The University Cheikh Anta Diop of Dakar (UCAD) Science Shop "Xam-Xamu Niep Ngir Niep" (Knowledge of All for All)

Dieyi DIOUF[1]

School of Librarians, Archivists and Documentalists (EBAD),
University Cheikh Anta Diop of Dakar (UCAD)

Abstract. Traditionally, universities in the North as well as in the Global South concentrated their activities on two main missions: Teaching and Research. A "third mission" of universities called "service to the community", defined as its social responsibility to contribute to development, is now promoted to researchers [1] [2] [3]. Several studies have shown that scientific and local knowledge play an important role in the process of sustainable development by creating an operational interface between researchers, students and non-profit organizations [4] [5] [6]. In order to fully accomplish this mission for the benefit of local communities, researchers are getting involved in Science shops, which were established in the Netherlands in the 1970's. Glen Millot [15] speaks of "third sectors" in reference to the role Science Shop plays. Indeed, Science shops are dynamic mediators of cooperation between communities, NGOs, citizens and researchers. Science Shos teams receive demands from civil society or organizations and helps translate them into research programs or scientific issues that students and researchers treat and make the results available to communities. This presentation will firstly focus on a definition of some useful concepts. Then, the second part will deal with the origin of Science Shops and their evolution before analyzing the process of setting up the UCAD Science Shop "Xam-xamu niep ngir niep" (Knowledge of all for all).

Keywords. Science shop, openess of research, participatory research, social responsibility, civil society, local knowledge, UCAD

1. Introduction

A Science Shop is a permanent device, usually integrated into the structure of a university. It allows the university to get closer to the people, working together with the civil society organizations, scientists and students. Science shops and institutional repositories are the preferred tools of Open Science as they allow collaboration, sustained exchanges between civil society and academics, but also a better sharing of knowledge [7].

Traditionally, universities had two very specific missions: teaching and research. But, Researchers in Information and Communication Sciences evoke now a "third mission" of universities called "Service to the community", which can be defined as a university's social responsibility to contribute to Development [8].

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[1] Corresponding Author, E-mail: dieyi.diouf@ucad.edu.sn/dieyidiouf@yahoo.fr

This third mission is part of the process of building a knowledge society in which knowledge flows freely in the service of the common good [9] [10] [11] [12].

To ensure the "scientificity" of knowledge at university, the dominant normative framework of conventional science requires researchers to refrain from interference by non-scientists in the definition and development of research programs and projects. The university is supposed to deal with local development issues such as the lack of hygiene, corruption, misappropriation of public funds, politicization of the administration which undermines access to public services [13]. In fact, African universities usually ignore peasant or civil society organizations that are at the heart of the debate on local development.

Indeed, opening up research to civil society can make a significant contribution to sustainable development by creating an operational interface between researchers, students and non-profit organizations [4] [5] [6]. To illustrate these ideas in their study of 21 science shops, Leydesdorf & Ward [11] showed that cooperation within these shops can promotes inclusive development.

On the other hand, the dialogue between universities in the South and the North could also have the positive effect of reviving reflection on modes of knowledge [14].

In this presentation, defining some concepts seems useful first of all. Then, we will give a brief overview of the origin of science shops and their evolution before analyzing the process of setting up the UCAD Science Shop.

2. Definition of Concepts

2.1. Xam-Xamu Niep Ngir Niep

The UCAD Science Shop is named *"Xam-xamu niep,"* which literally means "knowledge of all". It is then associated with the expression *"ngir niep"* which means *" for all",* which we call the spirit of association and sharing. In the Wolof language, *Xam-xamu niep ngir niep* translates to the linking between the university and society, and the UCAD Science Shop proposes to formalize and perpetuate these relationships which the university must maintain with society.

