Estudio de egresados, un indicador de pertinencia y calidad. Estudio de caso

Study of graduates, an indicator of relevance and quality. Case study

Marvel del Carmen Valencia Gutiérrez
Universidad Autónoma de Campeche, México
marvel_valencia@hotmail.com

Diana Lizbeth Alonzo Rivera
Universidad Autónoma de Campeche, México
diana_lizbeth_a@hotmail.com

Susana Friné Moguel Marín
Universidad Autónoma de Campeche, México
sfmoguel@uacam.mx

Resumen

El presente trabajo presenta un estudio de egresados para valorar la pertinencia y calidad del programa educativo de la carrera de ingeniero bioquímico ambiental en la Universidad Autónoma de Campeche, empleando el instrumento de acopio de información propuesto por la Asociación Nacional de Universidades e Instituciones de Educación Superior, el cual fue diseñado para medir la pertinencia y la calidad de las instituciones educativas en contraste con algunas adecuaciones adaptadas al contexto de su aplicación. Para ello, se consideraron 51 alumnos egresados de cinco generaciones (2004 - 2009). Los resultados muestran que 64 % de los egresados ejercen una actividad remunerada en el mercado laboral, siendo los porcentajes más altos los de jefes de oficina, supervisores y funcionarios públicos; 46.2 % afirma que existe total coincidencia de su actividad laboral con sus estudios de licenciatura, sin embargo, 51.9 % manifestó que no labora en su área de estudio. Este porcentaje habla de la necesidad de rediseñar el plan de estudios para que se considere un programa educativo pertinente y de calidad.

Dicho seguimiento de egresados está considerado dentro del rubro "vinculación - extensión" por el comité acreditador de este programa educativo, el CACEB.

Palabras clave: pertinencia, programa educativo, ingeniero bioquímico.

Abstract

This paper presents a study of graduates to assess the relevance and quality of the educational program of environmental biochemical engineer career at the Autonomous University of Campeche, using the instrument of collection of information proposed by the National Association of Universities and Institutions of Higher Education, which was designed to measure the relevance and quality of the educational institutions in contrast with some adaptations suited to the context of your application. For this purpose, we considered 51 students graduated from five generations (2004-2009). The results show that 64% of the graduates have a remunerated activity in the labour market, being the highest percentages of office managers, supervisors and Government officials; 46.2% say that there is a total coincidence of their work with their studies of Bachelor's degree, however, 51.9% stated that not working in their field of study. This percentage speaks of the need to redesign the curriculum that is considered a relevant educational program and quality.

Such monitoring of graduates is considered under the category "linkage-extension" by the accrediting Committee of this educational program, the CACEB.

Key words: relevance, educational program, biochemical engineer.

Introduction

Nowadays the trend in higher education is oriented towards the evaluation of the results of educational processes at different levels, as well as to the relevance, feasibility and linking of educational programs with the productive sectors and service, which are indicators of quality in educational institutions. The United Nations Educational, Scientific and Cultural Organization (UNESCO) (1998), points out that higher education must be oriented to the relevance, and must assess the role of education to compare what society expects of institutions and what they do. It also notes that in an economic context characterized, by changes and the emergence of new knowledge-based production models and their applications, as well as in the treatment of the information should be strengthened and renewed links between higher education, the world of work and other sectors of society.

Studies of graduates constitute one of the most appropriate strategies for feedback educational programs; the performance of graduates in the labour market is one of the reliable indicators of relevance, adequacy and timeliness of educational programs which supported its formation (Fresán, 1998).

The proposals of the National Association of Universities and Higher Education Institutions (ANUIES), are aimed at "the integral improvement and the assurance of the quality of the higher education system-understanding that the concept of quality, include those of relevance, coverage, efficiency, level of performance and equity".

The National Association of universities and institutions of higher education, ANUIES (2000), in the book the higher education in the 21st century, set fourteen programs or proposals of actions for institutions of higher education, the higher education system and the State.

Institutions of higher education have main function prepare highly qualified personnel for the various sectors of the academic, economic, social and political activity; generate knowledge, develop technology, as well as preserving and spreading the culture.

