Representaciones sociales de la gestión ambiental para la sustentabilidad en una comunidad escolar privada

Social Representations of Environmental Management for Sustainability in a Private School Community

Representações sociais da gestão ambiental para a sustentabilidade em uma comunidade escolar privada

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Resumen

El objetivo de esta investigación fue identificar las representaciones sociales sobre la gestión ambiental para la sustentabilidad compartidas por la comunidad escolar de la Universidad Español campus Diamante en Acapulco, Guerrero. El alcance metodológico fue descriptivo y el diseño mixto. Se aplicaron 276 cuestionarios y 11 entrevistas al personal directivo, docente y no académico y a estudiantes. Los datos cualitativos se procesaron mediante análisis de contenido y los cuantitativos a través de redes semánticas naturales y estadística descriptiva. En cuanto al cuestionario, las respuestas predominantes indicaron que la información adquirida por la comunidad escolar proviene, principalmente, de asignaturas como la de biología (26.7 %); en relación con las representaciones sociales, 41 % de los entrevistados piensa que el concepto *gestión ambiental* se enfoca al cuidado, 31 % desconoce la sustentabilidad y 30 % relaciona la sustentabilidad con la conservación de los recursos naturales. Asimismo, para 47 % de los encuestados, la finalidad de la gestión ambiental es, básicamente, ahorrar y administrar los recursos. Se concluye con la necesidad de desarrollar procesos de formación con toda la comunidad escolar para transitar de una conceptualización conservacionista y utilitarista a la construcción de representaciones sociales más sólidas, complejas y dinámicas, orientadas a la sustentabilidad.

Palabras clave: educación ambiental, medio ambiente, organización y gestión, percepción.

Abstract

The objective of this research was to identify the social representations about environmental management for sustainability shared by the school community of Universidad Español Diamante campus in Acapulco, Guerrero. The methodological scope was descriptive, and the design was mixed; 276 questionnaires and 11 interviews were applied to directive, teaching and non-academic staff and students. Qualitative data were processed through content analysis and quantitative data through natural semantic networks and descriptive statistics. Regarding the questionnaire, predominant responses indicated that the information acquired by the school community comes mainly from subjects taken in their academic training (biology, 26.7 %); In relation to social representations, 41 % of those interviewed think that the concept *environmental management* focuses on care, 31 % are unaware of

sustainability and 30 % relate sustainability to the conservation of natural resources. Likewise, for 47% of those surveyed, the purpose of environmental management is basically to save and manage resources. The need to develop training processes with the entire school community is concluded, to move from a conservationist and utilitarian conceptualization to the construction of more solid, complex, and dynamic social representations, oriented towards sustainability.

Keywords: environmental education, environment, organization and management, perception.

Resumo

O objetivo desta pesquisa foi identificar as representações sociais sobre a gestão ambiental para a sustentabilidade compartilhadas pela comunidade escolar do campus da Universidad Español Diamante em Acapulco, Guerrero. O escopo metodológico foi descritivo e o desenho misto. Foram aplicados 276 questionários e 11 entrevistas a funcionários directivos, docentes e não académicos e alunos. Os dados qualitativos foram processados por meio da análise de conteúdo e os dados quantitativos por meio de redes semânticas naturais e estatísticas descritivas. Em relação ao questionário, as respostas predominantes indicaram que as informações adquiridas pela comunidade escolar provêm principalmente de disciplinas como biologia (26,7%); Em relação às representações sociais, 41% dos entrevistados acham que o conceito de gestão ambiental tem como foco o cuidado, 31% desconhecem a sustentabilidade e 30% relacionam a sustentabilidade à conservação dos recursos naturais. Da mesma forma, para 47% dos pesquisados, a finalidade da gestão ambiental é basicamente economizar e administrar recursos. Conclui com a necessidade de desenvolver processos de formação com toda a comunidade escolar para passar de uma conceituação conservacionista e utilitária à construção de representações sociais mais sólidas, complexas e dinâmicas, orientadas para a sustentabilidade.

Palavras-chave: educação ambiental, meio ambiente, organização e gestão, percepção.