2.2. Open Science

In the context of SOHA project, Open Science is defined as a science in the service of local populations of a territory. It is a science that takes into account all types of knowledge to serve society as a whole without discrimination. In other words, instead of ignoring or marginalizing non-scientific knowledge (traditional, local, political, daily, etc.), Open Science is a science that opens up to them. According to this definition, Open science can be considered as a common good which belongs to humanity [7].

2.3. Science Shops

Science Shops are structures that offer citizen groups inexpensive access to scientific and technological knowledge and research so that they can improve their social and environmental conditions. The main types of projects carried out by the Science Shops

are bibliographic studies, scientific research, technological developments or adaptations of existing technologies to meet specific needs [15].

2.4. Scientific Third Sector

The Scientific Third Sector is a term that covers a wide variety of actors and processes related to a participatory approach to research. Some forms of organization of these actors around concrete projects have developed and have acquired institutional recognition, at least on a European or international scale. The Science Shops are an example of success at the European level but unfortunately, after a first ephemeral experience in the 1980s, it was difficult to re-emerge in France [15] and elsewhere.

3. History of Science Shops

Created in the 1970's in the Netherlands by students wishing to help a group of citizens worried about the quality of the water of a lake on which they were bordering, Science Shops have spread to more than a hundred locations around the world, but mostly in Europe [9] [10] [11] [12].

Since the early 2000s, this openness to society has been defined as a major element of the social responsibility of universities [1] [2] [3]. As a form of Responsible Research Innovation (RRI), the Science Shop entails engaging all actors (from individual researchers and innovators to institutions and governments) through inclusive, participatory methodologies in all stages of R&I processes and in all levels of R&I governance (from agenda setting, to design, implementation, and evaluation). Science Shops thus emerged to provide access to knowledge or respond to the research needs of organizations that do not have the means to carry out such research, and are also lacking the connection with the world of research considered too focused on academic and technological innovation [9] [10] [11] [12].

With the exception of South Africa, the continent of Africa was largely left out of Science Shop development until November 2016. Conscious of the importance of these tools and considering their high absence in the continent, nine Science Shops were created in conjunction with the SOHA projects in December 2016 (one in Haiti and eight in sub-Saharan francophone Africa: Benin, Burkina Faso, Cameroon, Guinea, Mali, Niger, DRC, Senegal).

Currently, 3 Sciences Shops are set up in Benin (Alowotodji), Haiti (SPOT) and Senegal (Xam-Xamu niep ngir niep). This was one of the goals of the SOHA project, to convey the message that social responsibility of African universities is crucially needed to connect them to local populations for a local development agenda constructed by citizens.

Below are examples of various calls we made to Senegalese academics and civil society in the Saly workshop on March 6th 2017 to begin the UCAD Science Shop outreach activity of awareness raising:

You are looking for an internship associating your training with a societal problem, the UCAD Science Shop offers you the opportunity to complete your courses by a field research, concrete and useful to society. This practice will be the opportunity to put your knowledge to the benefit of a structure. (See adhesions on the Science shop Web site) online: http://nianitambabn.com/wordpress/

Are you a part of an association, a foundation, an NGO or any other structure involved in the themes Health, Environment or Social Economy? The UCAD Science Shop accompanies you by connecting you with teachers, researchers and students.

4. Context and Justification

4.1. Brief History of UCAD

The University of Dakar was founded on the 14th of February, 1957 and inaugurated in the December of 1959. The University of Dakar is the oldest and most important structure of higher education currently in Senegal. Since the 30th of March 1987, it was baptize Cheikh Anta Diop University of Dakar, following the death of the great historian bearing the same name. Apart from the central administrative departments of the President's Office, it involves thirty higher-level research institutions, comprising six faculties, six higher education institutes, nineteen university institutes, and one Inter-State school of Science and Veterinary Medicine, which is scientifically dependent on the University.

4.2. UCAD Vision

UCAD's vision is to be a successful university serving the economic, social and cultural development of Senegal and Africa, while remaining rooted in the value systems that underpin the Senegalese Nation. It proclaims its openness to solidarity and complementarity with the rest of the world.

