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THE COMMITMENT OF STUDENTS TOWARDS SUSTAINABLE DEVELOPMENT: CASE STUDY

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Abstract: The present investigation is a descriptive study that was carried out with the objective of analyzing the commitment of the students of the Technological Institute of San Luis Potosí (ITSLP) towards sustainable development, based on their Life styles, attitudes and active participation in environmental actions. The survey technique was applied, for which a questionnaire with 22 items was built, which evaluate the dimensions: Life style and attitudes, the sample was 130 students. The results indicate that in Life style, only the water care variable presents a strong interest, while the electrical energy care variable has medium interest, the rest of the variables show weak interest. While in the dimension of attitudes, there is a strong interest in the variables related to considering climate change as a serious matter and respect for the rules established to enter historical sites or natural reserves; the remaining variables are located in a medium interest. One of the conclusions is that the institution must work more with its students so that they have a strong commitment to sustainable development.

Keywords: Sustainable development, commitment, student attitudes, environment.

INTRODUCTION

The social and environmental problems that are experienced in the 21st century have been caused by the capitalist economic model oriented towards business growth, whose central variables have been the increase in production, the increase in sales, the generation of profits and a greater number of business units, regardless of the impact that this has had on the minds of people, who have gone from acquiring basic necessities to buying superfluous goods, which most of the time are acquired only by idyllic visions that are awakened by advertising strategies of companies; or on the other hand, the repurchase

is generated due to the creation of goods with a high degree of obsolescence. We can consider this situation as consumerism, according to Rodríguez (2012, sp) “consumerism involves waste and causes degradation, contamination and scarcity of natural resources”.

It is then when generating a development model considering the systemic vision of sustainability: economic, social and environmental becomes an imperative to stop this maelstrom of economic growth that has only caused loss of values and an irremediable ecocide. These results invite us to reflect on the actions that companies implement for the sake of their growth and achievement of objectives, and in doing so it is observed that those who are running the companies are, for the most part, university professionals; who leave higher education institutions with big dreams of triumph, materialized in economic income that allows them to perpetuate the circle of consumption, but without an iota of awareness and commitment towards sustainable development.

The most accepted concept of sustainable development is the one established in the report *Our Common Future* published by the World Commission on Environment and Development in 1987 as “one that meets current needs without compromising the ability of future generations to meet their needs. “own needs” (cited in United Nations, sf). As it can be seen, the previous concept is more than 30 years old, however, for many professionals it is a concept totally alien to their training, they have passed a series of academic levels where the subject was never taught or questioned, and today we have the result: companies that degrade the environment without an iota of social responsibility.

Therefore, the need for university students to acquire the necessary skills to put their profession into practice is recognized, considering the social and environmental

impacts that their actions cause. Thus, it is essential that at least one sustainable development subject be taught in higher education institutions, and beyond, that it be compulsory. As Santa Ana et al. (2016, p.8) “practicing sustainability must be considered an obligation of every citizen of the world, since it is the only way to ensure the permanence and survival of our species on the planet.”

The present work shows the results of a descriptive study that was carried out at the Technological Institute of San Luis Potosí (ITSLP) in 2019, to students from the fifth semester onwards, from the careers of Engineering in Business Management, Industrial Engineering, Systems Engineering and Bachelor of Administration, being a sample of 130 students; whose general objective was to analyze the commitment of students towards sustainable development, from identifying their attitudes, Life style and active participation in environmental actions.

The guiding questions of this research are: do ITSLP students actively participate in environmental actions to achieve sustainability? Do students show a strong interest in sustainable development? What sustainable actions do the students suggest to be implemented in the ITSLP?

Sustainable development is not a recent concept, since 1970 the current economic model was questioned through the report Limits to Growth, and in 1972 the United Nations Environment Program established the need to seek a balance between economic growth and environmental conservation. Fifteen years later, in 1987, the concept of sustainable development was established in the report Our Common Future, and since then an endless series of agreements and meetings have followed one another to resolve the social and environmental problems caused by economic growth. The most recent agreement is the 2030 Agenda, which entered

into force in 2016 and which establishes 17 Sustainable Development Goals (SDGs) and 169 targets. It is expected that with the adherence of the 193 member countries of the UN to this Agenda, and with the fulfillment of the commitments established in each country, the proposed goals can be achieved, however it is clear that the countries will not be able to meet these goals without the participation of its inhabitants, therefore it is urgent that the entire population join in contributing from their spheres of action to the SDGs.