Introduction

Environmental management systems emerge as a strategy to contribute to the identification and control of the impacts that organizations generate on the environment (Malavé and Fernández, 2020; International Organization for Standardization [ISO, for its acronym in English] (2015). Initial research in this field focused on the business environment in order to assess the effectiveness of the implementation of the ISO 14001 standard (Mikulčić, Duić and Dewil, 2017; Salim et al., 2017), the importance of waste management solid (So, Lee and Chow, 2019) or other aspects, such as the relationship between environmental management, economic performance, green innovation and leadership (Zhang and Ma, 2021). Currently, topics such as behavior, participation and commitment to adopt environmental management practices (Kitila and Woldemikael, 2019; Klein, Schramm, Veiga and Moreira, 2021; León et al., 2017; Mills et al., 2017).

However, the various manifestations of the environmental crisis made evident the need to encourage the participation of a greater number of people in the search for solutions for a harmonious coexistence between society and nature. The Declaration of Talloires (Association of University Leaders for a Sustainable Future, 1999) recognizes that higher education institutions play a fundamental role in the development of sustainability strategies to address current problems. One of them is the incorporation of environmental management systems as a tool to achieve a balance between the social, environmental and economic aspects of the institutions, and influence the academic training of future professionals (Aleixo, Azeiteiro & Leal, 2018; Collins , 2017; Mushtaq, Bandh and Shafi, 2020).

To recognize the characteristics of the environmental management practices of educational institutions, the classification of Gudynas (2009) is useful: a) weak sustainability accepts modifying production processes to reduce environmental impact and considers conservation necessary for economic growth; b) strong sustainability holds that the value of nature cannot be reduced to monetization, and c) super strong sustainability indicates that the environment must be valued from multiple dimensions, even more important than the economic one.

At the beginning of the 21st century, some universities in the United States of America took the first steps in the search for sustainability, including Harvard, Stanford and Buffalo. In Spain, the universities of Murcia, Vigo, Alicante and Madrid joined this wave (Rivas, 2011); Spain also promoted eco-schools at the basic level (Trukšāns, 2017). While

in Latin America, Chile and Cuba promoted environmental management programs in schools (Ministry of the Environment, 2020; Ochoa, Gallardo, Pérez and Ávila, 2016).

Mexico shows progress in this area. One of the most prominent was the creation of the Mexican Consortium of University Environmental Programs for Sustainable Development [Complexus] (2020), an institution that focuses on the improvement of academic processes to integrate environmental management and sustainable development in the programs of study. In basic education, the Sustainable School Program promotes strategies to systematize environmental management practices. From 2011 to 2013, 1,269 schools were certified in the 2018-2019 cycle (Ministry of the Environment and Natural Resources [Semarnat], October 30, 2019).

It is worth mentioning that the evaluation of environmental management practices that are developed in this type of program is limited to the application of checklists to verify compliance with organization or infrastructure indicators; and the methodology of the studies that document them is usually quantitative (Lo-Iacono, Torregrosa & Capuz, 2017; Testa, Iraldo & Daddi, 2017). In the educational field, the incorporation of other types of strategies is necessary to know the impact they have on the individuals and the community that they make up, especially if the systemic approach of environmental management is considered, which gives special importance to the way in that the parts are integrated: it forms an interrelated whole, with a reciprocal enrichment derived from this continuous feedback (Edwards, 2019; Forrest, 2018). This approach can be done through the study of social representations.

The theory and methodology of social representations, as Mireles (2019) points out, allow us to know the meanings that the actors give to different aspects of school life. This theory has been useful to know the role of environmental education in the training of children and young people (Allen and Lalonde, 2020; Calixto, 2019; Ponte and Caballero, 2012; Terrón, 2012; Terrón and González, 2012). Likewise, through social representations it is possible to know other aspects that involve the rest of the school community, such as the ideas, knowledge or beliefs that are built within it and their respective implications (Cuevas, 2016; Kanyimba, Richter and Raath, 2013).

These types of studies demonstrate the strong influence of the mass media in the integration of social representations (Cluley and Green, 2019; Kay and Gaymard, 2020; de Rosa, Dryjanska and Bocci, 2017), since they influence the way to incorporate new

constructs in daily life, assigning them a meaning and turning them into a shared sociocultural product (Ibañez, 2001).

