

<https://doi.org/10.23913/ride.v11i22.872>

*Artículos científicos*

## **Percepción docente sobre la cooperación universitaria al desarrollo en la Universidad Michoacana de San Nicolás de Hidalgo**

*Teaching Perception of University Development Cooperation at the Universidad Michoacana de San Nicolás de Hidalgo*

*Percepção docente da cooperação para o desenvolvimento universitário na Universidad Michoacana de San Nicolás de Hidalgo*

**Rosa Vega Cano\***

Universidad Michoacana de San Nicolás de Hidalgo, México

[rosa.vega@umich.mx](mailto:rosa.vega@umich.mx)

<https://orcid.org/0000-0002-5668-1429>

**Rogelio Rivera Fernández**

Universidad de Guadalajara, México

[rogelioriverafernandez@msn.com](mailto:rogelioriverafernandez@msn.com)

<https://orcid.org/0000-0003-2123-8360>

\*Autor de correspondencia. [rosa.vega@umich.mx](mailto:rosa.vega@umich.mx)

### **Resumen**

Aun cuando las universidades han tenido y mantienen una relevancia significativa como fuentes de conocimientos transferibles a la sociedad, los avances alcanzados en términos del desarrollo sostenible son escasos, parcelados y con efectos sinérgicos limitados. Por ello, este trabajo se planteó como objetivo analizar la forma en que se contribuye al desarrollo desde las funciones sustantivas de la Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) mediante la percepción de sus docentes. Se utilizó un enfoque mixto, con la



intención de recabar información basada en la subjetividad de los profesores universitarios, para después hacer un análisis mediante técnicas estadísticas que permitieran cuantificar las opiniones de los docentes de forma general y por dimensiones de análisis. Finalmente, se analizó la información para identificar posibles relaciones entre variables. Por tanto, se trata de un estudio descriptivo-correlacional que se apoyó en la aplicación de una encuesta a una muestra aleatoria simple conformada por 336 docentes adscritos a dicha universidad, con representatividad de todas las áreas del conocimiento. Los resultados permitieron identificar una percepción muy favorable acerca de la cooperación de esta universidad para mejorar las condiciones del entorno mediante sus actividades de docencia, investigación y extensión y difusión; sin embargo, estas son insuficientes y, según la propia opinión de los docentes, los esfuerzos por generar sinergias a favor del desarrollo sostenible deben ser incrementados en cuantía y cualidades. Asimismo, se encontró que los profesores universitarios asumen una responsabilidad con el desarrollo social que, desde el ejercicio de su labor, pueden cumplir. En ese sentido, la UMSNH se encuentra en un momento clave que debe aprovechar para fortalecer su legitimidad y pertinencia social.

**Palabras clave:** desarrollo sostenible, educación superior, redes de colaboración.

### Abstract

Even though universities have had and still maintain significant relevance as sources of knowledge that can be transferred to society, the progress made in terms of sustainable development is scarce, fragmented and with limited synergistic effects. For this reason, this work aimed to analyze the way in which development is contributed from the substantive functions of the Universidad Michoacana de San Nicolás de Hidalgo (UMSNH), through the perception of its teachers. A mixed approach was used, with the intention of collecting information based on the subjectivity of university professors, to later make an analysis using statistical techniques that allow quantifying the opinions of teachers in a general way and by dimensions of analysis. Finally, the information was analyzed to identify possible relationships between variables. Therefore, it is a descriptive-correlational study that was supported by the application of a survey to a simple random sample made up of 336 teachers assigned to said university, with representativeness of all areas of knowledge. The results allowed identifying a very favorable perception about the cooperation of this university to



improve the conditions of the environment through its teaching, research, extension and dissemination activities; however, these are insufficient and, according to the teachers' own opinion, efforts to generate synergies in favor of sustainable development should be increased in quantity and qualities. Likewise, it was found that university professors assume a responsibility with social development that, from the exercise of their work, they can fulfill. In this sense, the UMNSH is at a key moment that it should take advantage of to strengthen its legitimacy and social relevance.

**Keywords:** sustainable development, higher education, collaboration networks.

## Resumo

Embora as universidades tenham tido e tenham uma relevância significativa como fontes de conhecimento passíveis de transferência para a sociedade, os avanços em termos de desenvolvimento sustentável são escassos, fragmentados e com efeitos sinérgicos limitados. Portanto, o objetivo deste trabalho foi analisar a forma como o desenvolvimento é contribuído a partir das funções substantivas da Universidade Michoacan de San Nicolás de Hidalgo (UMSNH) por meio da percepção de seus professores. Utilizou-se uma abordagem mista, com o intuito de coletar informações a partir da subjetividade dos professores universitários e, posteriormente, fazer uma análise por meio de técnicas estatísticas que permitissem quantificar as opiniões dos professores de forma geral e por dimensões de análise. Por fim, as informações foram analisadas para identificar possíveis relações entre as variáveis. Portanto, trata-se de um estudo descritivo-correlacional que se apoiou na aplicação de um survey a uma amostra aleatória simples composta por 336 docentes alocados na referida universidade, com representação de todas as áreas do conhecimento. Os resultados permitiram identificar uma percepção muito favorável sobre a cooperação desta universidade para melhorar as condições do meio ambiente por meio de suas atividades de ensino, pesquisa e extensão e divulgação; no entanto, são insuficientes e, na opinião dos próprios professores, os esforços para gerar sinergias em prol do desenvolvimento sustentável devem ser aumentados em quantidade e qualidade. Da mesma forma, constatou-se que o professor universitário assume uma responsabilidade com o desenvolvimento social que, a partir do exercício do seu trabalho, pode cumprir. Nesse sentido, a UMSNH encontra-se em um momento-chave que deve ser aproveitado para fortalecer sua legitimidade e relevância social.