With the support of the results obtained in a study of graduates, discusses the relevance and quality of the educational program of the environmental biochemical engineer, program

that is taught in the Faculty of Sciences chemical biological of the Autonomous University of Campeche so that students, teachers and education authorities have a panorama of the current educational situation and implement strategies for quality higher education.

DEVELOPING

The educational program of environmental biochemical engineer race was created in 1996, adding 18 generations with 79 professionals in total. This research asked about their employment status to determine the relevance and quality of the educational program.

Graduate studies have been used by the Institutions of Higher Education (IES) for information that supports the establishment of various strategies or institutional improvement actions. In this case, they were used to evaluate the congruence or incongruity between these professionals received training at the university and the activities carried out in the working world (Cu, Aragon and Alonzo, 2007).

In this context, the National Association of Universities and Institutions of Higher Education proposes that colleges provide students with a comprehensive education responsible criticism, humanistic and enable graduates to be able to venture into the scientific, technological and professional media. Thus it is responding to the needs and challenges of Mexican society, giving opportunities for welfare. University education should have a profile of skills and / or skills to achieve high production level and contribute to the expanding world market, however, the human sense should not be overlooked, since it works with human beings and not with machines. The World Bank encourages specialization and carries an enormous expansive force of progress on the economy, but there is an intellectual and spiritual regression; the sacrifice of culture leads to the loss of values (ANUIES, 2000).

METHODOLOGY

There are many methodologies to conduct studies and follow-up of graduates; the National Association of Universities and Institutions of Higher Education (ANUIES, 1998) in its basic outline for graduate studies, proposes a methodology that facilitates the higher education institutions conducting such studies and ensure homogeneity in proceedings of

obtaining information. The data collection instrument proposed by the ANUIES, is designed to measure the relevance and quality of educational institutions.

This work is not used integrally collection instrument proposed by the ANUIES information but adapted it according to the circumstances of context. To obtain information ANUIES's proposal, which recommends orienting the graduates to study cohorts who have been about five years in the labor market is considered. In the event of the intention of a larger study is recommended that graduates of contiguous generations or cohorts that have been formed with the same curriculum. To follow-up studies conducting follow-up studies on a sample of the cohort considered in a study of performance of graduates, three or four years after the study (ANUIES, 1998) is considered desirable.

The results were processed with statistical program called Statistical Package Seach Serial (SPSS).

Type and design research.

The quantitative research is cut, not experimental, transversal, because the information was collected in a single moment; also is exploratory-descriptive because the variables set allow us to an initial explanation, which could be the prelude to other research on the subject and to analyze how the factors involved in the labor market (Hernandez, 2007) manifest .

Population and sample

population

The choice of the population of graduates was analyzed an informal selection of type called probabilistic available groups.

Sample

For this study population were grouped as shown in Table 1.

Table No. 1 Generations Environmental Education Program biochemical engineer.

Generación	Egresados estudiados
2004	5
2005	10
2006	10
2007	8
2008	9
2009	9
TOTAL	51

The variable studied is described in Table 2.

Table No. 2 Definition of the variable

VARIABLE	DEFINICIÓN CONCEPTUAL	DEFINICIÓN OPERACIONAL	CLASIFICACIÓN
Pertinencia	"Se considera… en función de su cometido y su puesto en la sociedad, de sus funciones con respecto a la enseñanza, la investigación y los servicios… con el mundo de trabajo". (UNESCO, 1998)	• Grado de coincidencia que existe con los estudios profesionales realizados.	1. Nula 2. Baja 3. Mediana 4. Total
		• Ubicación laboral o nivel jerárquico	1. Alto 2. Medio alto 3. Medio 4. Medio bajo 5. Bajo
		• Valoración personal del egresado con su situación laboral.	1. Mejoró 2. Está igual 3. Empeoró 4. No aplica

RESULTS

The results obtained through the proposed by ANUIES in the core, which was modified to the context of their application by teachers from the Autonomous University of Campeche, and applied to graduates of the Educational Program Environmental Biochemical Engineering scheme questionnaire are presented belonging to generations of graduates 2004-2009.