4.3. UCAD Missions

In order to highlight its values in the form of objectives, UCAD has set itself the following fundamental missions (some of them related to the science shop):

- To train highly skilled, scientifically and technically skilled personnel, tailored to the African context and the contemporary world, aware of their responsibilities to their peoples and capable of serving them with dedication;
- Develop research in all disciplines of science, technology and culture;
- Mobilize all intellectual resources for the economic and cultural development of Senegal and Africa and participate in the solution of national and continental problems;
- To acquire the most advanced knowledge and methods of investigation in all disciplines of science, technology and culture and to involve them in the development of knowledge and the creation of new methods of investigation, adapting to national and more generally African realities and requirements;
- Working with practitioners to promote traditional knowledge, the circulation of knowledge and information, and the coordination of initiatives to contribute to scientific progress and labor productivity;
- To develop, criticize and disseminate new knowledge, to constitute a place of interaction and cooperation between the world of work and economic, technical, administrative and scientific decision-making centers;

- Study and develop the paths of an endogenous and self-centered development strategy, including participation in the design, implementation and evaluation of national, subregional and regional development plans, etc.

This internationally renowned university has very important students (100,000 students), about 1,500 teachers-Researchers and 1,300 administrative and technical personals [16].

These statistics show a plethora of students with a low degree of training. We have noted an important pedagogical reform resulting from the National Consultation on Teaching with two big changes: the introduction of the LMD[2] reform in 2003 and the reform of Doctoral studies in 2005.

All these researchers produce many research results annually that are ignored by civil society but surely could help to develop one aspect of their needs. For these reasons, we think that Science Shop could play a bridging role between the university and the communities.

5. Motivation for the Creation of a Science Shop in UCAD

5.1. Poor Community Access to University Expertise

At UCAD, with the exception of some doctors who are working with medicinal plants, there is not enough dialog and collaboration between the local population and researchers who remain in laboratories and base their teaching on European realities. Then members of civil society, generally illiterate, are not implicated in scientific activities. This is reflected on the science shop logo: Academics are on the tree (using scientific knowledge) and the civil society, population in general is under the high tree representing the gap between them and academics (they are looking at them and they seem very far from the civil society who is dreaming to reach them one day and ask for help to put an end to the numerous problems they are facing on a daily basis).

5.2. Low Awareness of Local Knowledge in Teaching

As every faculty works alone in his laboratory, each one ignores what the other does. Teachers do not pay enough attention to local knowledge in their teaching programs. So the lack of platforms for coordination and sharing is a handicap. The civil societies are also not interested by what is being done in universities and so they ignore each other and think that no one can do something meaningful for the others.

5.3. Scientific Partition of Academics

There is not enough openness of academics to the civil society. So, they don't include other forms of knowledge in their teachings and always use the French language, French realities and practices. They know what the populations need because they come from and belong to the society, but their needs are not the priority. And the population also thinks that it is not possible to communicate their needs to academics. Another aspect that happens very often is that, the population would not divulgate

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[2] LMD refers to licence-maitrise-doctorat (bachelor-masters-doctorate)

some local knowledge. They keep it jealously and die without communicating even with the family. There are many considerations that prevent them from sharing indigenous knowledge and these are still not well understood.

5.4. Low Policy Priority of Administration

The slow advancement and difficulties we are facing in this Science Shop project is a good illustration of the low policy priority of the university administration. As a result, researcher are managing projects themselves or looking for partners outside the university without any support. However, if we succeed in a project, everyone begins to be interested and wants to be associated.

5.5. Low Capacity of Actors

At UCAD, some teacher-researchers are still very distant from ICTs. A few of them avoid publishing online, using social networks, or sharing their publications online. For these reasons, we are organize an Open Access day each year. We managed to give them USBs, pins, tee-shirts marked with"Open Access", etc. So, while they have a very low capacity in new methods and practices, the situation is improving because many texts promoting open access are supported by CAMES, the National Assembly of Universities themselves.