There are different definitions of social representations; They all have aspects in common that Moscovici (1979) captures in his initial definition of 1961:

> A particular modality of knowledge whose function is the elaboration of behaviors and communication between individuals. (…) The passage from the plane of science to that of social representations implies a discontinuity. (…) The rupture is the necessary condition for each physical, biological, psychological knowledge to enter the laboratory of society. There all knowledge appears, endowed with a new epistemological status, in the form of social representations. (p. 17).

Jodelet (1986) it categorizes them as reference systems that give meaning to the information received by the individual in a context shared with others; he also affirms that they are dynamic and are transformed due to the fact that social groups constantly modify meanings, creating new representations.

In terms of structure, social representation is a functional unit with heterogeneous and multiple content, apparently dissolved and disordered, but in reality it keeps a logical order, in which three dimensions can be distinguished: attitudes, information and representation field (Moscovici, 1979).

In the studies of social representations, a qualitative methodology predominates (procedural approach); The content analysis method is used to identify the subjectivity of the expressions and, within them, the meaning and meaning they reveal. As part of this method, the analogy and similarity technique allows to categorize and classify the information to define specific fields according to the meanings attributed to them (Terrón and González, 2012).

Quantitative methods (structural approach) are also used, such as the free association of words, where the natural semantic network technique allows to know the way in which individuals construct meanings, recovering their knowledge and relating them to the word stimulus (Mireles, 2019). Another quantitative method consists of closed questions, whose answers can be processed with descriptive statistics. The combination of both in a mixed method is an alternative to seek a broader and more solid vision, find a better understanding

of the study phenomenon and obtain more robust results. (Abric, 2001; Hernández y Mendoza, 2018).

According to this theoretical-methodological framework, it is possible to consider that the study of social representations can contribute to reveal the images, values and attitudes that a school community relates to environmental management, and their influence on the integration of a system aimed at scope of sustainability (Yucedag, Kaya and Cetin, 2018). It also helps to investigate the factors that affect the motivation of those involved, as well as the way in which they assume their role in the design and execution of tasks, data that could help explain the reasons why some of these systems have not managed to achieve its objectives permanently (Benayas, Marcén, Alba and Gutiérrez, 2017).

Although the ISO 14001 system is one of the most successful in the world (Lan and Lee, 2019; Loste, Roldán, Lomba and Giner, 2019), it does not propose a way to address substantive functions in educational institutions; it is restricted only to technical activities, aimed at remediation (Benayas et al., 2017; Taddei, 2011). Therefore, the investigations that are carried out to know the scope of its objectives focus on the quantitative analysis of the indicators, and although some of them address social aspects such as communication, leadership or commitment (Mills et al., 2017 ; Zhang and Ma, 2021), the conclusions are obtained through statistical data, which do not allow knowing the thinking that those involved construct through the information they receive.

For this reason, it is considered that a study of environmental management with a methodology of social representations can contribute valuable elements to enrich its implementation in schools and promote compliance with sustainability standards. It should be noted that, during the review of bibliographic material, after 2010, no antecedents were found of works that addressed environmental management from the study of social representations.

Environmental management for sustainability promotes the systematization and dissemination of various practices, but also invites critical reflection that makes it possible to awaken awareness and commitment to act in an organized way in effective solutions and according to the context (Maldonado and Loza, 2018).

The challenge for educational institutions consists, then, in constituting a community directed towards a super strong sustainability, with a systemic, holistic and complex approach that participates in the conformation of a new environmental rationality (Benayas

et al., 2017; de Andrade, Sudan, de Meira, da Rocha and Sorrentino, 2017; Gudynas, 2009; Leff, 2008).

This work is linked to another carried out by Vilchis, Aparicio and Rodríguez (2021), who undertook an action-research process in the community of the Universidad Español Diamante campus with the aim of strengthening the social representations of environmental management taking into account the "new normal" consequence of the health emergency caused by the 2019 coronavirus disease (covid-19). Both studies are part of a doctoral research in progress.

The objective of this article was to identify the social representations about environmental management for sustainability shared by the school community of the Universidad Español Diamante campus, located in Acapulco, Mexico.

The questions that guided the research were: what are the social representations of environmental management for sustainability shared by the community of the Spanish University, in Acapulco, Mexico? What role does the mass media play in strengthening the social representations within the educational institution ?, and what strategies or methods could be established to strengthen social representations on environmental management and sustainability?

