

Chapter 10

From *Mulungu* to *Mamulengo*: The Sharing of Knowledge Among Teachers, Academic Researchers, and *Mamulengueiros* (Traditional Puppeteers) in a Participatory Workshop



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Abstract Ethnoscience is ethically and politically committed to discussing the benefits of research carried out with local communities, including ways to share their results. One of the forms of sharing for such research is the participatory workshop. This chapter describes the authors' experience with such a workshop, from its conception to its evaluation. The workshop was held in Glória do Goitá, Pernambuco (Brazil), with the participation of 49 initial fundamental education teachers, 8 public administrators, 5 artists (traditional puppetry specialists), and 5 researchers. Data referring to the influence of the local artistic-cultural context (*mamulengo* art) on the connection between local and scientific knowledge in the classroom were shared. During the workshop, the artists explained the origins of *mamulengo* and its basic characteristics, while the researchers explained the morphological and physiological characteristics of the plant used to make the dolls used by the artists. Data obtained from interviews were presented in an accessible way. At the end of the activities, those present expressed thanks for the sharing of information from the research and for moments of dialogue about the local culture and its associated natural resource, as well as for the opportunity to strengthen ties between themselves and the university.

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10.1 Participatory Workshop as a Sharing Strategy: Ethical and Political Pact

The object of study of most researchers in the field of ethnosciences is local or traditional ecological knowledge. This knowledge comes from experiences lived through beliefs, perceptions, and traditions and from knowledge constructed and legitimized throughout history by human groups in relation to natural resources (Albuquerque and Alves 2014; Medeiros and Albuquerque 2012). Therefore, to access their objects of study, ethnoscientists must, directly or indirectly, be in contact with the holders of this knowledge – people.

This meeting between academic researchers and their local field collaborators or participants may be seen also as a meeting between different cultures and expectations, between the *emic* and the *etic* dimensions of the phenomena being studied. This asymmetry within in the nature of the investigative process, as treated by Kloppenburg Jr. (1991), has allowed some experiences to be guided by the misconduct of researchers while working with local communities over the years.

To avoid possible harm as a result of this interaction, research procedures must comply with legal guidelines contained in national and international guiding documents and be submitted to an analysis of their ethical principles in accordance with what is established in each country and in light of codes of ethics and international agreements.

Reflection on legal aspects in ethnobiological and ethnoecological research covers different issues about the protection of intellectual property rights related to traditional knowledge associated with biodiversity, including the sharing of possible benefits generated from research such as by sharing or the so-called “return” activities with communities (Posey 1990; Albuquerque et al. 2010; Soldati and Albuquerque 2016).

Ethnobiological and ethnoecological research must, therefore, follow these national and international ethical and legal principles aimed at respecting people who have knowledge in relation to biodiversity (Soldati and Albuquerque 2016; Zank et al. 2019).

Among the ethical and legal frameworks generated from discussions about good research practices and mechanisms for protecting communities’ intellectual property rights, the International Society of Ethnobiology Code of Ethics (2006) plays a central role in the search of ethical commitment. The code establishes 17 principles that guide the conduct of researchers when carrying out their research with indigenous, traditional, and local communities.

The principles of “active participation,” “full disclosure,” and “reciprocity, mutual benefit, and equitable sharing” address, among other aspects, the prior analysis of results before dissemination through the communities, the dissemination and application of results in an adapted manner for these populations, and the enjoyment of those involved in any possible benefits arising from the investigation, respectively (International Society of Ethnobiology 2006).

In addition to the need to comply with these legal obligations regarding the ethical aspects of research, ethnobiologists and ethnoecologists also establish a “pact” to share the results with the studied communities, and this can be done by means of sharing or return actions (Albuquerque et al. 2014). It is important for every researcher to understand the sharing of benefits arising from research as not only as a legal obligation, but as an ethical and moral presupposition (Albuquerque et al. 2010).

Sharing activities are understood as ethical and political activities constructed and thought out in a dialectical way between research participants who seek to contribute to local development, considering the problems and difficulties of the community and of collective interest (Albuquerque et al. 2014).

Participatory workshops can serve as sharing activities for the researched communities (Albuquerque et al. 2014), as well as a technique for collecting data from ethnobiological surveys that use participatory methods (Sieber and Albuquerque 2010).

