

SDG's knowledge from the current curricular map, on under graduate level

El conocimiento de los ODS desde el mapa curricular vigente, en nivel licenciatura

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Abstract:

The Higher education institutions (HEIs) play a very important role in introducing content from the curriculum that allows students to know what is established in each of the Sustainable Development Goals (SDGs).

In the present research work, a diagnosis of the contribution that is being made on the subject of the SDGs is presented from the study programs of the current curriculum of the undergraduate that is taught at the Institute of Administrative Economic Sciences dependent on the Universidad Autónoma del Estado de Hidalgo, Mexico.

Two subjects were identified in the curricular map, Sustainable development and care for the environment, which is taught in the first semester, and the subject of social responsibility, which is taught in the ninth semester.

Keywords: Curriculum, SDGs, Diagnosis, Competence

Resumen:

Las Instituciones de Educación Superior (IES) adquieren un papel muy importante para introducir desde el curriculum contenidos que permitan a los alumnos conocer lo que se establece en cada uno de Objetivos de Desarrollo Sostenible (ODS).

En el presente trabajo de investigación documental se presenta un diagnóstico de la aportación que se está haciendo sobre el tema de los ODS desde los programas de estudio del currículo vigente de pregrado que se imparte en el Instituto de Ciencias Económico Administrativas, ICEA, dependiente de la Universidad Autónoma del Estado de Hidalgo, UAEH, México.

Se identificaron dos asignaturas en el mapa curricular, "Desarrollo sustentable y medio ambiente" que se imparte en primer semestre y la asignatura de "Responsabilidad Social en las Organizaciones" que se imparte en noveno semestre.

Palabras Clave: Currículo, ODS, Diagnostico, Competencia

Introduction

The fulfilment of the SDGs by the HEIs can promote a sustainable society and institution, by strengthening their ability to interact with society, formal and informal

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education, opening up to new research and improving the processes and infrastructure of the institutions educational, which promotes a performance as agents of change who know the needs of the population. The formulation of analysis criteria allows us to understand the scope and limitations for sustainability in Higher Education, it is at this level of studies that greater control, execution and adaptation of educational policies in favor of sustainability are allowed.

In this sense, it is important to know what is being contributed from HEIs? in relation to the contents and activities related to the theme of the 17 SDGs in each of the subjects that make up the current undergraduate study plan that is taught at the ICEA, dependent on the UAEH, Mexico.

In this first phase of the investigation, an undergraduate program is analyzed, which has the mission of training high-quality professionals, with a solid humanistic and ethical base, capable of successfully facing the planning, organization, integration, direction and control of the organizations; exercising their profession with sensitivity to cultural diversity; aware of recognizing the importance of quality, the strategic value of information and technological development; and, above all, committed to solving state and national problems.

The project to be developed consists of three phases:
Phase 1.- Carry out a diagnosis of the current undergraduate curriculum and the subjects related to the contents according to the 17 SDGs.
Phase 2.- Apply a survey to students to identify their knowledge of the SDGs and the practices they carry out to comply with them.
Phase 3.- Based on the analysis of results, make proposals for updating the contents in the study plans and the development of skills at the undergraduate level that involve knowledge of the SDGs.

Questions that guide the inquiry
Does the current study plan include subjects related to the topic of sustainability?
What are the issues that are addressed related to the SDGs?
What are the activities that are developed in the current curriculum related to the SDGs?

Objectives that guide the inquiry
Identify the subjects related to sustainability in the current undergraduate curriculum.
Know the topics that are addressed in each of the subjects established in the curricular map.
Recognize the activities that students develop in relation to the topics of the SDGs.

Theoretical references

Sustainable Development Goals

The SDGs have their beginnings at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. However, they began to be applied in 2015 to give continuity to the Millennium Development Goals (MDG) in which it is guiding axis of the 2030 Agenda [1], which emerges as an action plan towards sustainability for all UN member nations [2].

Figure 1 shows the 17 SDG objectives, which are made up of 169 targets and 232 indicators, referring to poverty, zero hunger, health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, the reduction of inequalities, sustainable cities and communities, responsible production and consumption, actions for the climate, underwater life, the life of terrestrial ecosystems, peace, justice and solid institutions, and alliances to achieve the objectives [1].

Figure 1.
Sustainable Development Goals



Note: UN, 2022. [3]

Curriculum

The study plan is understood as a structure that guides the educational community and manifests the planning of the learning process. [4]"It is an instrumental synthesis through which a series of factors such as purposes, goals, disciplines, resources and profiles are organized and ordered, for teaching and learning purposes of a profession that is considered social." and culturally important."

