

**Educação profissional: experiência dos estudantes em projeto de extensão
em aquicultura no arquipélago do Marajó, Amazônia, Brasil**

**Professional education: students' experience in an aquaculture extension project in
the Marajó archipelago, Amazon, Brazil**

**Educación profesional: experiencia dos estudiantes en proyecto de extensión
en acuicultura en el archipiélago del Marajó, Amazonia, Brasil**

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Fabricio Nilo Lima da Silva

ORCID: <https://orcid.org/0000-0002-6402-0540>

Instituto Federal de Educação, Ciência e Tecnologia do Pará, *Campus* Breves, Brasil

E-mail: fabricio.nilo@ifpa.edu.br

Luã Caldas de Oliveira

ORCID: <http://orcid.org/0000-0001-7246-8559>

Instituto Federal de Educação, Ciência e Tecnologia do Pará, *Campus* Breves, Brasil

E-mail: lua.oliveira@ifpa.edu.br

Wania Alexandrino Viana

ORCID: <https://orcid.org/0000-0002-7106-3995>

Universidade Federal do Oeste do Pará *Campus* Marechal Rondon, Brasil

E-mail: wania.viana@ufopa.edu.com.br

Elaine Vasconcelos Bezerra Alves

ORCID: <https://orcid.org/0000-0001-6462-2026>

Instituto Federal de Educação, Ciência e Tecnologia do Pará, *Campus* Avançado Vigia, Brasil

E-mail: elaine.bezerra@ifpa.edu.br

Ludmila de Freitas

ORCID: <https://orcid.org/0000-0002-9976-3387>

Instituto Federal de Educação, Ciência e Tecnologia de Rondônia, *Campus* Ariquemes, Brasil

E-mail: ludmila.freitas@ifro.edu.br

Resumo

A assistência técnica e de extensão rural é considerada um dos ramos da aquicultura que se configura por meio de processos educativos. Assim, o objetivo do trabalho foi analisar a contribuição do projeto de extensão em aquicultura na formação profissional de estudantes no arquipélago do Marajó (Pará, Brasil). O projeto “Estudo do perfil da piscicultura no município de Breves/Pará como prática de extensão rural na Amazônia marajoara” foi executado pelo Instituto Federal de Educação, Ciência e Tecnologia do Pará (IFPA) *Campus Breves*. A duração do projeto foi de outubro de 2016 a abril de 2017. Ao final, realizaram-se entrevistas com estudantes dos cursos Técnico em Agropecuária e de Formação Inicial e Continuada em Criador de Peixes em Viveiros Escavados, participantes das práticas extensionistas. Os resultados mostraram que as atividades de extensão em aquicultura são relevantes e significativas para a construção do conhecimento, e que irão fundamentar e subsidiar a prática profissional desses estudantes de forma concreta e efetiva. Ressalta-se que o projeto de extensão é um excelente canal de ensino-aprendizagem, pois trouxe uma série de benefícios mútuos entre os atores (estudantes e aquicultores) envolvidos nos ensinamentos da aquicultura.

Palavras-chave: Aquicultura; Experiência; Ensino; Conhecimento; Amazônia.

Abstract

The technical and rural extension assistance is considered one of the branches of aquaculture that is shaped by educational processes. Thus, the objective of the research was to analyze the contribution of the extension project in aquaculture in the professional formation of students in the Marajó archipelago (Pará, Brazil). The project "Study of the profile of fish farming in the municipality of Breves/Pará as a rural extension practice in the Amazon marajoara" was executed by the Instituto Federal de Educação, Ciência e Tecnologia do Pará (IFPA) *Campus Breves*. The project's duration was from October 2016 to April 2017. At the end, interviews were conducted with students from the Technical in Agriculture and Initial and Continuing Training courses in Fish Breeding in Excavated Nurseries, participants in extensionist practices. The results showed that extension activities in aquaculture are relevant and significant for the construction of knowledge, and that they will substantiate and support the professional practice of these students in a concrete and effective way. It is emphasized that the extension project is an excellent channel of teaching-learning, because it brought a series of mutual benefits among the actors (students and fish farmer) involved in the teaching of aquaculture.

Keywords: Aquaculture; Experience; Teaching; Knowledge; Amazon.