Participatory workshops can be considered as a way of sharing benefits in a non-monetary way. In this way of sharing, it is possible to promote the training of local populations regarding the sustainable use of resources, the exchange of training teams, technology transfer, and increased local scientific capacity with the participation of local experts (Elisabetsky 2003 cited by Albuquerque et al. 2010).

Considering participatory workshops as a means of structuring the experience of the present authors during the performance of a sharing activity, this chapter will describe the experience from its conception and planning to its execution and evaluation of the achieved results.

The experience in question is the result of activities carried out by our research group in a small town in the countryside of Northeast Brazil. There is a unique cultural context in the place, with the main object of its artistic expression being made from a local plant resource.

The activity involved university researchers (the authors included), initial fundamental education (years 1–5) teachers, artists (local puppetry specialists), and public administrators.

First, a summary of the performed ethnobiological research will be presented, as well as a characterization of the place and its biocultural context. Some of the main findings of the research will also be presented, aiming to scale the importance of sharing these results for each social actor involved. Then, the step-by-step stages of elaboration and execution of the workshop will be presented, with impressions and observations of this experience.

This chapter aims to assist researchers in the construction and execution of a participatory workshop-type sharing activity, as well as demonstrate its relevance as

a technique for sharing and reviewing collected information – the opportunity for connection between social actors and dissemination and enhancement of traditional or local knowledge.

10.2 From *Mulungu* to *Mamulengo*: Knowing the Artistic-Cultural Context of the Research Site

The ethnobiological research that generated the results shared in the workshop was part of the doctoral thesis of author Maria Carolina Sotero, under the supervision of Dr. Maria Medeiros and Dr. Ângelo Alves.

This thesis aimed to analyze the articulations between local and scientific knowledge in the school environment, in the teaching↔learning process, as well as the influence of a specific artistic-cultural context on these articulations as reflected in the daily practice of local teachers.

For the development of this research, it was necessary to find a place that offered basic education to its population, in a broad way and under the influence of a striking artistic-cultural context. These characteristics were found in the municipality of Glória do Goitá, state of Pernambuco, Brazil.

Glória do Goitá encompasses an area of 231,831 km², 58.8 km from the state capital (Agência Estadual de Planejamento e Pesquisa de Pernambuco 2014). Founded in 1878, Glória do Goitá has typical characteristics of a “município” in the Brazilian interior, with a small population, estimated at 30,504 inhabitants in 2018, and an economy mainly focused on agriculture (IBGE 2019).

The rural area of the municipality makes up most of its territory, comprising of several communities, each with its own peculiarities. These areas surround the tiny city center, which is made up of public administration buildings, small shops, an open market, old houses that still preserve traces of colonial architecture, and new, simpler housing on the outskirts.

Right in the heart of the city center, there is a beautiful, ancient, and imposing building by local standards. It is the former flour market, now transformed into a museum dedicated to the main artistic-cultural activity in the city: the Museu do Mamulengo (Mamulengo Museum) (Fig. 10.1a).

But after all, what is *mamulengo*?

Mamulengo is the name given to a type of popular dramatic representation, which also gives its name to the wooden puppets used to represent it (Borba-Filho 1966) (Fig. 10.1b).

An artist who performs this dramatization, and who also makes the puppets, is called a *mamulengueiro*. To present their show, a *mamulengueiro* sets up a tent outdoors or in a room inside and manipulates their puppets to represent stories, mostly improvised, representing local people and institutions in a rather sarcastic tone, using music and dance (Borba-Filho 1966) (Fig. 10.1c).



Fig. 10.1 (a) Museu do Mamulengo and headquarters of the Associação Cultural dos Mamulengueiros e Artesãos de Glória do Goitá, Pernambuco, Brazil. (b) *Mamulengo* dolls made of *mulungu* wood (*Erythrina velutina* Willd.) with their extravagant ornaments. (c) *Mamulengueiro*, inside the museum, exhibiting his puppets and *mulungu* wood in the background for producing new pieces. (d) A member of the local mamulengueiros' association carving *mulungu* wood to produce puppets

The Mamulengo Museum of Glória do Goitá is administered by a nongovernmental organization called Associação Cultural dos Mamulengueiros e Artesãos de Glória do Goitá (Cultural Association of the Mamulengueiros and Craftspeople of Glória do Goitá). The Association was founded in 2003. Its main objective is to foster the *mamulengo* culture, through the training of young and adult people in the art of making and handling puppets. It also organizes puppetry performances and encourages local puppeteers to participate in fairs and cultural exhibitions promoted by other organizations (Associação Cultural dos Mamulengueiros e Artesãos de Glória do Goitá 2003).

