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TRAINED TO INTERACT

Experimenting mediation: a constant challenge

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ABSTRACT: The Science House of the Federal University of Rio de Janeiro (UFRJ) is a space where science is approached through the perspective of culture, seeking interdisciplinarity, stimulating debate among different areas of knowledge, and building a closer and more pleasant relationship between society and scientific knowledge. Work with mediators has gone through significant changes over time and the paths chosen have been modified, re-evaluated and transformed. The presence of mediators can mean the possibility of dialog, conversation, informal chat, and sharing. It has been one of the main channels of communication with the general public.

A science and technology cultural center

Opened in 1995, the Science House of the Federal University of Rio de Janeiro (UFRJ) is a space where science is approached through the perspective of culture. Considering that science is part of humanity's cultural heritage and is, for this reason, deeply integrated with the arts, literature, world visions and the socio-economic context, the House has been building channels of communication that permit an encounter between science, art and culture. Though these channels, the House also seeks interdisciplinarity, stimulates debate among different areas of knowledge, and builds a closer and more pleasant relationship between society and scientific knowledge. The great challenge is to stimulate visitors to make their own discoveries through activities that invite them to ask questions and seek answers, thus spurring/piquing their interest.

The option of working with temporary activities and exhibits and thinking of science in its more global concept has made the space more dynamic, has led to the integration of various areas of science, and has stimulated partnerships with public and private institutions. In addition to this, the actions are not limited to the physical space of the institution. They go in search of environments that allow for greater and more explicit interaction with society – popular gatherings, bars, streets, festivals, encounters, fairs and schools. All of this has brought us great challenges. Many questions continue to be discussed.

The existing physical space limits us to receiving up to 12,000 visitors per month, but because of the mediation script, which varies with each exhibit, there is an average of 6,000 visitors. The House is open from Tuesday to Friday, from 9am to 8pm, and on Saturdays, Sundays and Holidays, from 10am to 8pm. Entrance is free. Maintenance funds come from a variety of sources. UFRJ is the main supporter and a part of the funds is obtained through public announcements in the area. Elaborating projects that fit within the requirements of the Cultural Incentive Laws (federal, state and city) and fund-raising are also part of a strategy to include the House in the cultural market. The goal is to create a group of patrons in order to ensure project development in a more guaranteed manner.

As both a characteristic and an option, the team is made up of professionals from different areas. It is constantly growing in size, with new consultants, mediators and interns. The greater objective is that of changing and experimenting in order to learn. The work involved is worth it only if we are happy. This is a determining factor that allows the group to dream and transform these dreams into reality. Topics, languages, paths and evaluation are all discussed together in order to shape the projects, events and activities. Scientists, researchers, professors and specialists from UFRJ and other institutions have had a fundamental role as consultants and partners in the exhibits, courses, seminars, lectures, audiovisual aspects, shows, personnel training, educational material development and publications.

From the perspective of result evaluation, it is not always possible to notice the potential of an activity or the quality of the work carried out through a simple analysis of quantitative data. Therefore, evaluations involving both the public and the House team are carried out. These evaluations seek to identify differences among groups of visitors, influences and impacts on the public's daily life because of their visit and their interests, and errors and positive aspects about the methodologies chosen by the team. The results obtained permit options of new paths, changes in strategies, choices of other topics to be explored and, mainly, the improvement of the team's professional and personal relationships and of the work with visitors.

New perspectives are put forth for education, be it formal, non-formal or informal. Thinking of different ways of popularizing science and integrating it with education, while respecting expectations and interests of visitors, institutions and their teams, is a constant challenge for the professionals who work in this area. If we consider the different realities that exist within the country, where each person develops his or her work through public expectations and regional needs as defined by the population, museums and science centers have had a fundamental role in this process. Independent of the choices, we cannot lose sight of the existing reflections about the role of these spaces in a city's cultural, educational and social life.

This conception is being constructed in a very peculiar and different way in each of Brazil's museums and science centers. Stimulating curiosity, developing paths that lead individuals to question and reflect on the world that surrounds them, bringing science to the visitor's daily life, proposing institutional exchanges, making scientific information available and reflecting in a deeper way about these concepts allow for a multi and interdisciplinary vision of science.

In most cases, the publics are "plural" and it is challenging to develop activities that include visitors with such diverse interests. Recognizing and understanding the limitation created by this diversity can be a motivating element for experimenting with forms, concepts, ideas, and languages. Our actions are not fixed on just one model.