**Palavras-chave:** desenvolvimento sustentável, ensino superior, redes de colaboração.

**Fecha Recepción:** Agosto 2020

**Fecha Aceptación:** Febrero 2021

---

## Introduction

The world is experiencing a time of deep and dizzying transformations in economic, social, environmental matters, etc., stimulated by the advancement of technologies and by the (almost imperative) objective of competitiveness; all this derived (to a large extent) from the globalization process.

In this increasingly complex context, the growth and development of countries is determined by a variety of non-traditional factors (such as investment, production and consumption), now based on aspects such as innovation and technological development, the generation and transfer of knowledge and the formation of local and global networks.

In this way, universities, being institutions in which the different areas of knowledge converge, from where knowledge is produced, transmitted and transferred, stand as a fundamental actor in promoting the development of countries.

On the other hand, in this process of transnationalization of human relations that is implicit in that of globalization, a space has been opened for the emergence of cooperation between actors to promote development, from a vision of co-responsibility, solidarity and sustainability in the long run.

This idea of development cooperation finds strong support in the fact that globalization, pretending to be a homogenizing process (at least apparently), has resulted in the constitution of a completely heterogeneous globe in which the generation and exchange of knowledge and Technologies observe great asymmetries that make it difficult for the less favored to incorporate into the logic of globalization.

In such conditions, it is understood and justified that universities should not remain as spectators of changes and replicating schemes that allow them to adapt only partially and in the short term to the prevailing logic; the current situation demands from them a dynamic behavior that helps to face the uncertainty that complexity implies, because in this lies, to a large extent, their reason for being.

The problem is that, even though universities have had and still have significant relevance as sources of knowledge that can be transferred to society, the progress made in terms of sustainable development is scarce, fragmented and with limited synergistic effects.



For these reasons, and considering that the Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) is a state public university that covers most of the demand for higher education in the state of Michoacán, this research work aimed to analyze how contributes to development from its substantive functions, taking as a frame of reference the 17 Sustainable Development Goals (SDG) proposed by the United Nations (UN) and in particular SDG 4: Quality education, which seeks to ensure that education meets three criteria: inclusion, equity and quality, at all levels, in all countries and throughout the life of any citizen.

Taking into account the above, it was proposed to answer the following questions: 1) is the UMSNH training citizens capable of promoting sustainable development ?; 2) can the knowledge that this university produces be used to solve social problems? And 3) does the institution interact with other social actors to promote development?

For this, it was defined to carry out a perception study from the teaching perspective, given the diversity of functions assumed by university professors in the fulfillment of their work, since, currently, they are not only in charge of planning and facilitating the teaching process- learning, but rather they carry out research, manage resources, connect with the internal and external environment of the university and, of course, maintain direct contact with the student community. In this sense, it was considered that their opinion on the subject could contribute very significant elements to fulfill the objective of this work.

### **Starting elements on the contribution to development from universities**

The predominance of the neoliberal conception in public policies in the world led to the commercialization of higher education. The strong financial pressures to which universities were subjected through budget cuts (which prevail to date) led to the adoption of an approach that conceives of university education as a very profitable commodity (García, 2018) and to carry out activities within the framework of its substantive functions as an alternative to compensate for the lack of public resources.

In this context of superposition of the economic aspects on the social aspects, elementary activities that are part of the reason for existing of the universities were put aside. This vision is shared by Aguilar, Crisanto and Sánchez (2013), who observed “a fundamental change in the definition of what higher education is and the role it plays in the development of society, restricting this to economic growth and education to the formation of human capital”(p. 23), which shows the mercantilist tendency of education.



However, the balance that has been made for more than three decades indicates that it was not enough to reduce the size of the State (and its participation in the economy), deregulation and opening up to international markets, among other neoliberal measures, carried out through globalization, to generate better living conditions and fairer and more equitable societies.

From these reflections, alternative approaches have emerged that point to the need to involve elements beyond the economic sphere, such as human development and sustainable development. The first conceives development as “a process of expansion of the real capacities that individuals enjoy” (Sen, 1999, p. 19); that is, the expansion of the potential that individuals have to live and enjoy life. While the second is based on the idea of considering, in equal order of importance, three dimensions in development strategies: economic, social and environmental. The most significant difference in this approach, in the opinion of Gómez (2016), lies in the assessment of the ways in which natural resources have been used to satisfy current needs and its consequences in the availability of said resources for future generations; In other words, the starting point of this type of proposal is to guarantee the survival capacity of human life.

Of course, these visions have expanded the role of universities in development (Álvarez, 2012): they are called, educational institutions, to participate in a decisive, committed and dynamic way in the social transformation that human and sustainable development requires, since, as they are in charge of generating and transferring knowledge, training a highly qualified workforce, generating guidelines for the conduct of public policies and promoting critical thinking, reflection and the generation of ideas that lead to the improvement of the living conditions of the inhabitants of the planet (Figuroa, 2013), are attributed a privileged role in terms of the potential to undertake projects and wide-ranging synergies to achieve economic, social and environmental sustainability.

These alternative approaches have permeated the international development agenda; even within the UN, since in 2015 member countries signed a series of commitments to strengthen the fight against poverty and environmental problems from a multidimensional approach, which involves universities in complying with the SDGs: 1) End of poverty, 2) Zero hunger, 3) Health and well-being, 4) Quality education, 5) Gender equality, 6) Clean water and sanitation, 7) Affordable and clean energy, 8) Decent work and economic growth, 9) Industry, innovation and infrastructure, 10) Reduction of inequalities, 11) Sustainable





cities and communities, 12) Responsible production and consumption, 13) Climate action, 14) Underwater life, 15) Life of terrestrial ecosystems , 16) Peace, justice and strong institutions and 17) Partnerships to achieve the goals (UN, 2019). According to the Sustainable Development Solutions Network [SDSN] (2017), the SDGs “provide a great opportunity to show and celebrate the impact and importance of what universities do for local and global well-being” (p. 40). Hence, it is possible to refocus the activities of higher education institutions towards sustainable development.