Resumen

La asistencia técnica y de extensión rural se considera una de las ramas de la acuicultura que se forma mediante procesos educativos. Así, el objetivo del trabajo fue analizar la contribución del proyecto de extensión en acuicultura en la formación profesional de los estudiantes del archipiélago de Marajó (Pará, Brasil). El proyecto "Estudio del perfil de la piscicultura en el municipio de Breves/Pará como práctica de extensión rural en la Amazonia marajoara" fue realizado por el Instituto Federal de Educación, Ciencia y Tecnología de Pará (IFPA) Campus Breves. La duración del proyecto fue de octubre de 2016 a abril de 2017. Al final, se realizaron entrevistas con estudiantes de los cursos de Técnico en Agricultura y de Formación Inicial y Continua en Cría de Peces en Viveros Excavados, participantes en prácticas de extensión. Los resultados mostraron que las actividades de extensión en la acuicultura son pertinentes y significativas para la construcción de conocimientos, y que sustentarán y subvencionarán la práctica profesional de estos estudiantes de manera concreta y eficaz. Cabe mencionar que el proyecto de extensión es un excelente canal de enseñanza-aprendizaje, porque aportó una serie de beneficios mutuos entre los actores (estudiantes y piscicultores) que participan en la enseñanza de la acuicultura.

Palabras clave: Acuicultura; Experiencia; Enseñanza; Conocimiento; Amazonas.

1. Introduction

Aquaculture is the production of organisms with predominantly aquatic habitat (Akter et al., 2020; Osmundsen et al., 2020). An activity practiced at any stage of development (eggs, larvae, post-larvae, juveniles or adults) (Valenti, 2002; Oparinde et al., 2019; Sousa et al. 2019). There are various organisms that can be created. Thus, we can highlight fish farming, shrimp farming cheloniculture, raniculture, malacoculture among others. These are important activities both from a social and economic point of view (Santiago & Surís-Regueiro 2018; Nowland et al., 2019; Calixto et al., 2020). Therefore, these activities are responsible for the continuous growth in the supply of fish to the world population (FAO, 2018; Brasil, 2020).

In fish farming, according to the Food and Agriculture Organization (FAO, 2016), Brazil has accumulated a production of 474,300 tons, which provides the discreet eighth position among major producers, losing to Asian countries such as Vietnam (2.7 million tons),

Philippines (672.3 thousand tons) and Chile (968.1 thousand tons). According to the survey of the Brazilian Association of Fish Farming (Brasil, 2018), in 2017 Brazil was the 4th largest producer of Nile Tilapia (*Oreochromis niloticus*) with 357,639 tons, which placed the country among the four largest producers in the world, behind China, Indonesia and Egypt. Thus, it is evident that fish farming in South America is representative, compared to other aquaculture activities in the world (Valladão et al., 2018).

In the Northern region of Brazil aquaculture is less developed in relation to other regions of the country (IBGE, 2016). In the state of Pará, the activity with emphasis is fish farming, to the detriment of the cultivation of shrimps, oysters and soles, which is practiced in a derisory way.

The Marajó archipelago is on the Amazon coast, north of Pará State and has municipalities with low Human Development Indexes (HDI) (UNDP, IPEA, 2013). Among its characteristics, the region deserves to be highlighted by the extensive hydrographic network composed of basins, canals, insands, lakes and streams, among which stand out the amazon, Pará, Anapu, Jacundá and Anajás rivers (Crispim et al., 2016). Marajó presents numerous tributaries that provide the practice of various fishing modalities, especially the capture of Amazon River Prawn, *Macrobrachium amazonicum* (Heller, 1862) and Tambaqui fish farming, *Colossoma macropomum* (Cuvier, 1818). These activities are important for the continuous supply of fish for Amazonian population. Aquaculture in Marajó is growing, practiced by small and médium sized producers, besides being exercised by family farming, extractives and riparians.

In the aquaculture value chain, skilled professionals are extremely important to leverage with activity in the Amazon, especially in technical assistance. In the training of professionals at the technical levels and initial and continuing training, basic and applied research, beyond to rural extension activities, is present at Instituto Federal de Educação, Ciência e Tecnologia do Pará (IFPA) *Campus* Breves, providing labor directly linked to fishing and aquaculture activities. The trajectory of this educational institution in Marajó has been essential to advance with fish farming. Therefore, the path to the development of the activity must go, first of all, through basic education, technical and professional training (Tubino, 2008; Silva and Oliveira, 2020). For this reason, extension projects in Aquaculture are necessary in the curricular matrix of Technical Courses in Agriculture and Initial and Continuing Training in Fish Breeder in Excavated Nurseries, which are offered by IFPA. Currently, the institution offers subjects of Fish Farming and Communication and Rural Extension, which provides a broader training for its students.