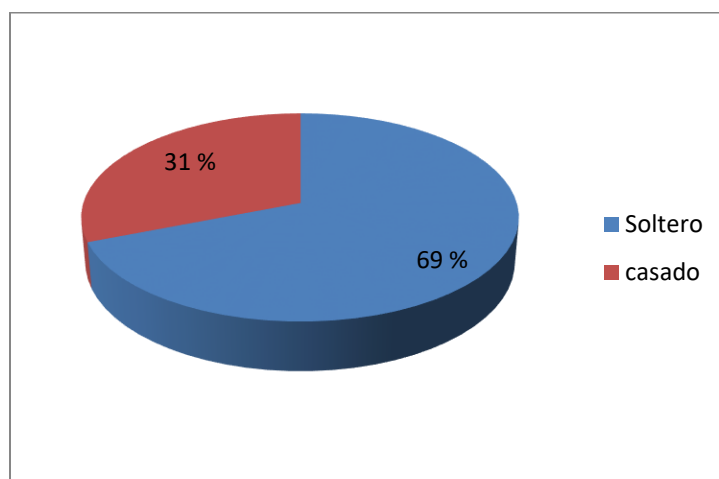Marital status and age: Some general aspects of the study population are presented. With regard to marital status, the following was obtained:

Figure 1. Marital status of graduates.

In the graph 1 it shows that the highest percentage (69%) of graduates report being subjected to study single and 31% married.

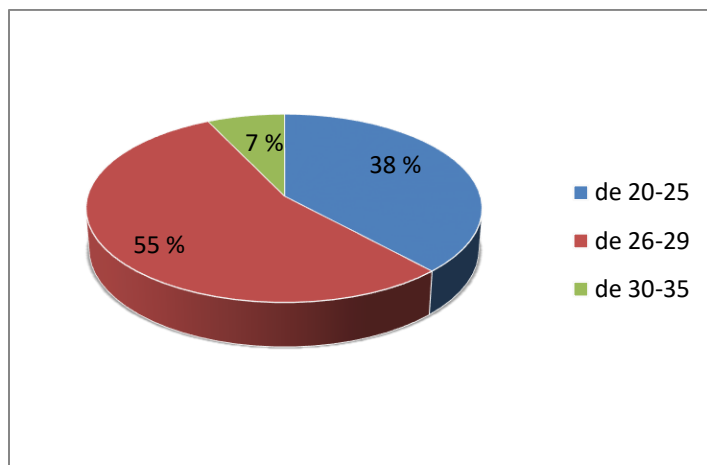With respect to age the following results were found:

Figure 2. Age of graduates.

The graph shows that 55% of graduates has an age range of between 26-29 years, this being the predominant age range.

Regarding employment status, current employment of graduates is shown in Figure 3.
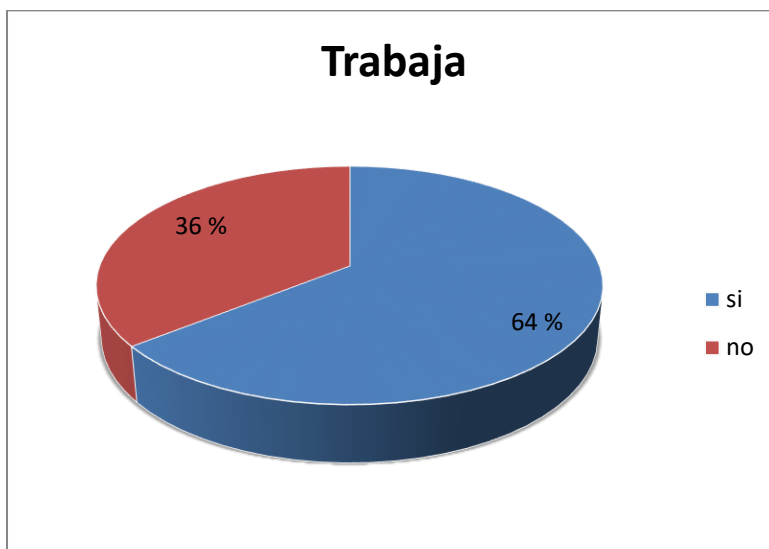

Figure 3. Employment status of graduates.