There, the artists sculpt, exhibit, and sell their pieces, receive visitors, and offer *mamulengo* workshops for the general public.

In addition to the peculiarity of the fact that *mamulengo* portrays local reality, this artistic-cultural expression also interacts with the socioecological system of the place through the use and manipulation of a specific natural resource for making the puppets.

Mamulengo puppets are made from the wood of a typical tree species of the region, *Erythrina velutina* Willd., locally called *mulungu*, and are dressed in calico clothes and extravagant accessories (Santana and Lucena-Filho 2012) (Fig. 10.1d).

Mulungu (*E. velutina*) belongs to the family Fabaceae. The etymology of the Latin name alludes to the color and texture of its flowers, with the term “erythrina” (from the Greek, *erythros*) meaning “red” and “velutina” (from Latin) referring to velvet (Carvalho 2008).

The species has an arboreal habit and deciduous behavior and is endowed with thorns. It can reach up to 15 m in height and 80 cm diameter at breast height (DBH) when mature (Fig. 10.2a). It has porous, soft wood with low natural durability (Figure 10.2b, c). Its flowers are hermaphroditic and visited by European or Africanized bees (*Apis mellifera*) and by carpenter bees (*Xylocopa* spp.), with anemochoric and zoochoric pollination, mainly by birds (Carvalho 2008).

The leaves of *mulungu* are trifoliate, with alternate phyllotaxis. The inflorescences measure 12–20 cm in length, the flowers vary from orange to red, and the fruits are legume-like, containing one to three seeds, which are dark red and red-orange in color (Fig. 10.2d) (Carvalho 2008).

Erythrina velutina occurs naturally in the Northeast (states of Alagoas, Bahia, Ceará, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe) and Southeast (state of Minas Gerais) regions of Brazil (Martins 2021). It is a pioneer, occurring preferably in secondary formations, with very irregular and discontinuous distribution (Carvalho 2008).

Mulungu is not listed as a species in danger of extinction (Martinelli and Moraes 2013). Species of the genus *Erythrina* are used in folk medicine for tranquilizing, sedation, insomnia control, and inflammation treatment (Silva et al. 2013) (Fig. 10.2b, c).

10.3 Teachers, Managers, and *Mamulengueiros*: Getting to Know the Social Actors Involved in the Workshop

The first local people with whom the authors had contact in the field were the artists at the Mamulengo Museum. Unstructured interviews with these puppeteers made it possible to understand the scenario and the importance of the local culture of *mamulengo* in that municipality, as well as its influence on the life of the population.

Understanding the biocultural context from the cosmovisions of *mamulengueiros* was essential to assist the authors in structuring the ethnobiological research.

Mamulengueiros were the local experts, as they knew the main natural resource (*mulungu*) and its management well. They had been experiencing the art of