In other words, universities are currently faced with the opportunity to respond with relevance to the society that created them. This by adopting the SDG approach that includes different strongly interrelated elements: “The reduction of poverty, climate change, the reduction of disaster risks, biodiversity, sustainable consumption and production. [Also] responds to local specificities and respects cultural diversity” (Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura [Unesco], 2014, p. 33).

At the same time, these higher education institutions have a great challenge, since assuming that responsibility not only means responding, as a consequence, to social demands; it also represents acting in coherence with that vision from within its confines, so the strengthening of institutional capacities plays a decisive role in making possible that participation that sustainable development demands from the university. “To (...) address the sustainability issues outlined in the SDGs, individuals must become agents of change. They need knowledge, skills, values and attitudes that empower them to contribute to sustainable development ”(Unesco, 2017, p. 7). Thus, the change is not only in the institution, but also in the individuals that form it.

To cite an example, for university professors “to contribute to the transition towards a sustainable society, they must first acquire the necessary knowledge, skills, attitudes and values (...). They must also develop the motivation and commitment that are needed ”(Unesco, 2014, p. 20), which leads to the need for sustainable teacher training.

This means that a three-stage process must occur. The first contemplates the recognition by the universities of the co-responsibility they have in current social and environmental problems; The second phase consists of recognizing the need to adopt, in a transversal and comprehensive way, the commitment to solving social demands, following the approach of the SDGs, and the third lies in the management of organizational change and social transformation ( Vallaeys, 2014).



In this sense, Alonso (2010) specifies the following conditions for universities to be able to assume a commitment to sustainable development: by principle, they must set the objective as a priority; then, they must define the policy that they will follow to achieve that objective (strategies, programs and projects); finally, they must assign a budget item to finance said activities. As can be seen, it is a task with long-term results that requires immediate planning and action.

Although there is no conventional typology to date to define the activities through which universities can contribute to development, Llanos and Monzó (2010, pp. 119-127) offer a typology that allows us to understand the transversality of the approach: a) activities in the field of education (free-choice subjects, compulsory subjects, postgraduate and continuing education programs, professional practice programs and social projects, awareness-raising and awareness-raising activities on development problems); b) activities in the field of research; c) activities of interuniversity cooperation, and d) activities in collaboration with other actors (governments, companies, non-profit associations).

As can be seen, the aforementioned activities involve training, research, extension and management processes and, therefore, all members of the university community: students, teachers, administrative staff and authorities (Vallaey, 2014). The complexity involved in assuming the commitment to contribute to sustainable development from the universities is evident and putting it into practice in reality is even more so. However, it is also clear that it constitutes a strategic possibility for the reencounter of universities with their social environment. In fact, various universities have implemented innovative initiatives "to face the challenge of forming a university community made up of citizens aware of contemporary socio-environmental threats and committed to the arduous task of overcoming or minimizing their consequences at the local, regional and regional levels. global" (González, Meyra and Martínez, 2015, p. 89). From what has been said so far, it can be inferred that the university is a trigger for the change in social awareness of sustainability.

It is important to consider that the approaches described here coexist in the current reality and generate equally contradictory results within universities, since some of these institutions that have sought to implement sustainable programs have not achieved significant or structural progress within them and have not managed to constitute reference models for the society in which they operate. In this sense, "the rhetorical definition ends up crashing against strongly established social, economic and academic barriers and inertias, which



prevent real and significant progress” (González et al., 2015, p. 78). And consequently, the change in universities is a long-term path.

Based on the foregoing, it is difficult to find and name an indisputable clear predominance in the ways in which the university relates to its social environment. There are currently hybrid forms that coexist and frequently juxtapose (or accommodate, block and restrict) between them, conditioning the possibilities of giving continuity to certain processes. An additional challenge is, therefore, to prevent the friction and friction that naturally occurs in this hybridization from blocking the emergence of innovative initiatives capable of transforming the university and today's society.

## **Materials and method**

In this research, we worked from a mixed approach, with the intention of collecting information based on the subjectivity of university professors, as well as on their professional experience in teaching in the university environment (Núñez, 2017), to later carry out an analysis through statistical techniques that allow quantifying the opinions of teachers in a general way and by analysis dimensions, and thus identify both an assessment on a global scale and at a dimensional level around the perception of teachers on the contribution to development through the functions university nouns. Finally, the information was analyzed to identify possible relationships between variables.

Therefore, it is a descriptive-correlational study that was supported by the application of a survey directed to the teaching staff of the UMSNH, taking as a guide an instrument developed by Vallaey, De la Cruz and Sasia (2009) and updated by Vallaey (2014), from which the information was analyzed in 2019. The purpose of this instrument is to identify the way in which higher education institutions “respond to society through the development of their mission, and how they can incorporate measures to improve and make their contribution to a more just and sustainable society meaningful”(Vallaey et al., 2009, p. 1).

The applied questionnaire was adapted and adjusted to the characteristics of this research work. The final instrument included a total of 53 items referring to various variables and categories of analysis: 1) Age, sex, maximum academic degree, dependence on assignment and contractual status of the teaching staff; 2) Current normative, planning and organizational framework of the institution; 3) Training, research and extension and



dissemination activities; 4) Institutional financing for activities aimed at contributing to development, and 5) External support instruments.