At the Science House, the diversity of topics dealt with and the methodologies chosen require constant updating with science, technology, communication, education, arts and culture. More than just teaching, the exhibits can awaken the visitor's sensitivity and involve him or her emotionally. Contextualizing aspects related to science and its role in society can contribute to the formulation of questions that go beyond that which visitors are seeing, thus allowing them to rethink and reinvent the world. Knowing about the past is important in order to understand the present and think about the future. It is possible to offer visitors experiences that place them within the historical and scientific process as active individuals and subjects that modify history. In this way, exhibits can become ample spaces of immersive, educational, dynamic and creative meanings. The transformation of scientific language is not simple; it depends on the common effort of scientists and professionals from the area. Even so, exhibits are limited spaces for those who seek answers to their questions. We broaden this context by offering complementary activities using diverse languages – film sessions, minisites on the Internet, workshops, plays, lectures, seminars, courses, music and publications, among others – that aide in going into greater depth on the topics.

In this way, we keep ourselves on the path of awakening, stimulating and incentivizing curiosity, in the belief that we thus contribute to the process of investigation, discovery and citizenship training of our visitors. A more participatory administration, the search for interdisciplinarity, the use of multiple languages and, mainly, experimenting in order to build and allow for a new encounter between science and society.

Mediation – an option for conversation

The work with mediators at the Science House has gone through many changes over the years. The exhibit that inaugurated the space came from a partner institution. The team of mediators, in addition to having been previously recruited, chosen and trained, had acquired knowledge from the period in which the exhibit was at a different location. Since then, the paths chosen have been modified, re-evaluated and transformed. The option of having undergraduate students from different degree areas brings different perspectives of the topic being dealt with. The learning of future mediators occurs in a multidisciplinary perspective, allows for the sharing of experiences, contributes to their personal, professional and academic growth, and reduces specialized and technical discourse. All of this allows for more flexibility in the assistance given to the public.

One of the most positive aspects of this work with students is their involvement with activities that bring them closer to a reality that is quite distant from that of the university setting. This makes it

possible to reflect on the professional performance that each one will have in the future. In addition to this, the vision of youth being one without fear brings transformational contributions. Many of the youth discover the popularization of science as a possible path for their academic and professional growth. On the other hand, scholarships allow most of them to support themselves at the university without building more lasting professional ties.

Educational training in Brazil does not allow us to be eternal apprentices in the most diverse environments and situations. School, friends, family, work, and literature all bring daily learnings about life. Science is a human interpretation about the world that surrounds us. It is years of research and formulation of theories. It is a universe of knowledge that does not fit into an exhibit environment that, in and of itself, is already limited. How can a student be capable of synthesizing so much information in so little time? How does one quickly understand visitors' interests and adapt the language so as to meet their expectations? In addition to this, how can one be an evoker and a stimulator, so that the public feels drawn in by the topic and wants to go in search of more information? The demands that fall upon the mediator, be them from the public or from the institution, are excessive and contradictory when we think about the importance that this activity has for the institutions, the time for training that is offered to students, the complexity of the topics that are often very distant from the students' fields of study, and the low values of the scholarships offered.

For the events of the Science House, we offer special hours for scheduling schools and groups. In this case, teachers and guides can decide on the best way of visiting in order to meet the group's interests. They generally choose guided visits and we are not always able to ensure that the mediator is more of an evoker than an explainer. Handicapped groups (visual, hearing, mental and motor-impaired), however, do not have specialized professionals in order for the visits to be explored in a more attractive and interesting way. In these cases, assistance has been given with the collaboration of the team accompanying the group. Because of this, reflection was begun so that, in addition to including appropriate languages (Braille, Libras, raised objects, captions, special equipment) that aid these visitors in a more qualitative way, we can open up a new professional field to handicapped students in museums and science centers by placing them in the groups of mediators.

In a space with the characteristics of the Science House, we have a situation that concerns us. The exhibits and activities change in very short periods of time. With these changes, the groups of mediators are alternated. Despite maintaining a dynamic of constantly renewing the topics dealt with, few mediators remain active and interested after months of working in exhibits. The process is very tiresome and we are not always able to offer efficient methods of work, reflection, participation and transformation of these students.