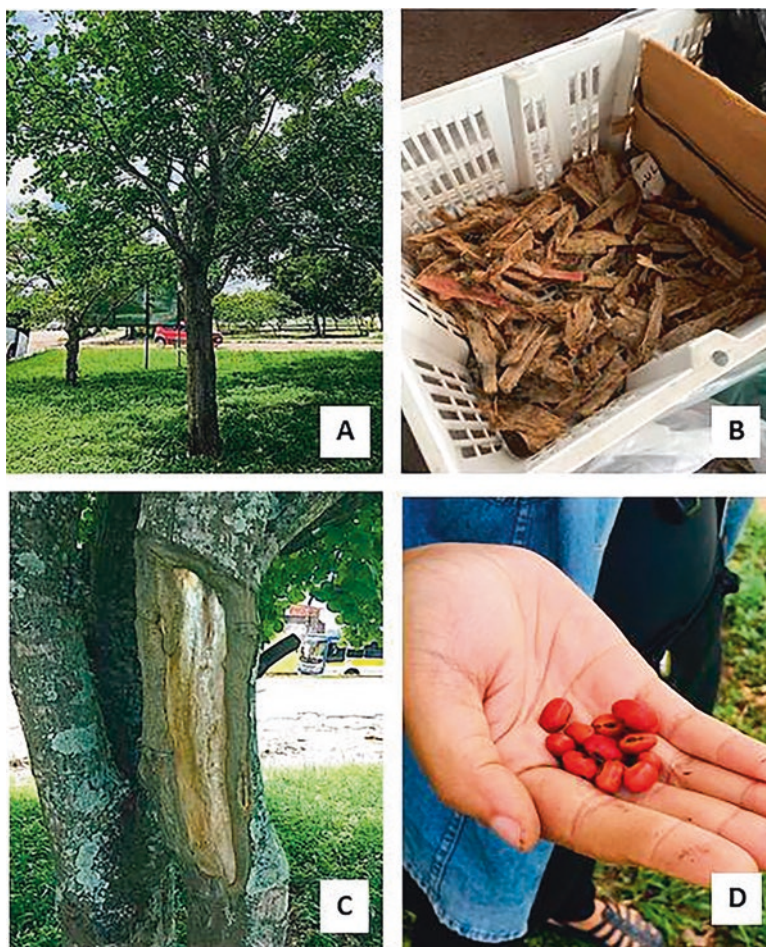


Fig. 10.2 (a) A *mulungu* tree (*Erythrina velutina* Willd.); (b) *mulungu* bark sold at the municipal market in Glória do Goitá; (c) trunk of *mulungu* with evidence of cutting for the use of bark; (d) *mulungu* seeds

mamulengo on a daily basis through generations, thus embodying its history and relationship with the people of Glória do Goitá in present time.

After knowing the artistic-cultural context in a macro way, through the eyes of the *mamulengueiros*, it was necessary to understand its influence (if any) on education in the municipality. Thus, contacts were established with municipal managers: coordinators and technicians from the local Secretariat of Education.

During these contacts, it was possible to understand the structure of education in the municipality and present the research objectives and its potential to contribute to municipal education, as well as discuss strategies for fieldwork.

Finally, contact was made with the teachers of the city, people who were in fact the focus of data collection, as the authors of this research sought to understand the influence of the artistic-cultural context on the practice of these professionals.

All 28 public schools administered by the municipality that were offering the initial fundamental education level (years 1–5), aimed at children between 6 and 12 years of age, were visited. These schools were in both urban and rural areas.

Teachers were invited to participate in a semi-structured interview, with audio and photographic recording, when authorized. Almost all teachers at this level of education in the city were interviewed (97.5%, $n = 79$), with only two being left out of the sample.

The interview script contained questions about the socioeconomic profile of the teachers, their knowledge about the artistic-cultural context of *mamulengo*, and the use of the theme in their classes.

To fulfill the research objectives, it was necessary to investigate whether knowledge and use of the theme of *mamulengo* in classes influenced the teachers in the way they welcomed, used, or addressed local knowledge in general (about plants, folk medicine, animals, myths, rituals, etc.).

To understand the relationship of teachers with local knowledge in general, a question involving a hypothetical situation was employed. In this way, teachers were asked what attitude they would have if, during a class, a student expressed local knowledge associated with flora.

10.4 What Knowledge Did We Want to Share?

After systematization, data analysis, and discussion involving the specialized literature, we had relevant results to be shared with the people participating in the research, presented briefly below.

For the teachers, it was essential to have a dialogue with them about the possible influence of the artistic-cultural context on their actions aimed at the connection between knowledges.

We found that the socioeconomic profile of the teachers and the artistic-cultural context of *mamulengo* seemed, in fact, to influence the knowledge and application of this context in the classroom, as well as the actions of the teachers regarding local knowledge in general.

In general, the teachers who most knew and applied knowledge about *mamulengo* were those who most positively reacted to the hypothetical question we asked them, indicating the possibility of carrying out actions to connect local and scientific knowledge. These teachers stated that they would value the student's speech, complement it with more information, and make connections with the scientific content they were addressing.