This study plan can be located in a curricular mesh, which is understood as "that sequential structure of teaching subjects and practices that form a study program, in which their requirements, duration and objectives are indicated." [5]. Other authors, such as Díaz, state that the curricular map "is made up of the synthetic description of the contents of each of the subjects that make up the study plan." [6].

The curriculum of an educational system is closely related to the purposes of that system, the type of social or individual needs that were considered in its preparation, the areas of training in which it is organized and the basic notions of each of these areas; this in order to obtain a study plan that allows visualizing the way in which the different contents of the subjects are supported and integrated, thus guaranteeing that contents are not repeated and that learning is integrated.

Given this position, it is necessary to generate new knowledge related to the development of the plans and their programs that indicate the possible modifications and necessary adaptations that must be made so that the study plans meet the individual needs of the student and the social system.

This is how the insertion of the content of each of the 17 SDGs in the study plans by HEIs can promote a sustainable society and institution, by strengthening their ability to interact with society, formal and informal education, the openness to new research and improvement of the processes and infrastructure of educational institutions, which promotes performance as agents of change who know the needs of the population. The formulation of analysis criteria allows us to understand the scope and limitations for sustainability in Higher Education, which allows greater control, execution and adaptation of educational policies in favor of sustainability.

Overview of the undergraduate curriculum.

The structure and articulation of the study plan contemplates four training nuclei (basic, professional,

complementary and the terminal and integration), four thematic axes (Integral Administration and Strategies for the Development of Organizations, Development of Human Capital in Organizations, Competitive Environment and Financial Analysis of Organizations and Social Responsibility and Respect for Legality) and five problematic fields (Organizational Administration, Promotion of Organizational Competitiveness, Human Capital Administration, Financial Administration, Marketing Administration and Social Responsibility) through of which the basic subjects of the comprehensive training of students have been distributed (Graph 2) [7].

The analyzed undergraduate study plan lasts nine semesters and is made up of 61 subjects: six correspond to Institutional Programs (PIAAC and PIAEVS), six to the Institutional Language Program (PIL), four institutional, one private ICEA institutional, one corresponds to the Social Service and one to Professional Practices. Each subject must be taken in the school periods established by the Autonomous University of the State of Hidalgo [7].

Derived from Figure 2, we observe that within the problematic field of social responsibility, the issues reacted to the SDGs must be inserted.

The Comprehensive Curricular Model of the UAEH considers the development of competencies as a pedagogical device, which, when put into practice, contribute to meeting social needs and demands. The competencies are key elements in the teaching-learning process, by virtue of the fact that they allow the academic to identify the didactic strategy, materials and adequate resources that enable the student to reach his progressive and graduation profile [8].

The competence is defined as the integration of content to achieve satisfactory professional performance, establishing a common thread between every day, academic and scientific knowledge [8].

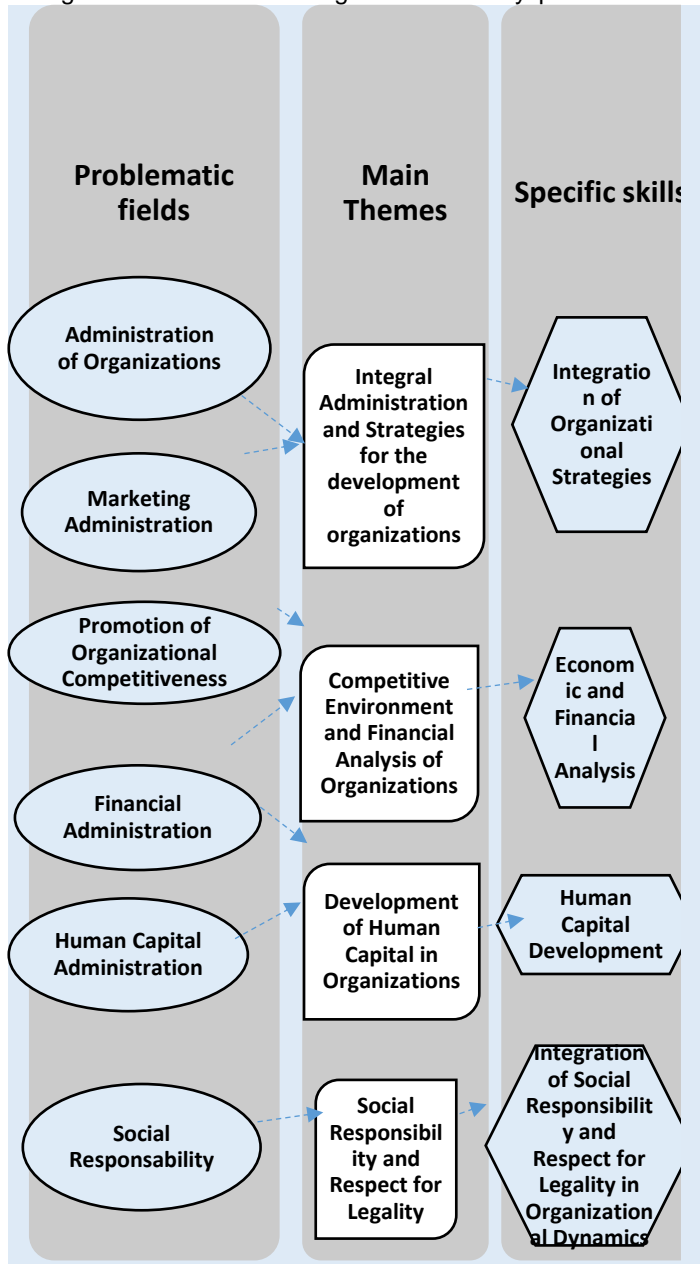
The Model proposes two types of competencies, generic and specific.