The dimension "Regulatory framework ..." included items to reflect on the contents of the Organic Law of the University Statute, the Institutional Development Plan and the formal organization chart of the UMSNH, since it is considered that these documents can reflect the degree of commitment that the The institution assumes cooperation for development by integrating it from the regulations, action strategies and the organizational structure that guide its operation and operation.

On the other hand, the dimension "Activities ..." refers to the tasks that the university performs within the framework of the fulfillment of its substantive functions. To address the training function particularly, items were included for teachers to reflect on the curricular content, teaching-learning methods, ways of evaluating the knowledge acquired in the subjects taught in the different academic programs, linking the teaching with social problems and involvement in social service and volunteer programs. On the other hand, in terms of research, the items revolved around its link with social needs, the involvement of external actors for the definition of priorities in the generation of knowledge, the interdisciplinarity of research, as well as integration from students to socially useful research projects. Finally, within this dimension, aspects related to the extension and dissemination of knowledge were considered: signing agreements with other key development actors, organizing awareness-raising events on specific issues of social demands, carrying out advertising campaigns to promote values and issues. of social benefit, existence of an explicit policy not to segregate access to academic training to marginalized groups, as well as mechanisms for monitoring public policies, promoting dialogue between researchers and political decision-makers, and forming groups or networks for social purposes.

A third dimension of analysis prompted reflection on the financing of activities of this nature and on the benefits (or not) of granting more resources to carry them out and expand them. And finally, the dimension "External support instruments" included items to capture the opinion of teachers about the existence of national and international networks and organizations on which the UMSNH could rely to expand its field of action in terms of cooperation to the developing.

The items, in all these cases, were presented in the form of statements with a Likert-type rating scale, whose response alternatives were 1) totally disagree, 2) disagree, 3)



indifferent, 4) agree and 6) totally agree (with the exception of the items corresponding to general data of the respondent, for which open questions were included).

The estimation and selection of the sample was carried out using a simple random type design that resulted in the selection of 336 teachers, of which 61% were men and 39% women; their average age was 48 years; 47% had master's or specialty studies, 28% with doctorates and 25% with bachelor's degrees; 72% were permanent teachers (either full or part time), 22% temporary teachers and 6% retired teachers.

All areas of knowledge were represented in the sample: 27% of teachers in the area of health sciences, 22% of engineering and architecture, 17% of economic-administrative sciences, 12% of law, 10% of biological-agricultural sciences, 7% of humanities and 5% of exact sciences, metallurgy and materials.

The analysis of the information was carried out by estimating frequencies (Rustom, 2012), coding scales to identify the global perception and by dimensions around development cooperation (Hernández, Fernández and Baptista, 2014); finally, correlations were estimated through the contingency coefficient and Spearman's correlation coefficient, as well as the level of significance (Wackerly, Mendenhall y Scheaffer, 2010).

## Results

### Frequency analysis

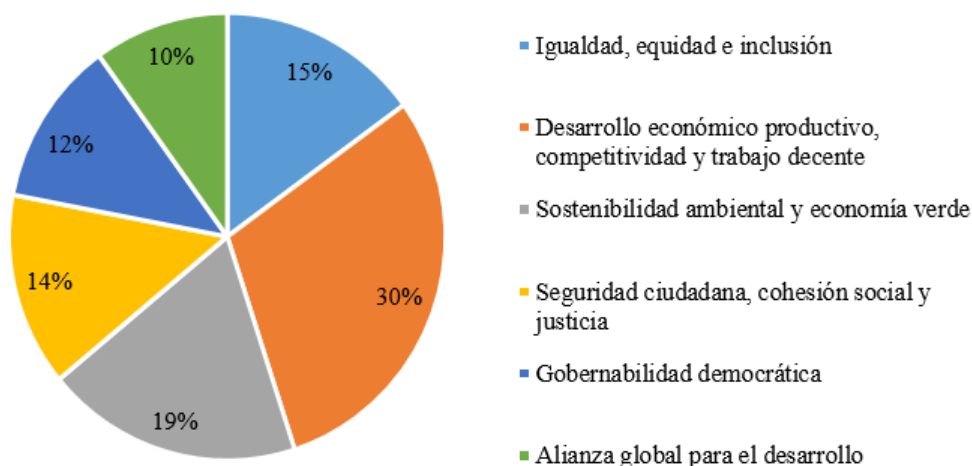
The information collected indicated that the majority of teachers knew only partially the university regulations (53%), the institutional development plan (51%) and the organizational structure (48%); However, 89% said they agree (totally or partially) that said institutional framework should establish the UMSNH's commitment to development from its Organic Law and the University Statute; 91% in which lines of action, strategies, and specific projects aimed at improving the economic, social and environmental conditions of our environment should be defined, and 88% in which institutional managers should be assigned for this type of projects or strategies, as well as be recognized within the institutional organization chart.

Regarding the training activities carried out at this university, most of the teachers considered that the education provided by the UMSNH should be oriented towards the training of professionals committed to sustainable development (94%) by offering a greater

number of courses or subjects with contents that contribute to creating social awareness in the university community (91%), as well as through the creation of social service programs or solidarity volunteering in which students are involved in development cooperation activities (80%), since the majority considered that it is very important that in the course of their student life the students of this university can learn a lot about the national reality and social problems in the state, national and international environment.

The topics that were indicated by the participants as priorities in the development agenda and on which they consider that knowledge should be strengthened from the university are shown below, in figure 1.