Method

Research context and study population

The Universidad Español Diamante is a private institution located in Acapulco, Guerrero. It was founded in 2008 and is distinguished by its philosophy focused on entrepreneurship, educational quality and training in values. It offers secondary, baccalaureate, and undergraduate education services in areas related to psychology, management, and communication sciences.

It has infrastructure for environmental care, which includes a wastewater treatment plant, solar panels, seismic-resistant classrooms, large green areas and an agribusiness center.

The university has a history of incorporating sustainability on campus; however, the initiatives have been intermittent, without solid results or permanent changes. Thus, it was considered convenient to start from a study that would allow to know the social representations of the members, information that will contribute to determine the factors that

hinder the conscious mobilization towards participatory environmental management and sustainability.

Research type and scope

The research was mixed because the data collection, analysis and integration was carried out with quantitative and qualitative methods. The quantitative method allowed to measure and obtain magnitudes of the studied phenomenon, which were processed using standardized statistical procedures. The qualitative method, on the other hand, allowed access to the perspectives and points of view of the participants, through the observation, analysis and interpretation of the speeches. The research design was non-experimental, with concurrent triangulation, since both methods were applied in parallel to corroborate results and carry out cross-validation. The scope was descriptive because the characteristics of the phenomenon studied were specified and the causes that originated it were exposed with theoretical and empirical support. Its development comprised the period July 2019-February 2020.

For the application of the questionnaire, the census was chosen; Open questions, multiple choice and free word association were included. In the case of the interview, as it is a qualitative technique that does not intend to generalize the results in a probabilistic way, but rather to access the particular interpretation of the reality that individuals construct, it was decided to conveniently choose representatives of the different areas and educational levels . The information obtained allowed us to understand the object of study in a broad dimension.

The research project was presented to representatives of the sectors that make up the educational community (management, students, teaching team and non-academic staff), and support was requested to carry out the activities in the different stages that comprise it. A positive response was received.

The research observed the ethical criteria applicable in humans established in the Declaration of Helsinki II, which was approved by the Bioethics Committee of the Autonomous University of Guerrero (CB-001/2019). The research subjects accepted the informed consent, the specifications of which were written in the questionnaire and expressed verbally in the interview. The confidentiality of the data was protected by passwords assigned to the participants to respect anonymity.

Procedure

The research was carried out in three phases: design of instruments, application of instruments and analysis and writing of results.

For the first phase, after a bibliographic review, a questionnaire and four interviews were designed; the former allowed access to the structure and the latter to the content of social representations. The integration of the two approaches (structural and procedural) offered a broader vision of the issue addressed. The instruments were validated by this group of authors, specialized in social representations, management and environmental sciences. A pilot test was carried out that consisted of applying the instruments to an individual from each sector of the school community (direction, students, teaching team and non-academic staff) and educational level (secondary, high school and university) to verify the understanding of the approach of the questions, time of application and effectiveness of the methods for data processing. After the corresponding adjustments and a second review, it was formally applied.

The application of the questionnaire reached a wide range of representativeness, having significant responses in each section. Thus, a sample of 278 participants was generated, which allowed obtaining a 95% confidence value and 5% error in the data obtained (Table 1).

Tabla 1. Población y muestra

Sector	Población	Respuesta	Porcentaje
Directivos	3	3	100 %
Personal no académico	17	17	100 %
Profesores	39	37	94 %
Alumnos	381	221	58 %
Totales	440	278	63 %

Fuente: Elaboración propia

The questionnaire was structured in five sections (Table 2).

The free association of words allowed the identification of elements that could not be expressed verbally and could be hidden in discursive productions. In addition, it facilitated access to the figurative core of the representation, by expressing in a word the

image or idea evoked with the stimulus, in this case, environmental management or sustainability.