Generic skills

The Comprehensive Curricular Model of the UAEH establishes seven generic competences, training, collaborative leadership, communication, creativity, critical thinking, use of technology and citizenship, which must be developed and possessed by PE graduates of this University, in order to carry out labor and social skills; to achieve them, it is unavoidable the coherence between the educational programs, the natural performance and

the real work of that professional in the local, national and international scope.

Figure 2.
Congruence of the undergraduate study plan



Note: Corichi, et.al., 2016, [7]

Below is a characterization of the two competencies, which, from the guidelines of this project, were considered to be related to knowledge of the SDGs. It was considered important to describe them, establishing their general objective. It is worth mentioning that each of them is divided into levels with their respective performance indicators.

Training competence: Integrate content in various situations (academic, professional, social, productive,

work and research) to solve problems through the use of methods and strategies focused on learning (problem-based learning, cooperative, collaborative, consulting and projects, among others) with autonomy and with values that are expressed in convictions, as well as their commitment to quality in their way of acting, according to the established standards.

Citizenship competence: Act before the different groups in accordance with the general principles of respect for cultural diversity with social responsibility and citizen commitment to face and resolve professional conflicts, exercising their democratic citizenship, which allows them to solve problems in a multicultural context and diverse based on universal values and ethical principles accepted and considered their own, thereby promoting the development of society.

Specific skills

Specific competencies are specialized knowledge to carry out specific tasks typical of a profession or discipline that are applied in a certain context. They refer to a person's ability to apply their knowledge to solving problems related to situations in the professional field, in accordance with a standard recognized by national and international accrediting and certifying bodies.

For the program under study, there are four specific competencies, two of which are considered to be directly related to knowledge of the SDGs.

1. Organizational strategies integration competence: Design innovative and cutting-edge strategies that allow organizations to develop sustainable and competitive capacities, based on the use of knowledge related to the optimal management of resources, the development and approach of strategic processes, the use of technology and the identification of business opportunities.
2. Competence for the integration of social responsibility and respect for legality in organizational dynamics: Integrate the administrative component with the applicable legal framework according to the globalized organizational context, knowing and considering the ethical and cultural aspects of the environment in which it develops its management, as well as environmental assessment and sustainable development instruments for the organization that promote social responsibility.

Methodology

Kind of investigation

In the first phase of the project, documentary-type research is carried out to identify the contents of topics related to the SDGs in the different subjects that make up the current undergraduate curriculum, which is taught at ICEA, dependent on the UAEH, Mexico.

An analysis of the contents in the programs of the subjects of the current study plan was carried out, identifying that there are two subjects of interest to address the issue of sustainable development objectives, ODS, "Sustainable development and environment" and Social Responsibility in Organizations".

Results

All the undergraduate level programs that are taught at the UAEH, in different semesters, take the Subject "Sustainable Development and Environment", in the particular case of the undergraduate analyzed, it is taken in the first semester.

The general objective of the subject. - Identify environmental problems, to raise awareness of the need for sustainable development, which reduces the negative impact of man on the planet and its resources, through documentary and field research, conferences with experts and case examples.