As shown in Figure 3, 64% of graduates surveyed were working at the time of the study. It is noteworthy that these are all employees and none owns a company. Regarding the legal status of the company / institution where they work, 50% is public and 50% private, no social. 64% of graduates who work, 28% in addition to his main job reported having another job in order to earn higher income and meet their personal and / or family expenses.

When asked about the size of the company where they work the following was obtained:
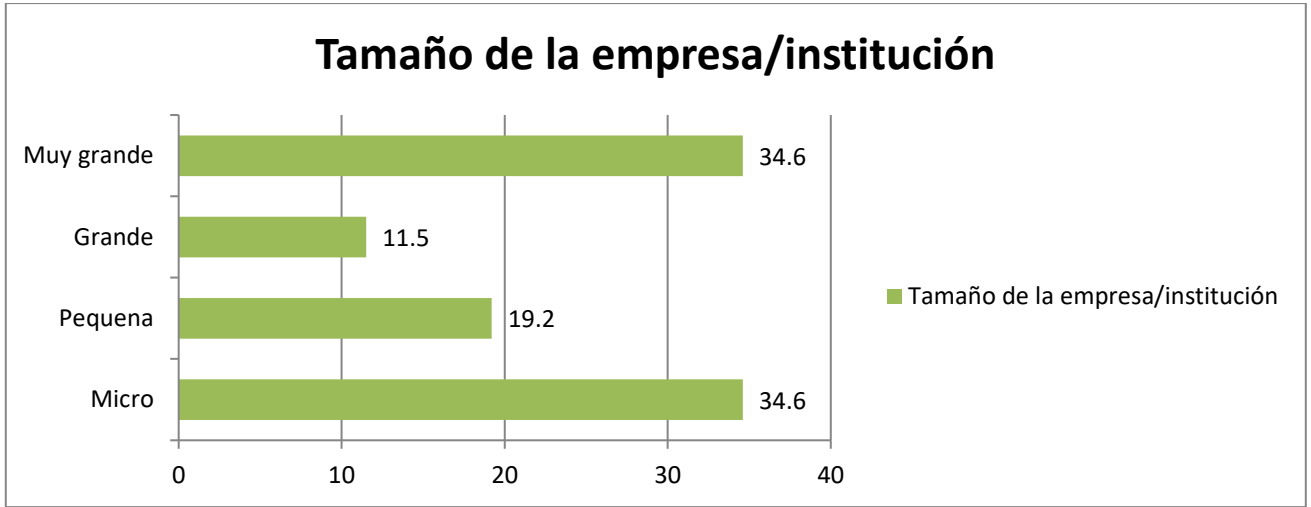

Figure 4. Size of the company and institution.

Figure 4 shows the size of the companies where they work, represented by its number of employees. It was found that 34.6% are working in companies with up to 15 employees, ie companies "micro" and the remaining 34.6% work in companies with more than 251 employees, or "very large" companies.

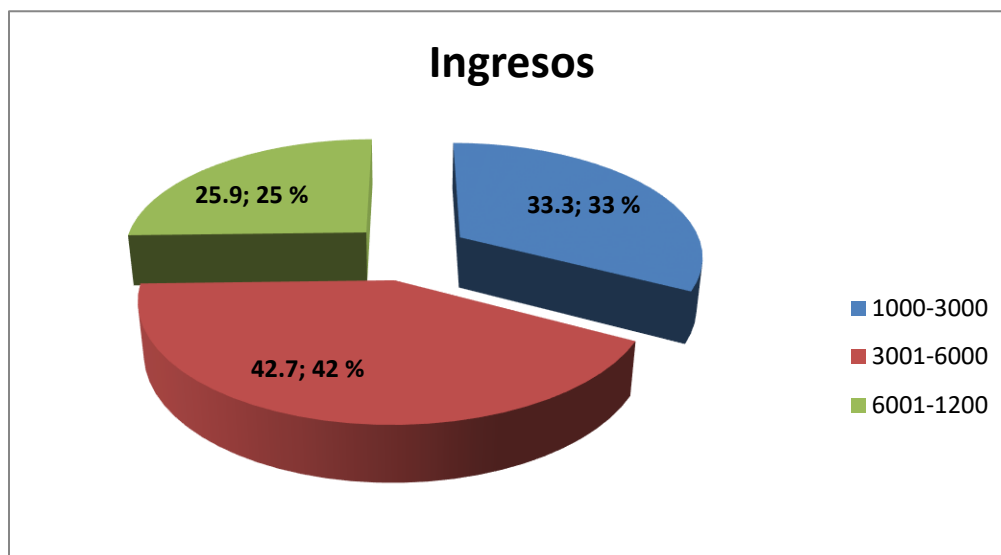With regard to income earned, we have the following:

Figure 5. Income of graduates.

Figure 5 shows the income range. According to data provided by the graduates, 42.7% obtained income amounting to $ 3,000 and $ 6,000 Mexican pesos, equivalent to US $ 456 and 912, or 507 and 1001 euros, approximately.

In the graph 6 it shows that 51.9% of graduates not working in their field of study, as opposed to those that are working, totaling 48.1%.
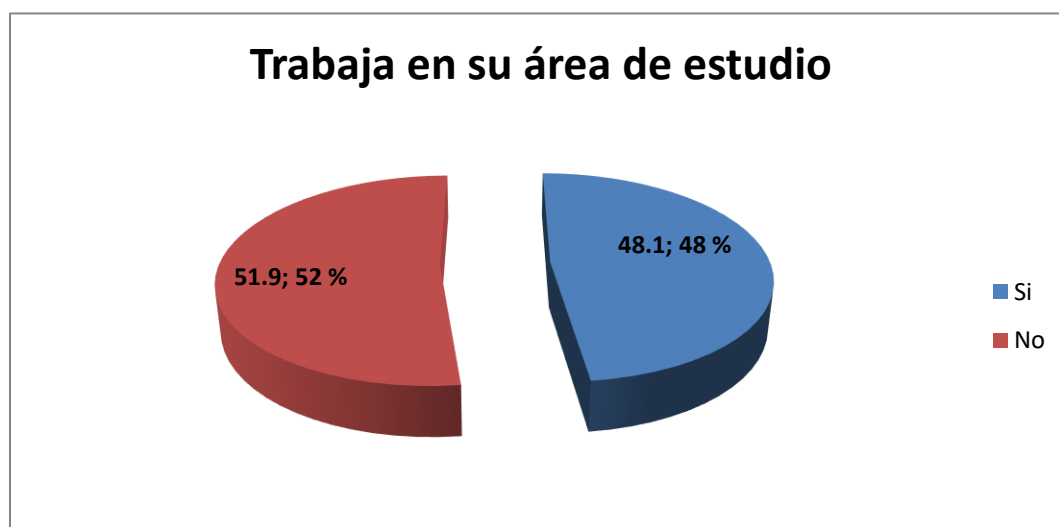

Figure 6. Work related to the study area.

Figure 6 shows if working in their field of study, 48.1% said yes and 51.9% reported no. This is a relevant fact as this is inferred if the curriculum is relevant or not.