For the *mamulengueiros*, it was important to inform them that their actions to disseminate and maintain this cultural heritage could reach schools, teachers, and students. And there was an indication that the knowledge of, and interaction with,

the artistic-cultural context they disseminated seemed to make teachers more likely to connect local and scientific knowledge, thus contributing to the teaching-learning process.

For the municipal managers, it was interesting to inform them about the influence of socioeconomic factors (age, level of education, length of service) and labor (classroom and school structure) on the possibility of teachers to know and apply information on the context of *mamulengo* in the classroom, consequently also establishing connections between local and scientific knowledge.

The results showed that the teachers who most knew and used the topic of *mamulengo* in their classes, and consequently who made more connections between knowledges, were those who had a higher degree in formal education, with greater length of service, and who worked in more structured schools.

Based on this information, the Secretariat of Education of the municipality could devise strategies aimed at reducing the disparity in characteristics among groups of teachers, such as updating and training programs, teacher development, and improving the physical structure of schools.

Finally, we also wanted to show municipal managers the relevance of the artistic-cultural context to education in the municipality, encouraging them to adopt public policies that allow the continuity of local puppetry artists' activities in the municipality and specifically in actions with education.

10.5 Sharing Workshop: Exchanging Knowledge and Cosmovisions

The sharing workshop had already been planned as a sharing or return-to-community activity since the construction of the research project. In addition to the ethical and political commitment, previous research experiences by our research group showed that this activity should be carried out.

The planning of the workshop took place prior to the interviews with teachers in the municipality, in meetings between the first author Maria Carolina Sotero, her advisors Dr. Maria Medeiros and Dr. Ângelo Alves, and other members of the Ethnoecology Study Group (GEE) of the Federal Rural University of Pernambuco (UFRPE). On these occasions, possible dates, format, event schedule and logistics, and organization were discussed.

The dates and location were eventually determined in agreement with the local Secretariat of Education, and, following the principle of mutual benefit, the workshop became part of the official teacher training calendar, with dates already pre-established by the municipal administration.

To facilitate the mobilization of teachers to participate in the workshop, an invitation was made at the end of each data collection interview. This strategy made it unnecessary to return to schools, which were often quite distant, and gave personalization to the invitation.

Shortly prior to the workshop, the teachers received a virtual invitation via message using the *WhatsApp* application. As the workshop was a partnership with the Secretariat of Education, teachers were also encouraged to participate through an invitation from the municipality itself.

According to Patzloff and Peixoto (2009), it is difficult to establish a priori what form of sharing or return is suitable for each community. However, since most of the participants in the study were teachers, who are already used to the participative workshop format, we believed that this form of sharing strategy would be the most appropriate to put forward.

A total of 67 participants were present in the participatory workshop, 49 of whom were teachers from the municipality (21 urban and 28 rural), 7 technicians and the secretary of the Secretariat of Education, 5 artists from the Mamulengo Museum, and 5 researchers from GEE-UFRPE.

Of all the teachers previously interviewed ($n = 79$), 62% attended the workshop. Considering the limited time available for face-to-face interaction with the teachers (only during the interview) and the absence that sometimes occur in teacher education programs, we considered the workshop to have had good adherence.

Difficulty in mobilization and participation in a workshop-type sharing activity was reported by Marques et al. (2010). According to this author, the low workshop participation by inhabitants of the studied riverside community was due to a possible lack of identification of informants with the research objectives or with the chosen form of return. We believe that these factors did not have a significant impact on participation in our study.

The fact that the main participants were teachers brought an advantage to the objective of disseminating and applying the research results. Teachers are sharers by definition, which makes it possible for the sharing action to become efficient in reaching a greater number of people, with rapid dissemination of information (Albuquerque et al. 2014). In this way, the knowledge shared with them during the workshop has the potential to be passed on to their peers and their students (not only for the current academic year, but throughout their entire professional life).

The workshop took place in the building of the Secretariat of Education of Glória do Goitá, on September 4, 2019 (with urban teachers), and on November 11, 2019 (with rural teachers).

Upon arriving at the workshop, the participants were welcomed by the GEE-UFRPE team and invited to sign the attendance list, after which they received an event t-shirt. A breakfast was also offered to better welcome and thank the participation of those present.