The contents are addressed in three work units with the following titles:

1. Fundamentals of Ecology and Environment. Identify the elementary concepts of the environment and ecosystems, in order to recognize the relationships between them and their importance, through documentary and field research, consultation with experts and cooperative and collaborative work.
2. The need for a Sustainable Development. Identify natural resources and energy sources, in order to describe the global impact that their indiscriminate use has made on the environmental imbalance through the study of cases at the global, national and state level.
3. The Evaluation of Sustainable Development. Identify the instruments for environmental evaluation and sustainable development, through the review of regulations, norms and laws that control environmental aspects, as well as the institutions responsible for their implementation and control in the various fields, in order to relate environmental problems and the

solution paths that have been established by the awareness that the world has generated on the subject.

In the current undergraduate study plan analyzed, the subject of Social Responsibility in Organizations is taken in the ninth semester, under the following structure:

General objective of the course: Adopt the culture and sense of social responsibility, through knowledge and analysis of the characteristics of companies to develop organizational commitment, implementing social value and the environment.

The contents are covered in four work units:

Introduction to social responsibility in organizations. Specify the basic concepts to be able to describe Corporate Social Responsibility, CSR, as well as promote, raise awareness and contribute to the achievement of a better society and a cleaner environment.

Social responsibility in Mexico. Know the methodology for the implementation of CSR in Mexico, through the integration and participation of organizations and citizens, to promote a more equitable and supportive society.

Corporate social responsibility. Associate the axes of corporate social responsibility through the analysis of ethics and governance, quality of life in the company, ties with the community and care for the environment to recognize the contribution and recognition that organizations receive.

Scope of social responsibility. Identify and understand the different scopes, means of development, relationships, opportunities, values and ethics that reflect socially responsible companies by recognizing the global approach of business strategy for successful implementation and development.

Conclusions

Based on the documentary analysis of the contents in the subjects that are taught in the undergraduate analyzed, it was identified that the contents of the current study plan mention in a very ambiguous way the topics related to the SDGs, however it is not enough to be written in a document, a more complete study must be carried out and with the appropriate methodology to find out if the learning has been significant in relation to the objectives of sustainable development and what activities or didactic techniques teachers apply when addressing these issues.

Of the total number of subjects that are taken in the current curriculum, there are two related to the topics of the SDGs, "Sustainable development and environment" that is taken in the first semester and that of "Social Responsibility in Organizations" that is taken in ninth semester.

Undoubtedly, Higher Education Institutions have a great responsibility to develop skills in students that contribute to caring for the environment, to the development of sustainable projects that in turn also allow a benefit for the social environment where they develop.

The SDGs are developed, with the aim of establishing goals that help to achieve sustainability efficiently, where education should be considered as a commendable piece to achieve them. In this way, education is an SDG and, at the same time, an essential strategy to make society aware, with the aim of preserving nature and generating proposals that help the population meet their needs and improve their quality of life.

Therefore, from Higher Education these proposals can be formulated, involving various sectors of the population for the promotion of sustainability. Higher Education Institutions (HEIs) develop their proposals based on substantive functions, which are a guiding axis to comply with a specific institutional philosophy for each HEI and measure the scope and limitations of their work as agents of change within society.

The Sustainable Development Goals (SDGs) mean a change that breaks with the logic of disciplines and organizes the curriculum around the skills of the future for sustainable development. This means determining what culturally relevant contents deserve to be selected in the formation of citizenship, which do not correspond exactly with the inherited disciplines or subjects and which are those that are included in the axes of the curriculum.

Recommendations

The contribution made from this project must be strengthened by reviewing the contents of other subjects that address or impact some of the 17 sustainable development goals.

Therefore, it is recommended to continue according to the appropriate methodology with phase two and three of the project in the short term to have solid arguments about the degree of knowledge that the students of the degree under study acquire in relation to the subject and impact of the SDGs.

A thorough analysis must be carried out to identify both generic and specific competencies that are

developed in students and that knowledge of the SDGs is implicit.

From the analysis of the results obtained, make the pertinent proposals in the redesign of the undergraduate study plans analyzed.

Redesigning the curriculum cannot be just a bureaucratic process, since repositioning the curricular dimension, obviously, cannot be entirely dissociated from the structural one, such as the configuration of the organizational and professional structure and additional supports. Work must be done on the ways of integrating the curriculum from the key life skills, now updated from the Education 2030 framework and the Sustainable Development Goals (MAROPE, 2017) [9]. The problems they pose are analyzed and exit routes for an adequate integration are formulated. In addition, guides and lines of action are provided for the integration of basic skills in the curriculum, from a comparative and international perspective.

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