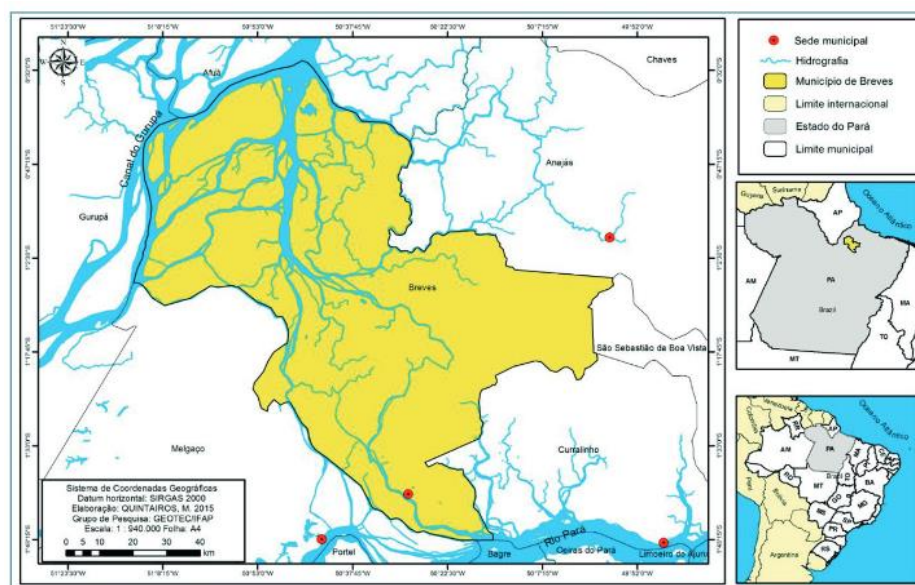
Thus, students when attending such subjects become professionals able to work in the aquaculture industry, either as entrepreneurs in technical consulting, in the aid of research and extension and/or in public agencies in the area. It's worth mentioning that studies of experiences in extension projects have been conducted in several areas of knowledge (Martins et al., 2015; Santos-Filho & Aguiar, 2016; San Reyes et al., 2017; Ekuni et al., 2018; Silva et al., 2019; Oliveira et al., 2020), for the purpose to develop contextualized teaching. In view of the above, the aim of this study was to analyze the contribution of the aquaculture extension project in the professional education of students in the Marajó archipelago, Pará, Brazil.

2. Material and Methods

2.1 Study area

A research is done to bring new knowledge for society as stated by Pereira et al. (2018). That study was realized in the municipality of Breves, Marajó archipelago, Pará State, Brazil (Figure 1). Marajó is located on the Amazon coast (Crispim et al., 2016). A region that comprises 16 municipalities, which compound the microregions of Arari (Cachoeira do Arari, Chaves, Muaná, Ponta de Pedras, Salvaterra, Santa Cruz do Arari and Soure), Furos de Breves (Afuá, Anajás, Breves, Curralinho and São Sebastião da Boa Vista) and Portel (Bagre, Gurupá, Melgaço and Portel).

Figure 1. Location of the municipality of Breves, Marajó archipelago, Pará, Brasil.



Source: Castro & Castro (2015).

Federal Institute of Education, Science and Technology of Pará - *Campus Breves* is present in Breves municipality. The institution currently has 429 regular training students among Technical courses subsequent to High School in Agriculture, Environment and Internet Informatics, Technical course in Integrated Informatics to High School and a diversity of Initial and Continuing Training courses, with a population coming from several municipalities of Marajó, according to data from the academic secretary of the Campus in 2017. This study consists of an experience report in the aquaculture extension project, called "Marajoara Fish Farming Project" by the students in the Marajó archipelago, Amazon, Brazil.

2.2 Research subjects

A total of nine students from the Technical Courses Following High School in Agriculture and Initial and Continuing Training in Fish Breeder in Excavated Nurseries, who participated in the extension project in aquaculture. The technical course lasts for one year and six months and the Initial and Continuing Training course has a maximum of three and a maximum of five months. The extension works were carried out between October 2016 and April 2017, whose sampling was nine students.