In the opinion of the graduates, their work coincides with the educational program completed studies at university as follows:
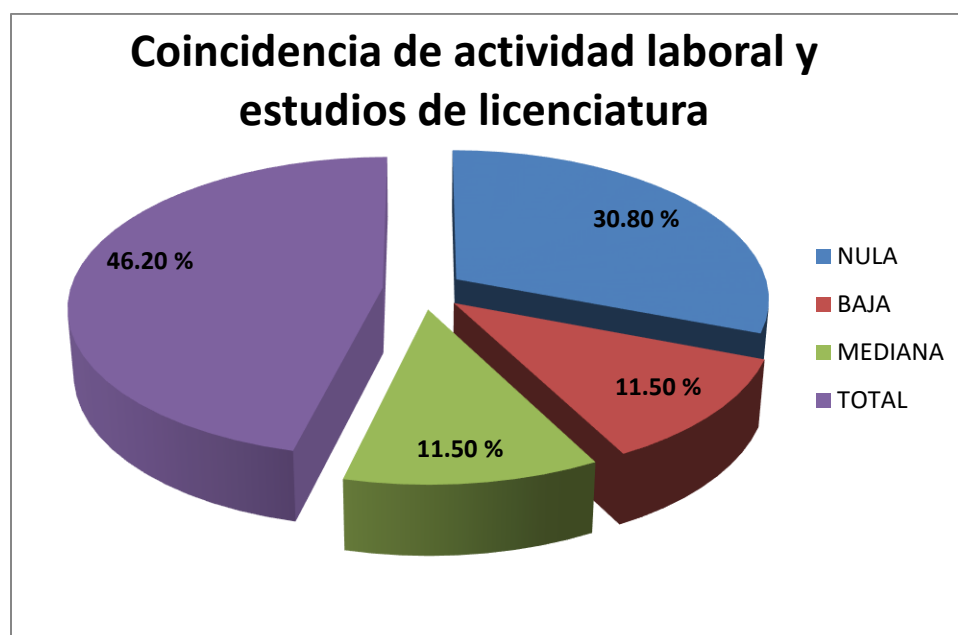

Figure 7. Matching the labor activity and studies of the degree.

As shown in Figure 7, the highest percentage, 46.2% said that there is total agreement, but 30.8% indicates that the match is null and 11.5% which is low.

With regard to the position they occupy, in Table 3 we can see that the highest percentages placed as head of the office, supervisor or official.

Table 3. Positions occupied by graduates.

Puestos ocupados	%
Gerente/director de área	3.7
Jefe de departamento	3.7
Jefe de oficina/sección/área	14.8
Empleado profesional	3.7
Supervisor/auxiliar	11.1
Analista especializado/técnico	7.4
Vendedor en establecimiento	3.7
Asistente/ayudante	3.7
Funcionario público/político	11.1
Otro	37

Functions other than those provided by the questionnaire were:

• Sales Advisor

• Impact Project Coordinator

• Baker

•Police

•Laboratory technician

• Supervisor

• Charge

CONCLUSIONS

Graduate studies are a key instrument for self-assessment, evaluation and accreditation of educational programs as possible to assess the degree of social compliance and relevance of graduate profiles.

The opinion of the graduates on the usefulness of the training college for entry, stay and / or promotion in the workplace, is extremely valuable for improving and updating plans and curricula, enabling the continuous quality assurance.

The job performance of graduates is undoubtedly reliable to estimate the relevance, adequacy and quality of educational programs indicator because it allows continuing suitability according to supply and demand in the labor market; also it provides valuable for the design of strategies that enable continuous quality improvement in education information.

According to the results obtained from this study it shows that 64% of graduates of the degree of environmental biochemical engineer active in the workplace at the time of the investigation; the highest percentages placed as head of the office, supervisor and public servant, only 48.1% work in their field of study, while 51.9% reported that their work has nothing to do with their university studies. This high percentage necessary to consider the need to update the curriculum of the degree to achieve the full relevance of the educational program. However, 46.2% of graduates said that there is complete overlap between their work and their professional studies.

Although the public and private sectors demand graduates biochemical engineering environmental area, such productive sectors offer low-income situation makes seek other opportunities other than their area of employment but studies have sufficient financial compensation to cover their basic needs . On the other hand, there is no link with the productive sectors and social services, since 36% of respondents still unemployed and underemployed, increasing their dissatisfaction.

These results indicate the need to review the curriculum of environmental biochemical engineer and update it taking into account the current demands of the productive sector. Furthermore, these results are important to the process of updating the curriculum to be held in this 2015 at the Autonomous University of Campeche, and aims to ensure that

graduates acquire the skills required by potential employers. That way you can improve the quality of the educational program and meet one of the indicators for the category "linkage-extension", which sets the accrediting body of the educational program for recognition as a relevant program and quality.

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