Tabla 2. Secciones y ejes de análisis del cuestionario

Sección	Ejes de análisis	Tipo de reactivo
1) Datos generales	Edad, origen, estado civil, género, escolaridad.	Opción múltiple
2) Fuentes de información/Conocimiento	Fuentes de información académica. Tipo de representaciones sociales que construye con la información (de la gestión ambiental: reducidas, globalizadoras, antropocéntrico-técnicas, integrales o críticas; de la sustentabilidad: débiles, fuertes y súper fuertes).	Preguntas abiertas
3) Campo de representación	Palabras que relaciona con la gestión ambiental y la sustentabilidad.	Asociación libre de palabras
4) Finalidad/Enfoque	Meta que se persigue con la gestión ambiental. Dimensión de la sustentabilidad con la que se identifica a la gestión ambiental.	Valoración numérica escalar otorgada a los ítems
5) Estrategias/Actividades	Frecuencia de actividades o estrategias relacionadas con la gestión ambiental que realiza la institución. Frecuencia de la participación individual y colectiva en dichas actividades.	Escala Likert

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6) Actitudes/Participación	Tendencias hacia la participación en un programa de gestión ambiental.	Preguntas abiertas
	Tipo de actitudes que se manifiestan ante la posibilidad de implementar un programa de gestión ambiental.	

Nota: El cuestionario puede consultarse en https://forms.gle/c7mpGwjiwMv5YRb79.

Fuente: Elaboración propia

Four interviews were designed, one for each sector: management, teaching team, students and non-academic staff. The questions were organized into five categories with their axes of analysis. This tool allowed access to the particular context of the interviewee, his cultural background and the arguments that support her position and reveal the meanings constructed regarding the object of study (table 3).

Tabla 3. Categorías y ejes de análisis de las entrevistas

Categorías	Ejes de análisis
1) Sentido y significado	Saberes, ideas, valores y relaciones
2) Función y finalidad	Vinculación con la labor que realiza Integración Acciones
3) Fuentes de información	Programas de estudio, medios de comunicación, cursos y conversaciones
4) Condiciones internas y externas	Experiencias personales, formación, filosofía de vida, sistema institucional, circunstancias, ubicación en el organigrama

Fuente: Elaboración propia

During the second phase, the questionnaire was applied through a Google form; It offered the advantage of concentrating information electronically and facilitating data processing quickly and efficiently. It was emailed to all members of the school community. The population and sample are detailed in table 1.

11 interviews were applied: to the general manager; three teachers, one for each section (middle school, high school and university); two representatives of the non-academic staff (reception and maintenance) and five students (two from high school, two from high school and one from university).

In the third phase, the responses to the open questions of the questionnaire and the interviews were analyzed using the content analysis method and the analogy and similarity technique. The information obtained from the free association of words was systematized with the technique of natural semantic networks; the responses to the questionnaire were processed with descriptive statistics.

Results

The results are analyzed in two subsections, identifying the responses to questionnaires and interviews; both are strengthened with some testimonials.

Social representations of environmental management for sustainability (questionnaires)

Heterogeneous data were found in age and education level, since the entire community of the educational center was considered. Regarding the other variables, the population born in Acapulco predominated. Most of the participants are single, since it is a child and youth population of school age. A balance was found between the participation of men and women, as shown below:

- Age: 11-21 years = 74%; 22-32 = 13%; 33-43 = 5%; 44-63 = 8%.
- Origin: Acapulco de Juárez = 74%; other municipalities of the same state = 8%; other places in the country or abroad = 18%.
- Marital status: single = 87%; married = 11%; divorced = 2%.
- Gender: men = 50%; women = 50%.
- Schooling: primary = 1%; secondary = 27%; high school = 42%; Bachelor = 24%; mastery = 5%; PhD = 1%.

The information that the educational community has received about the care of natural resources or solid waste management throughout their academic training came from subjects related to natural sciences, mainly biology (26.7%). Areas such as civic training

(6.26%) and ethics (1.4%) were little mentioned. Sustainable tourism (0.28%), economy (0.28%) and sustainable development (0.28%) had only one mention.

About the meaning they give to the term environmental management:

- 41% alluded to reduced social representations, characterized by the naturalistic approach, with an emphasis on environmental care. "It is when we take actions to take care of the environment" (ASM85).

- 30% said they did not know or were not informed about environmental management.

- 14% associated anthropocentric-technical social representations, which identify environmental management with an administrative process of natural resources. "It is a way of organizing and managing natural resources, as well as establishing standards for their care" (APM168).

- 7% gave other answers. "It promotes environmental problems" (APH165).

