

**Graduate Program: Master in Communication of Science and Culture,
Department of Sociocultural Studies, ITESO, Guadalajara, Jalisco, México**

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Abstract

This Master program has been offered by ITESO, in Guadalajara, México, since 1998, standing from a sociocultural approach in science communication. It was the first post-graduate program in this academic field in México. The program looks after the development of both research skills and the capacity to convey practical projects. The aim of this work will be to share the results of the program in three main axes: research projects in science communication developed by students (dissertations); strategic projects in science communication oriented to solve social problems through dialogic participation with social groups; and some examples of the research projects of Public Communication of Science developed by the professors of the MCCC.

Background

The Master in Communication with specialty in popularization of Science and Culture (Maestría en Comunicación con Especialidad en Difusión de la Ciencia y la Cultura) was founded in 1998 under the Department of Sociocultural Studies of the ITESO University, with the objective of promoting the advanced specialization of professionals in communication and for the training of specialists on other areas (biology, education, sociology, anthropology, history, philosophy) in the fields of communication and sociocultural studies. The graduate should be able to influence in the development and democratization of knowledge, through research, design, planning, management, and specialized and ethically oriented intervention; by developing projects placed both on the

line of public communication of science and on the field of cultural promotion. In 2005 the program changed its name to Master in Communication of Science and Culture (MCCC), but the objectives and intentions of the program remain unchanged. The Master is part of the PNP (National Program of High Quality Graduate Programs) in CONACYT (National Council of Science and Technology) as a program of international competence. Since the beginning of the program the MCCC has been developed around two main lines of knowledge: The Communication and Promotion of Culture, and the **Public Communication of Science**, which is the one that will be addressed in this work.

Among the several approaches from which scientific popularization has been historically engaged the MCCC develops a proposal based in the research and production of *public communication of science* from the perspective of socio cultural studies.

The socio cultural studies field provides an academic frame whose fundamental concepts approach the study of human practices in society, at the level of the social structure where these are being carried out, and at the level of the actions and shared codes that give them meaning. This means that in the specific case of concepts and processes that are related to the communication of science, the sociocultural studies give the elements that allow to contextualize and understand the relationships that exist between different practices: the production of scientific knowledge, its impact and consequences in different spheres of social life, the technological development, the particular ways in which they incorporate to society, and the meaning that the social actors give to the relationships with science and technology in their everyday practice. (Herrera Lima, 2012)

The objective of this presentation is to show **the results** that have been obtained in the MCCC during the past sixteen years, organizing these results in three main categories: In first place, the dissertations that have been developed by students; in second place the scope that we call Science Communication and Citizenship, with projects for the application of public communication of science related to specific local or regional problems, these works have been developed by academics and students of the Master; finally the scope of research and production of knowledge, with the research

projects of Public Communication of Science developed by the professors of the MCCC. A significant portion of the results are compiled in an academic publication: a collective book published in 2012.

Dissertations

Since the year 2002 in which the first student got his degree and until 2014, the Master counts 26 graduated students in the area of Public Communication of Science. The thesis projects of the students respond to their own research interests in the knowledge of public communication of science, but they must fulfill with the requirement of being socially referred: they must have a specific social referent. The research must be socially and academically pertinent within the frame of the sociocultural perspective from which Science Communication is approached in the Master.

The topics and problems that the thesis can address are not pre established, but I propose a classification based on the analysis of the final products and according to the emphasis of the results shown by the research:

- a. Dialogues between different kinds of knowledge: scientific knowledge and not specialized knowledge. These works analyze the interaction between scientists and not scientists in the context of some social problems where dialogue is the main way to get a successful common project.
- b. Mediations and narratives: museums, media, printed publications, internet. The emphasis of this works is in sociocultural mediations and discourses.
- c. Studies of reception, publics and audiences. These studies are focalized in the sociocultural context of the publics, their perceptions and appropriation of knowledge.
- d. Power, reproduction and legitimization. In this field the research works analyze the relations of power in the social structure within the scientific production.
- e. Imaginaries and representations. How science and scientists are socially perceived and represented by some social groups.
- f. Science communication and social problems: environment and health.