Based on the obstacles above, we believe that it is necessary and even essential to interconnect and to bring the Senegalese academic world (who has competence in research and innovation) and other societal actors who need concrete solutions or inspiring subjects or topics to develop one sector of life.

It is in this context that the creation of a science and knowledge shop in a university like UCAD is meaningful. Thus, the Science Shop will put the skills and knowledge available at UCAD to the service of projects and the needs of the civil society organizations.

By highlighting a pedagogy based on action and collaboration "outside the walls", by enhancing the students' ability to carry out concrete projects at the service of the community, this educational system is based on a brilliant idea: it invites students to carry out, free of charge, as part of their training and/or curriculum, research projects or practical projects in response to needs expressed by the State, the associations, the civil society or by the university.

The term "shop" is therefore misleading. Indeed, civil society organizations and students mobilize other forms of knowledge in service of the project being carried out. These are not volunteers or para-university projects that students would choose to do on their own in addition to their courses. The projects carried out are integrated into the training and pedagogy and form part of the university credits or the units of value of a program.

6. Specific Objects of the Science Shops

6.1. Connecting Universities and Society Through Projects with a Territorial Social Impact

The team of the Science Shop will play an important role of mediation between teachers-researchers and the civil society. If a member of an NGO or an enterprise or civil society has a project, he can post it on our platform. And the Science Shop team will contact for example, a student who was looking for a project or a teacher wanting to study this aspect with a student. So the science shop is a relay for each actor.

6.2. Help The State, Civil Society Organizations and Businesses Find a Solution to Their Different Concerns in a Solidarity Through the Intervention of Motivated Students and Teachers-Researchers

The same interaction will be done for all of these actors. Very often, communities can't pay an expert to develop projects for them. For example, some civil society administrations ask the university to send them students for some projects because they can't recruit someone. So the students only help for 2 or 4 weeks and these students were given one note (credit) as if they were in the classroom. This community-based work is training students for their professional work in the future.

6.3. Encourage Students to Find Answers to Territorial Concerns Enabling Them Both to Implement the Knowledge Acquired in Their Courses and to Acquire and Experiment Open Science Through Scientific Work

This object will train the students to become great citizens and they will improve their training in practice. This kind of exercise will make them much more familiar with their qualifications. They will learn by doing. This is the best way to understand and get more experience beyond theory.

6.4. Co-Build All Together (University and Civil Society) a Sustainable Local Development

If researchers remain in their laboratories and try to find answers for the communities, they will achieve very weak and slow local development. To succeed a better sustainable development, researchers and all the others actors of society must work together in an inclusive way. Development can't be constructed by one part of the population but by all actors.

7. Targets/Beneficiaries

7.1. Target - Students (Doctorate, Master), Teachers, Researchers, Academic Authorities

Every year, students are seeking someone to guide them in their work (research or Dissertation). With the low number of teacher-researchers and lake of accompanying

policy, the academic community actors are the first targets of this project. So, if teachers, researchers and academic authorities have a need but can't find motivated students, the Science Shop platform is best place to look first and the team will find solutions together.

7.2. Main Target - Senegalese State, NGOs, Civil Society Organizations and Actors, Enterprises, Local Populations

The Senegalese state has many development projects but they are not associated with the populations for which theses projects are destined. So, experts are generally called from other countries. They are highly paid yet they ignore completely the realities of the local communities.

7.3. Secondary Target: Municipalities, Ministries, Students of African and Foreign Universities, Local Populations, the Diaspora

Municipalities, Ministries and other local administrations usually have very low budgets to pay an expert to lead a project of development for them. So students and researchers will help to do it and this will be a great experience of collaboration between all actors.