In the case of future professionals who are the ones who have the opportunity to study a university degree that prepares them to lead and participate in organizational life, their contribution to the SDGs is mandatory, as Ban Ki-moon, Secretary General of the UN, points out. “education is a crucial element for the formation of a global citizen who can rise to the challenges of the 21st century, [...] urged governments and NGOs to involve youth in current projects” (United Nations, 2016). On the other hand, the Director General of UNESCO, Irina Bokova (2016) states that “now more than ever education has the responsibility to promote the right type of skills, attitudes and behaviors that will lead to sustained and inclusive growth”.

Therefore, it is necessary for students to develop favorable attitudes towards the environment, according to Holahan (1991, p.15) attitudes are “favorable or unfavorable feelings that one has towards some characteristic of the environment or towards a problem related to he”. It is here when higher education institutions take an active role in the formation of citizens committed to sustainable development, since awareness is required through formal and non-formal activities, such as insertion of related subjects, ecological clubs, sustainable actions. of support for the environment and society, and above all that institutions preach sustainability

by example through their daily actions.

To identify sustainable Life styles, the concept of Corral Verdugo et al (2008) is considered, who suggests that these are:

patterns of action and consumption used by people to affiliate with and differentiate themselves from other people, which: a) satisfy basic needs, b) provide a better quality of life, c) minimize the use of natural resources and the emission of waste and pollutants in the life cycle, and d) do not threaten the needs of future generations (p. 314).

Finally, to define the commitment, the concept of Paul Louis Landsberg (cited in Coca and Valero, 2011, p. 83) is taken up, which indicates that the commitment “translates a decision of the person who becomes aware of his own responsibility and carries out his positive formation as a person”. This way, the attitudes and Life styles of students reflect their level of commitment to sustainable development; hence, they have been taken up again as the dimensions analyzed.

METHODOLOGY

This research is basic, social, descriptive, non-experimental, cross-sectional and quantitative.

The technique applied was the survey, for which a questionnaire with 22 items was developed, 12 about Life styles and 10 about attitudes towards sustainability with a Likert scale from 1 to 5, where one represents never *and* five *always*. In addition, three multiple-choice questions were included that allow identifying the actions carried out by the students within the ITSLP or within the community, and the activities that they suggest be carried out within the Institute. The reliability test was carried out through Cronbach's alpha and it was identified that the questionnaire has satisfactory reliability, as shown in Table 1.

The application of the questionnaire was

carried out to 130 students from the fifth to the ninth semester of four careers, because they have a higher educational level than those of the first and third semester. A sample was not selected, but all the students of the aforementioned semesters who were in the classrooms during the period of application of the questionnaires, which lasted one week, were surveyed. Table 2 presents the number of respondents by race.

A descriptive analysis of the variables was carried out, considering the two dimensions: Life style and attitudes, for which the mean, mode and standard deviation of each variable were obtained. They were ordered based on the average score of Life style or attitudes that the students manifest, for which scores from 4.5 to 5 were categorized as of *strong interest*; scores from 4 to 4.49 as of *medium interest*, and those below 4 as of *weak interest*. For this analysis, the SPSS software, version 23, was used, as well as the Excel program to make the tables and graphs.

RESULTS

The results are presented in three blocks, in the first the *Life style dimension is analyzed*, in the second the attitude dimension is presented, *and* in the third block the actions carried out by the students are shown, as well as the activities they suggest. be implemented in the ITSLP.

A) LIFE STYLE

Only one variable of strong interest was found, with a mean of 4.58, which corresponds to *I take care that the water tap is closed when it is not used*, which is shown with a more intense color; Similarly, only one variable of medium interest was found, with an average of 4.36, which refers to *turning off the light in places where it is not used*, which is shaded with a lighter color; while the rest of the variables were considered as low interest and

Dimension	Number of items	Cronbach's Alpha
Life style attitudes	12	0.759
Global	10	0.935
	22	0.892

Table 1. Reliability test of the questionnaire dimensions.

