qualification through the use of Grade Point Average (GPA), through the use of standardized tests such as the Bachelor's Degree General Examination (EGEL), student enrollment and accreditation of graduate studies, qualification seminars, etc... Nowadays every school or faculty decides which qualification/degree obtention modalities apply within their own academic programs (Hernández, 2012) (UANL, 2008; UNAM, 2011; UJAT, 2011, Martínez, 2015 & UNACAR, 2017)

According to HEI modalities of academic qualification/degree obtention most frequently chosen in Mexico (See Chart 1).

**Chart1.** Most frequently chosen qualification/degree obtention modalities in Mexico

Degreeobtentionmodality	Description
Thesis	It is a research product, conducted either individually or by a collective which main objective is to further the knowledge, or exposing a new approach on a subject of the graduate student's area of expertise. In this modality a professional qualification test is required in which the student must present the results of his/her findings which are evaluated by a jury of academics. The graduate trainee has a full year to develop this research, starting from the thesis authorization date. The thesis can be carried out individually or by a collective, in the first option being developed and presented by one student, while the other may be developed and presented by several students of the same, school, department or career.
Grade Point Average (GPA)	This modality allows for an immediate degree obtention with a general GPA determined by each HEI, that as a rule is minimum of A- 3.7 (90 MEX), having accredited every course in the academic program's curricula on regular periods of examination.
General Bachelor's Degree Qualification Test (EGEL) CENEVAL	It is an standardized test (Generally applied by the National Higher Education Evaluation Center (CENEVAL) it is called General Bachelor's Degree Qualification Test (EGEL), in which students are required to answer a sequence of questions related to topics considered as core competences for professional practice. Schools keep an organized schedule for this test, students chose a date and enroll on their own, they are provided with a written guide for the test and present the test on their chosen date. Tests are graded, students that obtain the required score for qualification automatically earn their bachelor's degree, this is usually a quick and practical way to earn the degree, specially for those students who need to get their professional qualification in a short period due to academic or employment constrains. In some HEI, as an internal requirement, students enrolled in an academic program must apply for this test as a graduation requisite at their academic plan conclusion.
Enrolling in Postgraduate Program	a If a graduate student achieves 50% of the credits required to complete a postgraduate program related to his/her profession, this postgraduate program must have the Public Education Department (SEP) recognition. The postgraduate degree affinity with the bachelor's degree program is determined by the academy at the HEI where the bachelor's degree was imparted.
QualificationSeminar	The graduate student or last year student enrolls in a seminar, of at least 150 hrs, for bachelor's degree or 90 hrs for high school, organized by the office of academic

## Ratio and Modalities of Degree Obtention of University Health-Related Discipline's Students. An Approximation

	assistant at each school, academic department, education and research centers, with the scholar technical council approval and the academic board authorization. To obtain qualification a student must obtain a GPA of at least B- (80 MEX) and an attendance record of 90%, besides presenting an academic paper related to the issues addressed in the seminar.
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Definition of each modality is provided to characterize in a generalized way the array of options that students may choose to earn their bachelor's degree. In some instances, the definitions of each modality can be so general that there is no real difference among them (Silva- Rodríguez, 2016)

Even though the modalities for academic qualification/ degree obtention helped the HEI to increase their degree obtention/efficiency ratios, there is no assessment of how the increment on these values has contributed to improve education quality.

Taking in toa account that in the universities environment academic quality tends to be measured through academic outcomes, the objective for this research was to present a description of seven generational cohorts on academic outcomes, in which most used qualification/ degree obtention modalities were identified; this would enable the development of strategies to increase degree obtention ratios.

### MATERIALS AND METHODS

At the beginning of this study a written request for permission was addressed to a health related academic program coordinator in southeast Mexico, expressing the study's general and particular goals. It was later put under the bioethics' committee consideration where any conflicts of interest were dismissed and an approval decree was obtained.

The employed methodology was the quantitative approach, which allowed to analyze data in a numerical way, specially on the statistics field, this is a non-experimental descriptive, these type of studies try to gather an "Image" a faithful representation (description) of the studied phenomena parting from its characteristics and representative profiles of individuals, groups, communities or any kind of phenomena subject to analysis.