- 4% referred globalizing representations, which allude to a harmonious relationship with nature, but without properly integrating the social. "Environmental management is about making plans so that damage to the environment decreases as much as possible in order to obtain a healthy environment" (ASH45).

- 4% referred to comprehensive representations, which incorporate physical and social aspects from a humanistic perspective. "It implies strategies that must be organized, activities to achieve a better quality of life where we can develop some management to prevent or minimize cases of contamination" (PUM255).

- No critical representations were found.

Regarding the field of representations of sustainability, 31% of people do not know the meaning of the concept. In addition, 30% favored weak sustainability, as they relate it to the conservation of natural resources. "It is to maintain or preserve the elements of nature, so that future generations can also enjoy them" (APM81).

Social representations of strong sustainability, which value the importance of using natural resources recognizing their intrinsic value, reached 14%. "Allow the environment to have the necessary resources to continue existing and thus sustain the life that exists in it" (PLM227).

Super strong sustainability, which strives for a new ethic focused on biocentrism, multiple valuation of resources, as well as social and ecological justice, registered 1%.

"Know how to take care of life, try to reuse something, not buy something unnecessary in order to improve the environment and that all human beings are well" (ASM3).

The components of the representation field were obtained from the free association of words. Figure 1 shows that recycling, reuse, environment and nature are at the center of the semantic network; the remaining 11 words, although related to them, do not have a significant weight. For the school community, environmental management is aimed at recycling and reusing, since they are the terms that obtained the greatest semantic weight.

The order and configuration of the central nucleus that is observed in figure 1 shows that people relate environmental management to remediation activities and the approach that is provided is that of caring for the physical-natural environment, only.

Figura 1. Núcleo central de las representaciones sociales de la gestión ambiental
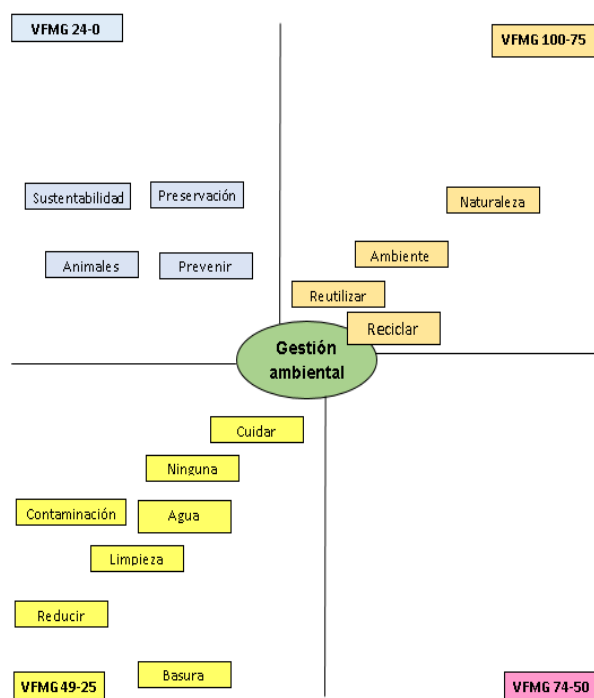
Nota: El esquema tiene cuatro cuadrantes, al centro está el objeto de representación. Cada cuadrante representa 25 % de la distancia semántica entre las palabras. Se lee en el sentido de las manecillas del reloj. Los cuadrantes están ordenados de mayor a menor peso semántico y cada palabra se acerca o se aleja del centro de acuerdo con el peso obtenido.

Fuente: Mireles (2019)

For 47% of those surveyed, the purpose of environmental management is to save, manage resources and comply with regulations, so the focus attributed to it is mainly economic.

Regarding campus sustainability, the strategies or activities that members of the school community recognize as frequent are caring for green areas (67%) and saving energy (60%). Those that are not carried out are the detection of water leaks (30%) and the use of alternative energies (9%). In teaching, the strategies that promote healthy coexistence, equal rights and equity stand out (36%); followed by events in which care for the environment is mentioned (35%) and research works, with proposals for the adequate use of resources (30%). The activities that are carried out the least (5%) are campaigns on caring for water or energy and conferences on responsible consumption, eating habits or solid waste management.