**Figura 1.** Principales temas de interés en la agenda del desarrollo, propuestos por los docentes para ser impulsados por desde la UMSNH



Fuente: Elaboración propia

When asked about their teaching practice, 85% of those surveyed said they had had the experience of teaching courses whose contents have motivated students' interest in contributing to development, 81% said they promote the participation of students in social projects outside the university 91% asserted to link teaching with current social problems, ensuring that students have direct contact with specialists in development issues (75.3%) and involving them in volunteer activities, community service or some form of contribution to development (61.3%) . Near the total of the sample weighed that the main benefit obtained by the students, when participating in this type of activities, is the development of a civic conscience and committed to improving the living conditions of society (90%).

In the same vein, 89% consider that, even though the UMSNH has research lines aimed at development, these should be strengthened (78%), ensuring that the projects are defined in consultation with external actors with the intention of serving specific social problems or demands (79%) and in an interdisciplinary way (71%). Approximately 30% of teachers have not participated in research of this type.

Likewise, 88% of the teachers consider it important for this university to sign collaboration agreements with other key development actors (governments, non-governmental organizations, international organizations and companies), organize and carry out events such as talks, debates, congresses, symposia, courses, publications, among others, in order to sensitize the academic community and society in general on specific development issues (88%).

It is important to note that 77% of the teachers said they agree with statements that indicate that this university organizes extension and dissemination activities of this type, through which it is possible to link teaching and research with social needs (90%) and provide their students and teachers with opportunities for interaction with various social actors (77.9%). However, just over a quarter of respondents (27%) responded that they have not been able to be part of groups or networks for social purposes organized or promoted by the university.

Regarding the issue of financing for development cooperation activities, most of the teachers expressed their total agreement that it is important for the institution to allocate financial resources to carry out activities to contribute to development (65%) and even that allocate a greater number of them to carry out these types of activities (84%). Notwithstanding the above, 39% of the teachers stated that they had not been involved in this type of activity

Likewise, the teachers agreed that it is important that the university make use of instruments (programs, projects and specific actions) offered by networks, associations and national and international organizations to expand the possibilities of action and contribute to improving the conditions of life of the population (93%), but 49% declared not having participated in activities of this nature.

## Assessment of development cooperation

To identify the perception that teachers have about development cooperation carried out by the UMSNH, a score was assigned to the answers obtained in relation to the score that could be obtained in total for all the items contained in the survey and it was created a new assessment scale, based on specific intervals, according to the total score. In this way, it was possible to identify both the global perception and by dimensions and categories of analysis. The recovered results are shown in table 1.

**Tabla 1.** Percepción de los docentes en torno a la cooperación universitaria al desarrollo, según dimensión, categoría de análisis y global

Percepción CUD	Valoración (frecuencia %)				
	Muy desfavorable	Desfavorable	Regular	Favorable	Muy favorable
<b>Global</b>	-	-	5 %	39 %	56 %
Marco institucional	-	1.2 %	4.5 %	38.1 %	56.3 %
Normatividad	0.6 %	2.7 %	10.1 %	33.6 %	53 %
Planeación	0.3 %	2.1 %	14.6 %	43.2 %	39.9 %
Estructura organizacional	1.2 %	3.3 %	8.6 %	38.4 %	48.5 %
Actividades	-	-	5.7 %	39.9 %	54.5 %
Formación	-	0.6 %	4.2 %	27.4 %	67.9 %
Investigación	-	1.5 %	11.9 %	41.4 %	45.2 %
Extensión y difusión	-	1.2 %	12.8 %	41.7 %	44.3 %
Financiamiento	0.6 %	4.8 %	9.8 %	41.7 %	43.2 %
Instrumentos externos	0.6 %	3 %	22.6 %	33 %	40.8 %

Fuente: Elaboración propia

As can be seen, the global assessment is very favorable; However, it is necessary to look inside the dimensions, since it is observed that, in various categories, there is not a very significant difference between the percentage of teachers who have a very favorable opinion and those who only have a favorable assessment.



Within the "Regulatory framework ...", this situation may be due to the fact that those who have a very favorable perception is because they sustain it on the potentialities that they consider can offer a regulatory, planning and organizational framework that is explicitly committed to development cooperation; however, it must be taken into account that a significant proportion of teachers do not know (or not fully) these normative, planning and organizational documents.

Regarding the dimension "Activities ...", it is important to remember that it includes items aimed at teachers' reflection on what they consider should be in terms of fulfilling the substantive functions of the university, as well as aspects in which the respondents are directly involved in their daily work as members of the academic community, from which it can be deduced that teachers observe that it is necessary to increase and strengthen strategies that allow integrating the social dimension in a transversal way in training, research and extension and dissemination to offer a more comprehensive education to their students.

In the dimensions "Financing..." and "External instruments of support", the participants legitimize, by showing a very favorable perception, the disposition of monetary resources to carry out development cooperation activities and give importance to the institutional efforts carried out by the university to approach public and private, national and international entities and coordinate with them projects that allow it to expand its possibilities to carry out development cooperation activities. This perception of teachers can be explained by the role that they themselves have in the formation of collaboration networks and in the execution and operation of programs and projects that are established institutionally.

### **Analysis of the correlations**

The significant correlations for the data retrieved from the teacher survey are some low (whose values range between 0.200 and 0.399) and others moderate (between 0.400 and 0.599).

In the dimension "Regulatory framework ..." all coefficients are low, which means that the general perception that teachers have about development cooperation is not influenced by their knowledge of said framework or the opinion they have in relation to This must contain (or not) defined lines about the university's commitment to development (and vice versa).

In the dimension "Activities ..." there are both low and moderate correlations, however, it can be said, with 99% certainty, that if teachers are assigned to programs that include subjects related to development issues, they will have a very favorable perception of cooperation development; The same occurs if, within their courses, they promote the participation of students in social projects outside the university, link teaching with social problems, and encourage students to have direct contact with specialists in development issues; or if they perceive that the university cares about social problems and encourages students to get involved in activities that contribute to development.