Career	Number of respondents
Bussines management's engineering	64
industrial engineering	14
Computer Systems Engineering	30 22
Degree in administration	130
Total	

Table 2. ITSLP careers where the questionnaires were applied

Life style	Half	Fashion	Std.Dev .
I make sure that the water tap is closed when not in use.	4.58	5	0.854
I turn off the light in places where it is not used	4.36	5	1,074
I prefer to drink without a straw	3.92	5	1,450
I prefer to travel by bus or share vehicles with others	3.71	5	1,464
I like to recycle or reuse materials	3.57	4	1,109
I usually unplug electrical appliances when not in use.	3.56	5	1,541
I prefer products made from recycled materials	3.43	3	1,184
I prefer to buy products that do not use batteries or batteries	3.25	3	1,287
Whenever I give gifts, I use recyclable wrappers	2.95	3	1,504
Before purchasing any product, I check the label of the same	2.95	3	1,421
I separate the garbage into organic and inorganic	2.73	1	1,413
I eat vegetables or fruits grown by myself	1.97	1	1,334

Table 3. Life style of ITSLP students

attitudes	Half	Fashion	Std.Dev.
Climate change is serious business	4.67	5	.762
I respect the established rules when entering a historical site or nature reserve	4.54	5	.848
I consider it important to protect natural resources	4.46	5	.919
I consider that I have capacities to act in favor of the environment	4.43	5	.899
I am willing to plant the trees I planted or someone else planted	4.42	5	.969
I am willing to plant trees in my community or school	4.41	5	.949
I am willing to change my habits to protect the environment	4.40	5	.995

I feel motivated to carry out actions that improve society's relationship with nature	4.31	5	.950
It seems relevant to me to be a person with sustainable habits	4.07	5	1,069
I am interested in knowing the environmental impact of the products I consume	4.01	5	1,266