Author Maria Carolina Sotero opened the workshop by thanking everyone for attending and presenting the workshop schedule. The person who was in charge of the Secretariat of Education, Maria de Fátima Santana, also thanked the municipality's teachers for joining the activity and the partnership with the Mamulengo Museum and UFRPE.

The artists of the Mamulengo Museum were invited to explain the art of the *mamulengo* to the audience. The artists' speech encompassed the origin of *mamulengo* culture in the region, its historical master artists, its basic characteristics, the

way in which the puppets were made, the history of the local Association of Mamulengueiros, and the challenges they face in maintaining their activities (Fig. 10.3).

Mamulengueiros also had the opportunity to present participants with a sample of a *mamulengo* show. The artists set up a tent and, cradling musical instruments, improvised a short performance of some typical characters that they normally use to present (Fig. 10.4).

These moments in the workshop were opportunities to bring the *mamulengueiros*, teachers, academic researchers, and public administration closer together.

The artists were able to demystify some prejudices of the teachers in relation to the art of *mamulengo*, arising from the fact that the presentations were originally aimed only at an adult audience and always included scenes of murders, profanity, insults, and texts with sexual, sexist, and racist insinuations. Some local teachers who had experienced *mamulengo* performances in the past recognized that they previously associated that kind of traditional show with slang and scenes inappropriate for children.



Fig. 10.3 Explanations by members of the Association of Mamulengueiros during the workshop “From *mulungu* to *mamulengo*: the teacher’s role in connecting knowledges” in Glória do Goitá, Pernambuco



Fig. 10.4 Presentation by *mamulengueiros* during one of the workshop sessions of “From *mulungu* to *mamulengo*: the teacher’s role in connecting knowledges” in Glória do Goitá, Pernambuco

The *mamulengueiros* explained that there are different moments in the presentation of the original *mamulengo*, with parts aimed at children and families and others at a more adult audience. The artists also informed that, currently, they are making adaptations, with the aim of bringing *mamulengo* closer to more people by changing scenes, texts, gestures, and language according to the target audience.

During the workshop, the *mamulengueiros* also took the opportunity to publicize the cultural projects developed by the Association of Mamulengueiros at the Mamulengo Museum and invited the teachers to experience these activities there together with their students.

After everyone got involved in the theme of the artistic-cultural context of *mamulengo*, it was time to present participants with information about the natural resource used in making the puppets – *mulungu* (*E. velutina*) wood.

The presentation about *mulungu* was under the responsibility of Sofia Moura, a biological sciences undergraduate student. For the scientific content to be understood by all participants, the student prepared the presentation in a more accessible language, striving for the care that a researcher must take regarding the proper adaptation of the content and methodology used in the research, taking into account the previous formal education experience, way of life, customs, and beliefs of the participants (Albuquerque et al. 2014). Respecting the needs of this adaptation, information was presented regarding the geographic distribution, morphological and physiological characteristics, and forms of use found in the scientific literature about the plant.

On these occasions during the workshop, the participants were very curious about the information presented, and it was exciting for us to experience the involvement and exchange of knowledge about the resource between academic researchers and local teachers, managers, and *mamulengueiros*.

Finally, author Maria Carolina Sotero presented, also with the scientific language adapted for everyone to understand, the preliminary results of her doctoral research in which the participants were involved.

First, information from the literature on the importance of connecting local and scientific knowledge in the teaching-learning process was presented. Then, our hypothesis about the influence of the artistic-cultural context (in this case the *mamulengo*) on the teachers' attitudes toward local knowledge was presented (Fig. 10.5).

The results of the research and the specific contributions for each type of participant (*mamulengueiros*, managers, academic researchers, and local teachers) were then discussed. Participants were able to observe the importance and influence of each one of them in the maintenance of the artistic-cultural context of *mamulengo* and, consequently, in the reception of related local knowledge in the classroom. Valuing the knowledge of field participants is an important element for a community's acceptance and recognition of academic researchers' own knowledge, as well as encouraging self-recognition of local participants as experts on a given topic by their peers and by the community itself (Patzlaff and Peixoto 2009; McAlvey et al. 2021).