Projects of Science communication applied to local problems: Science and Citizenship

In the frame of one of the Master's assignments, offered once a year: Analysis and design of Public Science Communication Projects, projects are developed through the identifying of local problems in which scientific knowledge can contribute to the understanding of the different phases of the problem and to the empowerment of the affected social actors. The idea is to contribute to the development of informed and participating citizens.

The work of the professors and students in the projects of this assignment consists in the linking of the knowledge produced by scientists of diverse disciplines with that of civil organizations, social groups or communities, by identifying and diagnosing the problematic situation in which they are immersed and by proposing and developing science communication strategies in different places, media and channels, all this in a continuous dialogue process with the affected actors.

One of the objectives of the Master is to place students in real sceneries with social problems, in which interdisciplinary scientific knowledge is necessary for the understanding of the different phases of a situation and for the positioning of the affected actors.

Some examples of these projects are:

-Pollution of the Santiago river with the civil organization "Un salto de vida" In this case the problem came from a damaged area next to the metropolitan area of Guadalajara, in which the Santiago river has been receiving for years the industrial disposes of the enterprises located at its shore, the loads of black water from the city and the leachate of the municipal dump next to it. The objective of the project was first to spread information of the problem in Guadalajara metropolitan area and then to provide argumentation elements to the people living there. Chemists, hydrologist and urban planners were involved in the process.

-Environment Communication for the Bosque Los Colomos. The urban forest Los Colomos is one of the main water providers for the city, as well as an important lender of environmental services for the region. It is threatened by real estate developments and the pollution of groundwater, among other things. The objective of the strategy was to place

the forest into the public agenda as part of a vulnerable eco system. We worked alongside with biologists, environmental engineers, experts in environmental ecology and economical ecology.

-Flooding in Guadalajara's Metropolitan Zone, from the project: "Guadalajara Pluvial".

- The Temacapulin affair. The problem of basins and dams.

-Science, enterprise and society. CIATEJ (Center for the research and application of technology of the state of Jalisco): strategic communication of biotechnology. This instance will be addressed in detail during the congress.

Academic research projects

There are two main lines of research in Public Communication of Science in the Department of Sociocultural Studies.

a) Public policy in science and technology in México.

b) Scientific-technological mediation in the relationship between nature and society.

Academic Publication

In the year 2010, during the 10th anniversary of the Master, we decided to summon the graduates from the area of public communication of science to participate in a book integrated by their dissertations, re-shaped into chapters of the book, plus a section devoted to write about their own professional projects that are related to science communication. The book also counted with the collaboration of the scholars that have been professors of the program, providing the national context of science communication in Mexico and the particular context in which the Master in Communication of Science and Culture has evolved. The book is named: *From Academy to public space. To communicate science in Mexico*, and it was coordinated by Susana Herrera Lima and Carlos Enrique Orozco.

Science communication in the ITESO

-Café Scientifique of ITESO. With 10 years of existence, the Café is a place of leisure to think and discuss science. It belongs to the Center of Cultural Promotion.

-Quarterly supplement “*Clavius*”. *Communities and Knowledge*” (Comunidades y Saberes), developed by scholars and students of ITESO and published by the newspaper *La Jornada, Jalisco*. It’s a project of public communication of social sciences referred to regional and local problems.

This has been a brief summary of the results of the works in the Master in Communication of Science and Culture, in ITESO University. This collective effort has made an important contribution to the professionalization of the public communication of science in, at least, two ways: the production of knowledge through specialized research and the development of applied projects.

References

Herrera Lima, S. (2012). “La profesionalización de la comunicación pública de la ciencia: hacia la construcción de un campo académico”. en Herrera Lima, S. & C. E. Orozco, De la academia al espacio público. Comunicar ciencia en México, Guadalajara, Jal, ITESO, pp. 49-63.

Full text of dissertations can be consulted in:

http://www.portal.iteso.mx/portal/page/portal/Dependencias/Rectoria/Dependencias/Direccion_General_Academica/Dependencias/DESO/Programas_academicos/MC