Even with all of these difficulties and changes, the mediator has been one of the public's main channels of communication with the exhibit, our team and the institution. Their presence can mean the possibility of dialog, conversations, chats and sharing. The space comes to life. It does not remain limited to the silence of the scenography, the equipment and the multimedia. The space becomes more human. Errors and positive aspects blossom, making the space more "intimate" and closer to that which is real. With the mediators, it is possible to share, clarify doubts, be stimulated or simply be guided to find new paths and discoveries.

Training of future professionals

The training of professionals in the area of the popularization of science in Brazil is in the process of being constructed. Daily life has been the main form of learning for the teams. New professionals and specialists have arisen in this process. Mediation professionals should be considered as one of the most relevant to have come about.

In the Science House, students are recruited from their original areas within UFRJ. They go through a selection process, which includes interviews, group dynamics and technical training consisting of aspects of scientific communication, education, communication, self-awareness and the topic of each exhibit. After several attempts at organizing groups, they are currently divided into four and they work on alternating days (Tuesday, Thursday and Sunday or Wednesday, Friday and Saturday), in two different shifts (8:30am to 2:30pm or 2:00pm to 8:00pm). In this way, possible difficulties with their academic activities are decreased.

Mediators need to be able to work in a team, be open to multiple learnings, be aware of their limitations with regard to scientific information, and develop the ability of communicating with diverse types of public. They must understand the need to adapt language based on the public's perspectives and interests. Knowing that this can be absolutely excessive, and in order to minimize this "confrontation" with the

public, we offer students a training program that includes the participation of professionals who work in the area and professors and researchers on the topics dealt with in the exhibit. In addition to this, an extensive bibliography on the topics dealt with is also provided.

The training program for mediators includes the following thematic areas:

Communication, education and science

- . History of Science Communication
- . Theories of Knowledge and Learning
- . Communication and Science
- . PCNs¹ – General Concepts and Relationship with the popularization of science
- . Formal, Non-formal and Informal Education
- . Art, Science and Culture
- . History of Science Centers and Museums
- . The Role of Science Centers and Museums
- . Institutional Associations: ABCMC, RED POP and others
- . UFRJ – Organization and Social Insertion
- . vScience House – Activities and its National Contextualization

“Plural” Publics

- . Through the perspective of street children and children without streets
- . Handicapped
- . Multiple interests and language adaptation

Personal Development

- . Oral Expression and Body Expression
- . The Challenge of Team Work
- . The Role of the Mediator
- . Group Dynamics

Technical Questions

- . Safety
- . Evaluation
- . Technical Reports

Technical Visits

Group visits to science centers and museums, history and art museums and cultural centers have provided the students with an exchange of information about institutional perspectives, in addition to contributing to the recognition of different methodologies in such differentiated environments in the area of culture and the popularization of science.

Topic Immersion

- . General Panoramic
- . Exhibit Contents
- . Complementary Activities
- . Technical Visit to the Exhibit
- . Mediation Planning

This programming, in spite of being extensive, is fundamental in placing the student within the area of popularizing science and facilitating public assistance. In addition to this, it has proven to be effective in the selection process, in which there are a number of students above the number that will be hired. Some of them give up in this period and during the exhibit.

The manner in which mediation will occur is decided with the team of selected students in the technical visit to the exhibit and after a great deal of conversation and discussion about the most adequate form. During the time of the exhibit, evaluation meetings with the team – including mediators – are fundamental in order to identify if there is the need or not to readjust the form that was chosen. At the end of each exhibit, the synthesis of these meetings and the reports that were drawn up by the students are elements used for an overall evaluation of the activities developed.

“Negotiating desires”; facing our limitations, mistakes and things we get right; rethinking ways and paths; changing whenever necessary; accompanying the stories, problems, difficulties, anxieties and emotions experienced in the daily life of the students, the visitors and the team are part of a collective process of

construction that is capable of transforming each of us. Perhaps this is the chemistry that has drawn ex-mediators to journey along the path of popularizing science and work as area coordinators in our space.

Reflecting on the performance of the mediators in spaces that propose to dialog with the visitor, proposing strategies that favor the training of personnel in the area and broadening the profile of those interested in working professionally in this context is indispensable. This is a concern in Brazil and abroad. The task is arduous, long and necessary. In the near future, may the option for mediation be a passionate choice and may it contribute to the creation of a new professional.

Translated by Robert Gartner

Notes and references

¹ NB: PCNs are the National Curricular Guidelines for Elementary and High School curricula, as established by the Ministry of Education.

Author

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