8. Activities to Carry out

8.1. Awareness Campaigns and Organization of Seminars, Colloquia, Training Workshops (Authorities, Research Communities, Students, Companies, Society)

The team and pioneers we have in each faculty are going to work widely to sensitize first in order to get the adhesion of more academics, the communities, students and enterprises.

Then, if funded, we will start with short conferences and conduct workshops for faculty after faculty, followed by the high schools of UCAD, and finally the institutes. If they accept the project as done by academics during the Saly workshop, we can then introduce the organization of seminars, colloquia, and training workshops.

8.2. Campaigns to Popularize the Tool

The campaigns can be done during workshops at the same time or during campaigns of sensitization. We will have some materials such as external discs, USBs, video projectors, and Wi-Fi (USB) to avoid the connection cut.

8.3. Conception Planning

Conception planning is an important for a project based on a technical platform. This would allow the team members to gauge the level of understanding of the contributors and redirect them before the scheduled training. These planning sessions are also an opportunity to elucidate certain points that can be raised such as the remuneration of actor, their focal points and decisions on who will do the basic work in their faculty.

8.4. Internal and External Evaluation of the Activities and the Teaching Tool

The team must evaluate internally the activities that they will lead. The evaluation allows the team to understand what has been done, where the team failed, and how to manage to adjust and reorient better. It is an important occasion to justify, to improve, and to follow or redirect activities when there is a problem. Extern collaborators can also evaluate activities to improve them as it can be difficult to judge oneself.

9. Methodology

The project will be decentralized, open and participatory in order to demonstrate the concrete practice of Open science while observing transparency in the ethics of research. Our methodology will be based on the following actions, but we emphasize that, with the exception of the platform draft made on Wordpress, no other activity has yet been done among the ones listed.

9.1. Activity 1 – Co-construction of the Web Site of the Science Shop (Already Done) by Inviting Each Members of the Scientific Community and Civil Society to Contribute Actively in Its Training Activities

It was a bit difficult to implement the platform without funding. To do this, I conceptualized and asked the assistants to do the editing. At the meeting, we discussed it and each member of the team brought their criticisms. After integrating the critics of the day, I shared the work with the EBAD teacher colleagues for further criticism. This platform is beneficial for UCAD because it will serve as a framework for sharing and exchanging between the components of society and academics. Thus, it will be an essential tool for sustainable development in Senegal.

9.2. Activity 2 - Presentation of the Science Shop Project, as a Teaching Tool at the Cheikh Anta Diop University's Research Ethics Committee for Evaluation, (Re) Orientation and Validation

UCAD is endowed with an ethics committee that controls all the pedagogical tools that must be used in teaching. This phase becomes almost a formality with this platform which received the approval of 36 colleagues out of 36 during the workshop of Saly where I made a demonstration as well as shared the Direction of the research of the UCAD. In general, when teacher-researchers judge and accept a tool, the committee only ratifies. So, when the time comes, the SOHA team of Dakar will make the presentation.

This activity is a necessity for the pedagogical tools that teachers use as part of their courses. This activity is an added value for the training dispensed at UCAD and it's an obligation.

9.3. Activity 3 - Administration of an Interview Guide and Distribution of the Questionnaire in Various Forms to All Project Targets (Government, Universities, Civil Society, NGOs

Students who are engaged to conduct these surveys after raising awareness of the targets in question will reinforce the Science Shop team.

9.4. Activity 4 - Identification of Participants (Students, Teachers, Researchers, Pats or Any Interested Person) Ready to Commit and Mobilize Them for Start of the Project

As mentioned above, the platform was presented to the participants at the Saly workshop last March and they all showed their willingness to be the focal point in their structures to start the project. A dozen have already filled in the online form and we will add the others as soon as time permits. This list is of great interest to the project because these pioneers will popularize open science in their establishments and it will be easier to gather them for future activities and symposia with the support of the pioneers.