Table 4. Attitudes of the ITSLP students

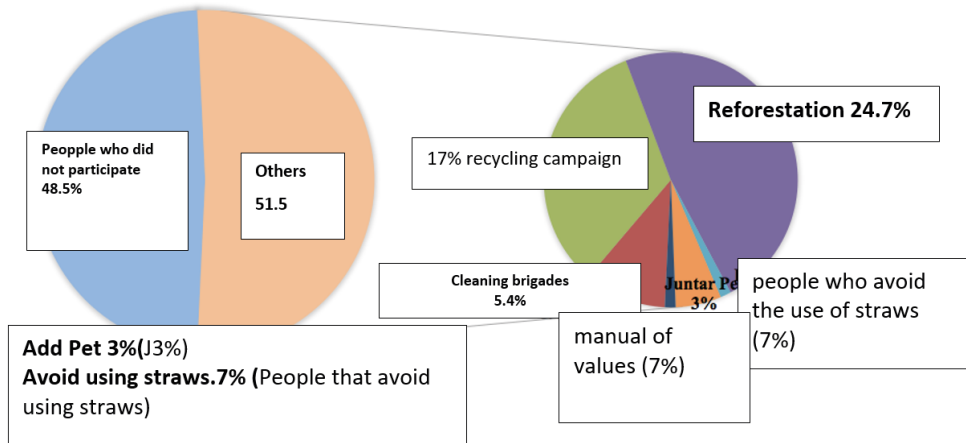


Figure 1: Sustainable development activities in which ITSLP students participate

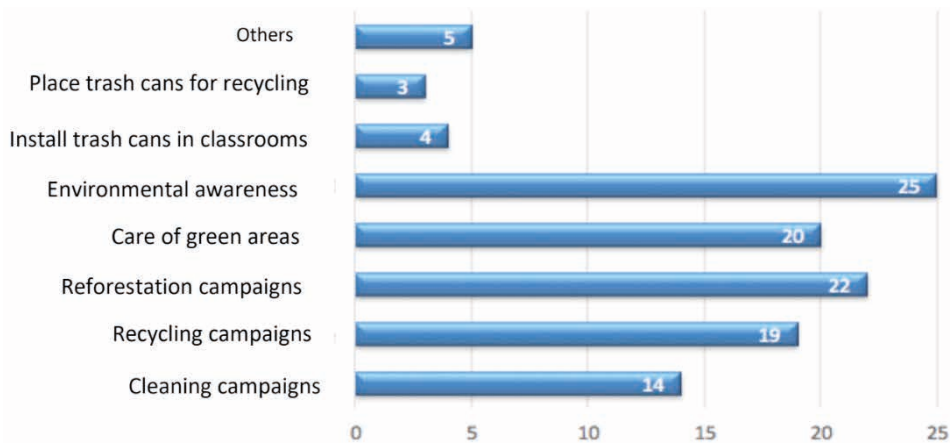


Figure 2. Sustainable activities proposed by ITSLP students

are not shaded. This information is observed in Table 3.

B) ATTITUDES

While in this dimension a different phenomenon is presented, the students state that they consider *climate change as a serious matter*, which presents a strong interest assessment with 4.67, followed by *respect for the rules established when entering a historical site or natural reserve*. with 4.54, these variables are shaded with a more intense color; while the rest of the variables are at the medium level of interest with a score between 4 and 4.49, which have weaker shading; no variables with weak interest were presented, as shown in table 4.

C) ACTIONS CARRIED OUT BY STUDENTS IN THE ITSLP

It was identified that 51.5% of the students participate in actions related to the environment, while 48.5% do not participate. Figure 1 shows these percentages, as well as the activities in which the students participate, where the highest percentage is concentrated in reforestation with 24.7%, and in second place recycling campaigns with 17%.

D) SUSTAINABLE ACTIVITIES SUGGESTED BY STUDENTS TO BE CARRIED OUT IN THE ITSLP

To respond to this section, two questions were asked, the first was to find out if the students consider that sustainable activities are needed within the Institute, to which 100% answered that activities are needed. Immediately they were asked to specify what activities they suggest, 76% of the students proposed various activities, the most mentioned were environmental awareness campaigns and reforestation campaigns, it also drew attention that on a smaller scale they suggest that garbage cans be placed

in classrooms and recycling bins, this information is presented in figure 2.

CONCLUSIONS

In the dimension of *attitudes*, an average score above four is presented, which means that students go from medium interest to strong interest, where I am *interested in knowing the environmental impact of the products that I consume* have a score of less than 4.01, and *I respect the rules established when entering a historic site or nature reserve*, and *climate change is a serious matter* are the attitudes with the highest average score, 4.54 and 4.67 respectively. However, in the *Life style dimension*, it is found that of the 12 variables, there is only one with a strong interest: *I take care that the water tap is closed when it is not used* with 4.58 and with a medium interest, *I turn off the light in places where not used* with 4.36; This leads to the conclusion that assuming a favorable attitude towards sustainable development, specifically in the environmental area, is easier than transferring it or putting it into practice in the Life style, since this already involves carrying out a more serious behavior of care towards the environment. Based on the above, it can be affirmed that students still need to become aware of their responsibility and commit to putting into practice actions with a greater impact that benefit the environment.

Regarding the participation of students in sustainable actions, it is necessary for the Institute to carry out awareness campaigns to ensure that a greater percentage is inclined to participate in them, since the current involvement is only slightly above 50% of the population.

On the other hand, some activities suggested by the students are already carried out, as it can be seen in figure 1, which means that they are not aware of it, it is then suggested to spread them further and perhaps increase

the frequency with which they are carried out. in order to have a greater impact.

At this stage of the environmental problem, where catastrophic news reaches us through various means, we can no longer continue to observe, we must be agents of change, be examples for our students, make them see that simple activities such as turning off the lights or turning off the water tap are no longer enough, explain to them that we must change our habits, in a world that is no longer what it used to be, we must keep up with these changes and take actions, which although they cost us more, in the end they will help us to overcome environmental devastation.

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