Finally, the only significant correlation that exists, in terms of the global perception of development cooperation, is between this and the area of knowledge to which the teacher's affiliation unit corresponds, among which the health sciences stand out. economic-administrative sciences and law.

## Discussion

In general, it can be noted that a very favorable perception prevails among UMSNH teachers in terms of development cooperation, both in conceptual terms (the duty to be) and in the field of practice of this higher education institution (the facts ), although the need to increase institutional efforts and capacities to have more significant impacts on the construction of a more just and equitable society is recognized. This agrees with that indicated by González et al. (2015) on the existence of social, economic and academic barriers and inertias that are still strongly established in universities, which limit achieving more far-reaching impacts.

On the other hand, this finding shows that there is a significant degree of social awareness, in general terms, in the UMSNH teaching staff, in addition to a significant interest in getting involved in activities of this nature, which leads to think that it is also There is an important level of awareness of the role that teachers can assume as leading agents of development both from the exercise of their profession and in the activities they carry out in the classroom.

This constitutes an important window of opportunity to execute co-created projects in which the involvement of the two directly involved in the teaching-learning process is achieved: the teacher and the student, from the coordination and institutional shelter that this requires. At the same time, it is essential to carry out strategies that allow offering



comprehensive education and ensure that graduates enter the world of work with a reflective and critical awareness that contributes to the solution of the great problems that afflict society both locally, as global. In other words, it is a significant advance in terms of the three-stage process towards university and social transformation to which Vallaeys (2014) refers.

In addition, this would allow it to overcome various debts that this university still has with its social context, which were also identified by teachers, and which refer mainly to the lack of an explicit policy to not segregate access to academic training to marginalized groups (indigenous population, racial minority, low-income students, etc.) through scholarships or other means; the lack of regular mechanisms for the monitoring of public policies, as well as the identification and analysis of the major issues of society; the scant promotion and stimulation of dialogue between researchers and political decision-makers, as well as the insufficiency of specific means of transferring knowledge to society. That is, to various aspects that have to do with the expansion of human capacities that Sen (1999) highlighted in his vision of human development and that involves and interrelates the social, economic and environmental aspects fundamental for sustainable development (Gómez, 2016), through the substantive university functions described by Figueroa (2013).

Now, it is important to point out that, by including items that provoke reflection and self-assessment of teaching practice, it is possible that there is an overvaluation of the perception of the activities they carry out with students to involve them with social reality; however, this cannot be verified with this study. In fact, it would not be the only hypothesis that could arise in this regard, as another alternative could explain this situation based on the intention with which teachers carry out these activities. That is to say, they may well have a social focus and what is needed, possibly, is teacher training, in specific methodological or pedagogical terms, such as to design solidarity learning and service projects, for example. Unesco (2014) refers to these aspects when it highlights the importance that teachers receive, before undertaking development cooperation projects, training to develop knowledge, skills, attitudes and values.

In addition to this, the implication of the study for higher education focuses on the perception of the teacher as an agent of change in sustainable development, which also agrees with what was stated by Unesco (2017, p. 7) in the sense that the Higher education can provide the knowledge, awareness, and action that empower people, in this case teachers, to transform themselves first and thereby transform society (Unesco, 2020).



Likewise, the research shows that, although education focused on sustainable development implies the integration of three dimensions in the teaching-learning process by universities: a cognitive dimension, a socio-emotional dimension and a behavioral dimension, as stated once again Unesco (2019), it is also necessary for the teacher to participate and be actively involved in the actions that each dimension entails; otherwise, sustainable development will be found in the university's plans and programs, but it will not materialize in individual teacher changes and, therefore, sustainable development will not be achieved.

## Conclusions

The current local and global context is making an urgent call for universities to participate in a dynamic and active way in solving economic, social and environmental problems, typical of sustainable development. This must be understood and used by universities to strengthen or consolidate their legitimacy and social relevance.

It must be recognized that university development cooperation is a complex endeavor and as such faces certain challenges to achieve long-lasting and high-impact results. Among these challenges are, on the one hand, achieving the involvement of all the actors that make up the university community and, on the other, the construction of a framework of promotion and financing both from the universities themselves and by the other actors that they influence the field of higher education and, also, it is necessary to be formally recognized in university agendas.

The results of this research allow us to answer the guiding questions in the following way: the perception of UMSNH teachers regarding the contribution to development made by this institution is, in general, very favorable and means, in short, that this university is training citizens capable of promoting sustainable development, that the knowledge produced in it can be used in solving social problems and that the institution interacts with other social actors to promote development. However, it was also identified that teachers consider that the activities and achievements achieved by them, to date, are not sufficient, so efforts to generate synergies in favor of sustainable development must be increased in quantity and qualities.

Likewise, it was found that university professors assume a responsibility with social development that, from the exercise of their work, they can fulfill, either by promoting among their students the formation of a critical and committed conscience with the environment that surrounds them, or managing and promoting research work that is socially relevant.

Finally, it can be pointed out that the UMSNH is at a key moment that it should take advantage of to strengthen its legitimacy and social relevance, assuming, at least, some compensatory (or rebalancing) policies aimed at contributing to the solution of specific social problems and developing more strategies. broad and inclusive, that allow its approach with the social environment through the design and implementation of programs and projects that manage to link it with the rest of actors (local and international) involved in development processes in a sustainable way.

Likewise, the need to overcome the approaches that, although relatively more advanced with respect to traditional models, continue to be reduced in part to isolated and dispersed collaboration schemes, only punctually with other actors, because, in some of them, they are overvalued. the possibilities that the establishment of collaboration networks imply (necessarily) improvements in the quality of life, and even the beginning of processes of economic growth, since, even though there are collaboration networks (of high cooperation and community participation), not always they manage to generate development dynamics and obtain only certain partial and transitory improvements that do not reach the involvement or assimilation required to become true synergistic links for integral and sustainable development.