9.5. Activity 5 - Presentation of This Pedagogical Tool (Science Shop) in a Series of Lectures in Order to Make Clear the Purpose and Operation (On the Site of the Science Shop as Well)

The use of the baobab symbol will allow the message to pass quickly. In addition, we had a foretaste in Saly and we will use more arguments in the workshops and symposia to organize if we have the necessary funding. The explanation will vary according to the public but, we will adapt whenever necessary. These workshops' aim is to popularize open science through the use of the platform and this will be of benefit to UCAD because its actors will be mainly trained in open science and will use local knowledge to better take Community concerns, work with the other actors to conduct projects together, find solutions collaboratively and co-build a sustainable development.

9.6. Activity 6 - Creation of an Open Database, Accessible Free of Charge and Reusable by All, Based on the Data Collected and the Results Achieved by the Students

The creation of an open database, accessible and reusable by all, based on the data collected and the results obtained by the students will allow a better sharing of the information for all actors. The results of the surveys and the works of the students must be widely disseminated to the stakeholder communities. This database is useful because it will allow free access to all the results of the project and even to others that will be communicated to us.

9.7. Activity 7 - Review of the Range of Training Strategies in the Documentary Research Methodology That Participants Have Experienced and How to Incorporate an Open Science Approach into the Activities of the Boutique

To better evaluate the platform and the activities carried out there, it will first be necessary to evaluate the methods used by the students to better help those to come. We have already begun to teach the literature search methodology course in advance of

the project because it is one of the subjects I teach at EBAD. But, this evaluation will allow me to enrich my courses and to update it constantly. This course is beneficial for all the actors of the UCAD. It makes it possible to improve the presentation and the quality of scientific works because I add to it the copyright, quotation, plagiarism and of course, the presentation of the bibliographic reference with Zotero, EndNote, Mendeley, etc. We also teach them how to use Research4Life resources. To do this, we adapt the course according to the discipline and the learner specialties.

9.8. Activity 8 - Organize Physical and/or Virtual Meetings Between Local Leaders and Learners Every 3 Months to Inform About the Progress of the Project (Videoconferences, Skype)

Organize physical and/or virtual meetings between local leaders and learners every 3 months to inform them about the progress of the project by videoconferences and Skype (this may also include webinars). The five public universities of Senegal are located in distant cities and actors teach almost in all of them. Sometimes an actor may be at another city or elsewhere in the world. So these virtual encounters will be beneficial for teachers and all. To succeed in such challenges, we must equip ourselves accordingly.

9.9. Activity 9 - Development by the Steering Committee of a Roadmap for the Adoption of Open Science in Universities/Higher Education Institutions and Validation of This Roadmap During a Symposium Between the Project Stakeholders

The development by the Steering Committee of a roadmap for the adoption of open science in universities and higher education institutions for validation of this roadmap during a symposium between the project stakeholders is necessary. This roadmap will be deposited with the authorities of each university hoping to set up a Science Shop and we can even strive towards the creation of a national Science Shop network because we share the same department. This will be the generalization of open science in the higher education institutions of Senegal. If we succeed in creating an African network of Science shops, local communities from all member countries will be able to interact with academics and vice-versa.

9.10. Activity 10 - Evaluation of the Activities of the Science Shop and the Means Put in Place to Ensure Its Perpetuation (Purchase of Laptops, USB Keys and Creation of a Database to Disseminate This Tool Even in the Absence of an Internet Access During a Conference)

The evaluation of the activities of the scientific store and the means put in place to ensure its perpetuation (purchase of laptops, USB keys and creation of a database to disseminate this tool, even in the absence of Internet access during a conference) is a necessity for the team members. In some cities in the interior of the country, the stays are always present, that is why it will be necessary to surround oneself with guarantees. The team members will need materials to present the platform everywhere and whenever needed.