Regarding attitudes and participation in environmental management programs, the response of 80% of those surveyed was positive; They expressed expressions such as the following: "I believe that all the school personnel would support the cause and contribute on their part to carry out the campaign successfully" (APM8).

In addition to this, 16% offered diverse responses (need to conduct surveys and promote values at home); 3% said they did not know, and less than 1% expressed that there could be a negative response due to apathy or the extra workload that it would mean.

> At first I think that the students would refuse since they are very lazy to do extra work (...), I also think that some parents would refuse to participate in this, since they would not want to contribute something financially but after that I do not think there will be more reactions negative (ASM19).

Social representations of environmental management for sustainability (interviews)

Regarding the sense and meaning, for the interviewees (management, teaching team, students and non-academic staff) environmental management is aimed at improving the impact on the environment, contributing, caring for, restoring the damage caused and minimizing climate damage (50%); They included comments with assessments of the responsibility of humans in the effects caused to the planet and expressed that action should be taken accordingly. They also expressed concern about the intensity of environmental damage (25%) and the need to reduce pollution, keeping the streets free of garbage (12%).

Research was mentioned as an environmental management strategy to teach students to link their knowledge with environmental problems and seek solutions (13%).

In relation to the function and purpose, managers and teachers have knowledge about how to integrate environmental management in their functions, since they associate it with academic work through environmental campaigns and projects that are carried out to minimize the impact of human activity. and take care of the planet. The administrative and maintenance personnel do not relate environmental management to their functions, they only receive instructions and carry them out; however, all agree that these activities promote values, mainly responsibility and respect.

Regarding sources of information, members of the school community find out about environmental management activities through social networks and the Internet. The textbooks they used in school are the only bibliographic reference that provided them with knowledge about environmental management strategies. Within the institution, information is socialized through comments, meetings and campaigns; and abroad, through events, clubs and information that they share with the family and the community.

Regarding the internal (personal) and external (institutional) conditions, it was identified that the General Directorate regulates the environmental management activities of the institution. Some teachers do them because they are part of the teaching work, and not on their own initiative; however, they express that they collaborate with enthusiasm. Outside of school, some try to design their own strategies, as evidenced in the following interview excerpts.

> I have to confess that I do have my own initiative, not exposed to school, not to develop it at school, but yes, personally I am one of the people who cares and who takes care to do a little help for this so that is better (NAF2; 92-95).

> It arises from the instructions of the Directorate and the enthusiasm that one puts into it is for the initiative (NAM1; 64-65).

The social representations of environmental management that were identified in the responses of the interviewees coincide with the results obtained in the questionnaire (reduced or simple, globalizing and anthropocentric-technical), since they refer to environmental deterioration, as well as care measures , improvement and conservation; deforestation and pollution were also mentioned. Some strategies are proposed to restore the balance between

society and nature, as well as the need to become aware to compensate for the damage caused to the planet. Anthropocentric-technical representations have less incidence, but are recognized when the administration of natural resources is mentioned as a conservation mechanism that allows to continue taking advantage of them.

The social representations of sustainability also coincide with those obtained in the questionnaire (weak sustainability), since the interviewees refer to activities such as caring for natural resources or the separation and recycling of garbage, focusing on the economic sphere, considering that the resource management will allow to continue giving the environment a utilitarian character for the human being.

Discussion

The objective of this research was to identify the social representations about environmental management shared by the members of a private school. The main findings are discussed below.

Knowing the way in which the school community constructs its own social representation about environmental management provides elements to understand the dynamism of its practices, because when the members of a group assign a meaning to the objects of representation that make reality understandable, this guides and characterizes people's actions (Abric, 2001; Moscovici, 1979).

The sense that the school community of the Spanish University of the Diamante campus gives to its social representations focuses on the how and the why. Members of the school community mention recycling and reuse as strategies to contribute to the care of the environment, and consider them important for the preservation of resources for future generations. In a study carried out on social representations of recycling practices, Ponte and Caballero (2012) obtained similar results, even when they were limited only to waste management as part of environmental management.