**Chart2.** Generational Cohorts 2006 to 2012 & its IQI and QGI

Generation	FirstYear (2)	Graduate (3)	DegreeEarned (4)	Graduation% (3) / (2)	IQI% (4) / (2)	QGI % (4) / (3)
2012	<b>58</b>	50	46	<b>86.21</b>	<b>79.31</b>	<b>92.00</b>
2011	<b>58</b>	41	40	<b>70.69</b>	<b>68.97</b>	<b>97.56</b>
2010	<b>57</b>	42	39	<b>73.68</b>	<b>68.42</b>	<b>92.86</b>
2009	<b>52</b>	35	33	<b>67.31</b>	<b>63.46</b>	<b>94.29</b>

Study population was selected by convenience, integrated by 258 graduate students' files who had completed each and every course of their academic plan from generational cohorts 2006 to 2012.

Data collected from the institutional systems was exported to a Microsoft Excell spreadsheet. Data was later processed and analyzed using SPSS software (StatisticalPackage for the Social Sciences version 20).

### RESULTS AND DISCUSSION

In Mexico, as all over the world, education quality is an element for comparison and measurement among higher education institutions. One of the most monitored indicators is educational outcome through qualification/degree obtention index. Qualification is a shared responsibility between graduate students and HEI, this index is a key element in education offer, it also plays an important role in evaluation and accreditation processes carried out by regulatory organizations and entities.

To study said issue a quantitative-descriptive research was conducted, using as a primary source the data obtained from several registrar office databases, regarding 350 first year students of a health related academic program at an university in southeast Mexico belonging to the generational cohorts 2006 to 2012.

While analyzing the data the overall school enrollment growth was revealed, so it was decided to include 100% of the data from each student belonging to these generational cohorts. In chart 2 the enrollment volume, graduation, qualification for each generational cohort are shown, graduation rate, Qualification/ Enrollment Index (IQI) and Qualification/Graduation Index (QGI) are also displayed among other educational path parameters.

## Ratio and Modalities of Degree Obtention of University Health-Related Discipline's Students. An Approximation

2008	<b>44</b>	34	31	<b>77.27</b>	<b>70.45</b>	<b>91.18</b>
2007	<b>48</b>	34	29	<b>70.83</b>	<b>60.42</b>	<b>85.29</b>
2006	<b>33</b>	22	20	<b>66.67</b>	<b>60.61</b>	<b>90.91</b>
Totals	<b>350</b>	<b>258</b>	<b>238</b>	<b>73.71</b>	<b>68.00</b>	<b>92.25</b>

From data analysis it was identified that of a total population of 350 students enrolled from 2006 to 2012, 73.71% (258 students) completed their academic paths and became graduates, 68% (238 students) achieved qualification and earned a bachelor's degree which accounts for a 68% Qualification/Enrollment Index and a 92,25% Qualification/Graduation ratio.

Since the academic program opened an selection of qualification modalities which were chosen at will by the graduate students, in chart 3 data referring to the ratio of students who chose each one of the modalities to achieve professional qualification, are shown.

**Chart3.** *Qualification/Degree Earning Modalities*

Modalities										Totals	
Thesis		EGEL		Postgraduate Accredited 50%		GPA		QualificationSeminar		f	%
f	%	f	%	f	%	f	%	f	%		
38	15.97	88	36.98	22	9.24	18	7.56	72	30.25	238	100

EGEL is the preferred modality of academic qualification with 36.98%, followed by qualification seminars with 30.35%, thesis is the third preferred modality with 15, 97% the lower values were obtained by postgraduate studies with 9.24% and GPA with 7.56% of the qualifications.

What can be assumed by the information gathered is that qualification seminars (either as qualification modality or as an extracurricular activity) have greatly increased the qualification ratios, since they entail an organized academic advisory, in other words class sessions, where the students go back to the classroom for a short period of time, where even students with academic lag can participate. On the other hand modalities which imply an individual effort such as the development of a written document such as thesis, research project, memoir, etc.... which has to be defended in front of an academic jury are being less sought by students,

Among public universities in Mexico there are scarce studies of academic outcome with ratios and qualification modalities preferred by students are characterized, this kind of research may help to provide guidelines for the actualization and permanence of

### CONCLUSION

Numbers about the health related academic program in an university at southeast Mexico shown a qualification index of 68%, a ratio above the national median (ANUIES, 2019)

It is concluded that the lack of qualification/degree obtention has multivariate

implications such as the poor or inexistence of researcher formation, the mystification of irresolute difficulties of thesis, lack of time, academic path issues, administrative difficulties and a labor environment that does not demand an academic qualification.

7.75% (20 students) belonging to the aforementioned cohorts at the time of this study have not applied for a qualification modality, these students must be targets of qualification modalities promotion, or at least surveyed to know the reasons why they have not completed their professional qualification requirements.

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## Ratio and Modalities of Degree Obtention of University Health-Related Discipline's Students. An Approximation

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