9.11. Activity 11 - Creation of Sponsors and Partnerships to Support Activities but Benefit the Science Shop's Results

As we started with a lot of financial difficulty, we thought it was necessary to look for sponsors but it is not possible at the moment because we have no products on the platform. Sponsors will help to realize many of the activities.

9.12. Activity 12 - Organization of a Discussion Group with Committed Participants in Each University to Collectively Develop a Maintenance Guide to Reflect on the Conditions for the Implementation and Use of This Collaborative Teaching Tool in All Public Universities of Senegal

The organization of a discussion group with committed participants in each university to collectively develop a guide to reflect on the conditions for the implementation and use of this collaborative teaching tool in all public universities of Senegal will have more benefit for all actors and institutions. This kind of networking is an important form of extension of the project.

10. Expected Results

Each of these results is related to one or many of activities we defined.

10.1. Result 1 - Universities and Society Work Collaboratively (Together) on Projects with a Territorial Social Impact

We are convinced that when the activities we have defined are carried out efficiently, universities and society will finally be able to work collaboratively on projects with a local, regional, territorial, subregional or even international social impact.

10.2. Result 2 - The State, Civil Society Organizations and Companies Find in Solidarity, Appropriate Solutions to Their Different Concerns, Thanks to the Intervention of Motivated Students and Teachers-Researchers

If students are trained in Open Science and have projects they understand, the State, civil society organizations and companies find in solidarity, appropriate solutions to their different concerns, thanks to the intervention of motivated students and teachers-researchers. The best outcome of all these results is the appropriation by each actor of the platform that will lead to the further interaction of more actors. Thus, all will become full actors, not tele-spectators. Each actor has a major part to play in order to make the project successful and useful for all. Hence our Science Shop name is "Knowledge of all for all" and all actors must keep this in mind while doing his activities.

10.3. Result 3 - Students Find Adequate Answers to Social Concerns Enabling Them Both to Implement the Knowledge Acquired in Courses, to Acquire and to Experiment New Notions Through Scientific Works

After solid training on Open Science and the use of platform, students find adequate answers to social concerns enabling them both to implement the knowledge acquired in courses, to acquire and to experiment new notions through scientific works. They experiment with what they learnt. It allows teachers-researchers to check. This makes it possible to verify the accuracy and relevance of the new knowledge and skills acquired in the project.

10.4. Result 4 - The Emergence of New Types of Citizen Actors in the African Space

The emergence of new types of citizen actors in the African space derives from the quality of the management and the training's actors in open science. If there are new types of citizen, the goals of the projects are achieved.

10.5. Result 5 - A Framework of Excellence Geared Towards Meeting the Needs of Society Through Applied Research Is Created

When a framework of excellence focused on meeting society's needs through applied research is created, it means that stakeholders have taken the platform and lessons on Open Science. Actors have assimilated trainings and lessons. Now, they interact to solve the problems and needs of society as a whole together, without discrimination and prejudices on local and scientific knowledge. This is the reason for this pleasant and beneficial environment for all.

10.6. Result 6 - Sustainable Local Development Is Co-Built by All the Actors in Society

Once all the activities set out in the project have been carried out, all actors feel at ease in collaboration and exchanges. They are all decompartmentalized, committed and motivated. They have become new types of citizens and succeed in the overall objective that the project had set in solving the starting hypothesis: the actors of society, together, co-constructing a sustainable local development.

11. Conclusion

The UCAD Science Shop is an important element in the fight against scientific compartmentalisation and helps to break down the barriers between universities and society. It also enables academics to know and accept other forms or types of local knowledge. Thus, academics interact with society in a spirit of service to the community, fulfilling the third societal mission of universities. Students acquire new knowledge from society that teachers value, as well as the organizations they serve by finding solutions to their needs. This type of innovative system puts universities at the heart of the community's activities and facilitates access to scientific knowledge for local actors, while developing the qualities of commitment. The UCAD Science Shop is thus perfectly in line with the sustainable development program of Senegal.

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