To culminate these final reflections, it is important to emphasize that the current environment demands that universities adopt the SDG approach urgently and that they reflect on the contribution they make in the construction of a more just, equitable, and peaceful global society and tolerant, mainly from its training function, not only from the student, but also from the teacher as an agent of social change, since the teacher is the link that generates synergies between the university, the student and society.

## Future lines of research

According to the prospective trends of the Spanish Network for Sustainable Development (2020a, 2020b), and according to what is stated in this research, some future lines of research could be: 1) the study of university competencies for the fulfillment of the SDGs, 2) the university's commitment to society within the framework of sustainable development, 3) the creation, transfer and application of knowledge in higher education institutions within the framework of the SDGs and 4) the impact of the substantive functions of the Higher education institutions for compliance with the SDGs.

## References

- Aguilar, M., Crisanto, O. y Sánchez, G. (2013). Educación superior y desarrollo en América Latina: un vínculo en debate. ¿La necesaria mediación del mercado? En Martínez, M. E., Piñero, F. J. y Figueroa, S. A. (coords.), *El papel de la universidad en el desarrollo* (pp. 23-44). México: Benemérita Universidad Autónoma de Puebla-Universidad Nacional del Centro de la Provincia de Buenos Aires. Recuperado de <https://www.google.com.mx/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjis435rZ7sAhU9AZ0JHbFWA5YQFjAAegQIAxAC&url=http%3A%2F%2Fbiblioteca.clacso.edu.ar%2Fclacso%2Fse%2F20140211121020%2Funiversidad.pdf&usg=AOvVaw3TFjDn6ZhxD7EwplyTX4Mg>.
- Alonso, J. A. (2010). La universidad como agente de cooperación al desarrollo: algunas consideraciones generales. En Arias, S. y Molina, E. (coord.<sup>as</sup>). *Universidad y cooperación al desarrollo* (pp. 29-35). España: Universidad Autónoma de Madrid. Recuperado de <http://biblioteca.hegoa.ehu.es/registros/author/7999>.
- Álvarez, S. (2012). Una introducción a la cooperación internacional al desarrollo. *Revista Electrónica de Derecho de la Universidad de La Rioja*, (10), 285-309. Recuperado de <https://dialnet.unirioja.es/descarga/articulo/4104832.pdf>.
- Figueroa, V. (2013). El rol de la universidad en el desarrollo. La perspectiva de los organismos internacionales. En Martínez, M. A., Piñero, F. J. y Figueroa, S. A. (coords.), *El papel de la universidad en el desarrollo* (pp. 11-22). Recuperado de <https://www.google.com.mx/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjis435rZ7sAhU9AZ0JHbFWA5YQFjAAegQIAxAC&url=http%3A%2F>





- <http://biblioteca.clacso.edu.ar/clacso/se/20140211121020/universidad.pdf&usg=AOvVaw3TFjDn6ZhxD7EwplyTX4Mg>.
- García, C. (2018). La mercantilización de la educación superior en Colombia. *Revista Educación y Humanismo*, 20(34), 36-58. Recuperado de <http://revistas.unisimon.edu.co/index.php/educacion/article/view/2857>.
- Gómez, C. (2016). El desarrollo sostenible: Conceptos básicos, alcance y criterios para su evaluación. Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura. Recuperado de <https://www.rua.unam.mx/portal/recursos/ficha/83568/el-desarrollo-sostenible-conceptos-basicos-alcance-y-criterios-para-su-evaluacion>.
- González, E., Meyra, P. y Martínez, C. (2015). Sustentabilidad y universidad: retos, ritos y posibles rutas. *Revista de la Educación Superior*, 44(175), 69-93. Recuperado de [http://www.scielo.org.mx/scielo.php?pid=S0185-27602015000300004&script=sci\\_abstract](http://www.scielo.org.mx/scielo.php?pid=S0185-27602015000300004&script=sci_abstract).
- Hernández, R., Fernández, C. y Baptista, P. (2014). *Metodología de la investigación*. Ciudad de México, México: McGraw Hill.
- Llanos, M. y Monzó, J. (2010). Universidad y cooperación para el desarrollo. En Calabuig, C. y de los Llanos, M. (coord.<sup>as</sup>), *La cooperación internacional para el desarrollo* (pp. 117-131). España: Editorial Universitat Politècnica de València. Recuperado de <http://www.upv.es/upl/U0566378.pdf>.
- Núñez, J. (2017). Los métodos mixtos en la investigación en educación: hacia un uso reflexivo. *Cuadernos de Pesquisa*, 47(164), 632-649.
- Organización de las Naciones Unidas [ONU]. (2019). *Agenda 2030 y los Objetivos de Desarrollo Sostenible. Una oportunidad para América Latina y el Caribe*. Santiago, Chile: Organización de las Naciones Unidas. Recuperado de <https://www.cepal.org/es/publicaciones/40155-la-agenda-2030-objetivos-desarrollo-sostenible-oportunidad-america-latina-caribe>.
- Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura [Unesco]. (2014). *Hoja de ruta para la ejecución del Programa de acción mundial de Educación para el Desarrollo Sostenible*. París, Francia: Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura. Recuperado de [https://unesdoc.unesco.org/ark:/48223/pf0000230514\\_spa](https://unesdoc.unesco.org/ark:/48223/pf0000230514_spa).

- Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura [Unesco]. (2017). *Educación para los Objetivos de Desarrollo Sostenible. Objetivos de aprendizaje*. París, Francia: Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura. Recuperado de <https://unesdoc.unesco.org/ark:/48223/pf0000252423>.
- Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura [Unesco]. (2020). *Educación para el desarrollo sostenible: hoja de ruta*. París, Francia: Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura. Recuperado de <https://unesdoc.unesco.org/ark:/48223/pf0000374802?posInSet=2&queryId=N-3cced673-a9dc-4d9b-abfe-9e42ca10edb2>.
- Red Española para el Desarrollo Sostenible [REDS]. (2020a). *Cómo evaluar los ODS en las universidades*. España: Red Española para el Desarrollo Sostenible. Recuperado de <https://reds-sdsn.es/wp-content/uploads/2020/04/Gui%CC%81a-COMO-EVALUAR-ODS-2020-AAFF.pdf>.
- Red Española para el Desarrollo Sostenible [REDS]. (2020b). *Implementando la Agenda 2030 en la universidad. Casos inspiradores de educación para los ODS en las universidades españolas*. España: Red Española para el Desarrollo Sostenible. Recuperado de [https://reds-sdsn.es/wp-content/uploads/2020/05/Dosier-REDS\\_Casos-ODS-Univ-2020\\_web-1.pdf](https://reds-sdsn.es/wp-content/uploads/2020/05/Dosier-REDS_Casos-ODS-Univ-2020_web-1.pdf).
- Rustom, A. (2012). *Estadística descriptiva, probabilidad e inferencia. Una visión conceptual y aplicada*. Santiago, Chile: Universidad de Chile. Recuperado de <http://repositorio.uchile.cl/handle/2250/120284>.
- Sen, A. (1999). *Desarrollo y libertad*. Barcelona, España: Planeta.
- Sustainable Development Solutions Network [SDSN]. (2017). *Cómo empezar con los ODS en las universidades. Una guía para las universidades, los centros de educación superior y el sector académico*. Melbourne, Australia: Sustainable Development Solutions Network. Recuperado de <http://reds-sdsn.es/wp-content/uploads/2017/02/Guia-ODS-Universidades-1800301-WEB.pdf>.
- United Nations Educational, Scientific and Cultural Organization [Unesco]. (2019). *Educational content up close. Examining the learning dimensions of Education for Sustainable Development and Global Citizenship Education*. France: Organización



- de las Naciones Unidas para la Educación, la Ciencia y la Cultura. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000372327>.
- Vallaes, F. (2014). *Manual de responsabilidad social universitaria. El modelo Ursula: estrategias, herramientas, indicadores*. Unión de Responsabilidad Social Universitaria Latinoamericana. Recuperado de <https://unionursula.org/publicaciones-ursula/>.
- Vallaes, F., De la Cruz, C. y Sasia, P. M. (2009). *Responsabilidad social universitaria: manual de primeros pasos*. Ciudad de México, México: McGraw-Hill. Recuperado de <https://publications.iadb.org/es/publicacion/14191/responsabilidad-social-universitaria-manual-de-primeros-pasos>.
- Wackerly, D., Mendenhall, W. y Scheaffer, R. (2010). *Estadística matemática con aplicaciones* (7.<sup>a</sup> ed.). Ciudad de México, México: Cengage Learning. Recuperado de [https://www.google.com.mx/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwibu9Px4JzsAhUbAp0JHQx4DE0QFjABegQIAhAC&url=http%3A%2F%2Fwww.economia.unam.mx%2Fbiblioteca%2FPdf%2FEstad%25C3%25ADstica%2520matem%25C3%25A1tica%2520con%2520aplicaciones%252007edi\\_MENDENHALL.pdf&usg=AOvVaw32nJahvdekrkJ5DtiCbslP](https://www.google.com.mx/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwibu9Px4JzsAhUbAp0JHQx4DE0QFjABegQIAhAC&url=http%3A%2F%2Fwww.economia.unam.mx%2Fbiblioteca%2FPdf%2FEstad%25C3%25ADstica%2520matem%25C3%25A1tica%2520con%2520aplicaciones%252007edi_MENDENHALL.pdf&usg=AOvVaw32nJahvdekrkJ5DtiCbslP).

<b>Rol de Contribución</b>	<b>Autor (es)</b>
<b>Conceptualización</b>	Rosa Vega Cano Rogelio y Rivera Fernández (mismo grado de contribución ambos autores)
<b>Metodología</b>	Rosa Vega Cano Rogelio y Rivera Fernández (mismo grado de contribución ambos autores)
<b>Software</b>	No aplica
<b>Validación</b>	Rosa Vega Cano Rogelio y Rivera Fernández (mismo grado de contribución ambos autores)
<b>Análisis Formal</b>	Rosa Vega Cano Rogelio y Rivera Fernández (mismo grado de contribución ambos autores)
<b>Investigación</b>	Rosa Vega Cano (principal) y Rogelio Rivera Fernández (apoyo)
<b>Recursos</b>	No aplica
<b>Curación de datos</b>	Rosa Vega Cano (principal) y Rogelio Rivera Fernández (apoyo)
<b>Escritura - Preparación del borrador original</b>	Rosa Vega Cano Rogelio y Rivera Fernández (mismo grado de contribución ambos autores)
<b>Escritura - Revisión y edición</b>	Rosa Vega Cano Rogelio y Rivera Fernández (mismo grado de contribución ambos autores)
<b>Visualización</b>	Rosa Vega Cano Rogelio y Rivera Fernández (mismo grado de contribución ambos autores)
<b>Supervisión</b>	Rosa Vega Cano Rogelio y Rivera Fernández (mismo grado de contribución ambos autores)
<b>Administración de Proyectos</b>	Rosa Vega Cano Rogelio y Rivera Fernández (mismo grado de contribución ambos autores)
<b>Adquisición de fondos</b>	No aplica