At the end of the presentations, representatives of teachers, managers, academic researchers, and *mamulengueiros* expressed thanks for the opportunity of participating in the workshop and for sharing the results generated by the scientific research. We believe that this mutual gratitude among the parties involved in the research is the result of the authors' and other participants' commitment since the beginning of their involvement in the research project. These should be discussed in depth to shed light on the rights and duties of each person or institution involved in the investigation (Lin 2006). Even though this ethical awareness is widespread, Quinteiro et al. (2013) found that a specific strategy devised to the sharing of research results was not present in most works in the field of ethnobotany analyzed by them. According to these authors, the research, in general, brought proposals and suggestions for sharing or return activities, but they did not actually present the respective results, characteristics, applicability, and difficulties.



Fig. 10.5 Presentation of thesis results by the first author during one of the workshop “From *mulungu* to *mamulengo*: the teacher’s role in connecting knowledges” in Glória do Goitá, Pernambuco

The teachers specifically gave thanks for the opportunity to get closer to *mamulengo* culture and the artists of the Mamulengo Museum and for the explanations about *mulungu* (*E. velutina*) and the importance of local knowledge in the teaching-learning process.

The *mamulengueiros* gave thanks for the opportunity to publicize their activities and for the authors’ interest in studying the cultural context in the municipality, as well as for the information presented that demonstrated the importance of preserving and publicizing their art.

The managers of the Secretariat of Education gave thanks for the partnership with UFRPE and for the sharing of results that had the potential to assist in intervention actions to improve the quality of the education offered.

The satisfaction of those present for knowing and discussing the research results and, even more, our satisfaction in sharing them were notable.

10.6 Final Considerations

In this chapter, we intended to publicize our experience in designing, organizing, and carrying out an activity for sharing research results in the form of a participatory workshop. In our view, sharing or return activities do not necessarily need to be large, resource-intensive events. Academic researchers can, during the execution of their activities, enable several small “returns” to researched communities, such as for the preparation of folders and booklets (Medeiros and Andreato 2003; Giraldi and Hanazaki 2010), distribution of plant seedlings (Sátiro et al. 2019), construction of a garden of medicinal plants, collaborations in courses and lectures, construction of maps and English classes, and so on, as reported in the studies analyzed by Patzlaff and Peixoto (2009).

However, we believe that channeling energy and resources for such activities since the very beginning of the construction of the research project, is important to prioritize their realization.

We must remember that when we are “immersed” in our fields of research, data-sheets, or readings, facing deadlines for articles, dissertations, and theses, we are prone to fail to fulfill some planned actions. At this point, the performance of sharing or return activities is threatened. It is always necessary to keep in mind the ethical and political commitment we have to the people who were involved in our research, prioritizing the carrying out of return activities that match the contribution of the participants to the research and to the scientific field as a whole.

Participatory workshops, in addition to performing their role as a sharing strategy, can provide new data for the researchers or for other, smaller research projects in their group. Workshops can also be instruments for training younger scientists, who can make presentations with the adaptation of scientific language or the reception of the participants. They also provide an opportunity to yet adjust some information from scientific research that may be incongruous.

During workshops, academic researchers have the opportunity to strengthen ties with the local community, opening doors for other activities, such as courses, field classes, new research, and partnerships for publications.

Participatory workshops are quick ways to transmit information to researched groups that can change the way participants interact with natural resources. Imagine that a researcher has the result that a certain plant species is more effective than another or that the form of management adopted by a local community is supposedly putting a certain species at risk. In this way, sharing results can lead to a strongly participative debate, and the connections between publishing, disseminating information, and generating local solutions can be strengthened.

We should stress that the academic researcher’s role in a participatory workshop, with the function of sharing research results, is not that of a “behavior judge” that

stares at a local community. The workshop must be a dialogic moment and not verticalized. In no way can it be directed toward a simplistic debate of the university vs. community or scientific knowledge vs. local knowledge.

Freire (1996) states that teaching requires availability for dialogue, with respect to the differences between educators and students. According to the author, teachers need to be confident about the issues they propose to discuss, avoiding the false assumption that they know everything or that they are superior, but with the conviction that they know something and that they ignore something, that everyone should be prone to continuous learning. We believe that this should also be the researcher's attitude toward workshop participants.

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