These results also find agreement with those obtained in other studies already referred to on social representations of environmental education (Allen and Lalonde, 2020; Terrón, 2012; Terrón and González, 2012). It can be inferred that the academic training that individuals received through the educational system exerts an influence on the representation of environmental management, replicating the naturalistic approach that permeates environmental education and that does not contemplate the social sphere (Terrón and

González, 2012). Textbooks are mentioned as the source of information they receive at school, which explains the relationship between formal education and social representations to link the knowledge built with cultural practices (Calixto, 2019; Terrón, 2012), what which, in turn, is reflected in reduced environmental concepts and practices.

On the other hand, the dimension related to attitude is shown as positive; the population is willing to act to improve the environmental situation. However, it was appreciated that the strategies identified by people as favorable are not able to be reflected in practice within the institution. The foregoing is relevant because although a positive attitude is considered essential for the success of environmental project management processes (Klein et al., 2021; Kitila and Woldemikael, 2019; Mills et al., 2017; Yucedag et al. ., 2018), it also requires structured social representations, with codes, values, classificatory logics and interpretive principles strong enough to guide positive attitudes towards practices that build a collective consciousness that define a way of acting in the world (lbáñez, 2001; Jodelet, 1986; Moscovici, 1979).

In this sense, the results show that the representations of environmental management and sustainability that the study subjects construct are heterogeneous, even some participants have no reference to these words. This suggests that the members of the school community do not structure a social representation with shared symbolisms and meanings that makes sense of these terms; Therefore, even when attitudes are theoretically manifested in the duty to be, they will not be able to enter a field of representation that allows the organization and appropriation of knowledge to trigger action (Ibañez, 2001; de Rosa et al., 2017).

With this contribution, a response is given to the episodic nature of environmental practices and the little impact that results from the implementation of environmental management (Benayas et al., 2017), as well as the lack of behaviors that involve actions of social responsibility and commitment with the environment (Malavé and Fernández, 2020; So et al., 2019). It is important to build social representations that give meaning and meaning to environmental management and sustainability.

Finally, the school community identified the Internet and social networks as the main sources (outside the institution) through which they learn about measures and strategies for caring for the environment. This reference reinforces the information from previous studies regarding the strong influence of the mass media by having the power to elaborate

representations and circulate them. (Cluley y Green, 2019; Kay y Gaymard, 2020; Moscovici, 1979).

Within environmental management systems, communication is an important part of the process for the correct execution of tasks and the dissemination of objectives and results (Cluley and Green, 2019; ISO, 2015); however, the mass media has not been considered as an alternative to bring information to the members of the institution. There is also no evidence of studies on strategies or skills development to discriminate the accumulation of data received through the Internet to make more conscious and informed decisions, with an impact not only in the workplace but also in daily life. The results obtained can serve as a reference for future studies on the influence of social networks in the construction of social representations of environmental management and sustainability.

Environmental management as a pedagogical practice that seeks to contribute to sustainability has shown its value in studies that analyze the technical result of the application of projects of this nature (Benayas et al., 2017; Collins, 2017; Rivas, 2001). However, they do not refer to an evaluation system that measures its impact on the common sense thinking that the school community builds; Therefore, it is inferred that, if social representations change (Moscovici, 1979), an educational intervention can achieve the construction and transformation of meanings and meanings to structure more complex and dynamic social representations over time.

Strengths and limitations

As a strength, it can be stated that the instruments designed and applied in the development of this research were relevant for the stated objective, and are the basis for further studies.

This is a cross-sectional investigation, the data obtained correspond to a specific historical moment; therefore, it is necessary to develop more investigative processes to observe the way in which the social representations of environmental management evolve. This is considered as a limitation.

Conclusions

This work identified the social representations about environmental management for sustainability shared by a school community. These showed a strong conservationist and utilitarian component within the institution, related to the traditional model educational systems.

Likewise, it was found that the mass media represent an important area of opportunity for the socialization of issues related to the environmental management of the institution in the search to strengthen its performance, both of the directive, teaching and non-academic staff as well as of the students.

It is necessary to develop training and updating processes in environmental and management issues in the school so that the entire educational community builds more solid, complex and dynamic social representations in the transition towards an environmental and sustainable management of the educational institution.

Contribution to future lines of research

This research creates an opportunity to promote the significant transformation of the evaluation processes of environmental issues in educational institutions, public or private: moving from simple checklists to a true institutional appropriation that leads to the improvement of administrative and educational processes and the promotion of environmental justice with social equity.

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