2.3 The extension project

The project "Study of the profile of fish farming in the municipality of Breves/Pará as a practice of rural extension in the marajoara Amazon" was financed by the Pro-Rectorate of Extension (PROEX) of that Federal Institute of Education, Science and Technology of Pará, under announcement number 03/2016. Students of that project received financial support for the acquisition of materials necessary for their execution, as well as the availability of extension scholarships. They participated in the surveys of information, with a qualitative and quantitative approach, being divided into two pedagogical moments (at school and in the field).

- **Stage I (at school)**

A survey was conducted on fish farming in the municipality of Breves, especially in the Association of Producers of the Tancredo Neves Colony (APROCOTANE) and in the communities of São Pedro, São Tomé, Nossa Senhora da Luz and Nossa Senhora de Nazaré.

After the survey, a bibliographic review was carried out, according to Lakatos and Marconi (2001), to characterize the aquaculture value chain. Information from books, monographs and scientific articles was used for further elaboration of a structured questionnaire for fish farmers, according to Cervo and Bervian (2002). Attention has been given mainly to the formulation of questions that would be basic to the theme to be investigated (Triviños, 1987).

During the diagnosis phase, the students searched for data that could trace the profile of the producers: a) demographic profile (gender, naturalness, marital status, age group, number of people per residence, number of children, time residing in the community, educational level, time residing in the community, water origin, sanitary constructions), b) socioeconomic profile (income, income from fish farming, financing/loan, social benefit, main economic activity, level of associative organization) and c) aspects related to fish farming (training/capacity in fish farming, time in activity, technical assistance).

For the characterization of fish farming, data were sought, such as: a) objective and purpose of production, b) type of labor (family, permanent or temporary), c) production system (types and classifications), d) cultivation structures (ponds and water catchment), e) cultivated species (species, fry acquisitions and production cycle, nutrition and feeding of cultivated fish), f) productivity, production assistance and animal escapes, g) characterization of commercialization and h) main difficulties, according to Oparinde et al. (2019) and Sousa et al. (2019) and, in accordance with the objectives of the study.

- **Stage II (in the field)**

The students had direct follow-up with twenty fish farmers in their workplaces, to understand the production and apply the questionnaires elaborated. Weekly visits were made to aquaculture enterprises, through action research, adapted from Thiollent (2007). Data collection was based on the methodology of Minayo (2007). When starting the interviews, the students make a conversation in order to understand if the possible interviewee would be willing to give information in a more relaxed atmosphere, obtaining the interest to participate in the study. At this time, the interviewer briefly discusses the work to his informant, clarifying that the informations obtained were only for academic purposes and that they will contribute directly or indirectly to the research.

The main activities developed during the project in the properties were: a) research of the rearing of commercially produced freshwater fish (tambaqui) in excavated ponds; b) monitoring of water quality in ponds; c) support in the marketing of fish during Holy Week

and d) research with alternative feed for tambaqui nutrition. Some observations in loco, notes in field notebook, photographic records and geographic coordinates of each enterprise visited were made. Direct observations were used as a way to complement data collection, as well as informal conversations that provide relevant information (Viertler, 2002). For this, it was necessary to use a field journal to maximize the record of research data. The participant observation and the field notebook were useful in deepening the issues perceived throughout informal interviews, during fieldwork and consultation of specialized literature on the subjects and themes raised by the students.

2.4 Experience report

A questionnaire was used for nine students participating in that aquaculture extension project, adapted from Rodrigues et al. (2012). The extension experiences in the student's education were reported, allowing a construction of knowledge in which the experience is the center. It was possible to understand, from the student's point of view, how the knowledge is constructed, as from the experiences with the extension project in aquaculture. To analyze the impact of extension activities on the trajectory of the students, considering that the project favors the exchange between those involved and their different experiences in the extension, stimulating the emergence of collective discussions in varied experiences, bringing a set of diverse information (Silva, 2019).

The questionnaire presented several questions according to the objectives of the research, such as: a) what could you say about the extension project in aquaculture in Marajó? b) what led you to be interested/engaging in the extension project? c) talk a little about how it is/was your routine in rural extension activities, d) was there any change in your school life as from the moment you were involved in extension activities? can you give some example? e) in terms of education, what does the experience in the aquaculture extension project influence/influenced in your school life? how do you perceive the relationship between these experiences and your education? exemplify and f) from as your experiences, what relationships could be observed between extension, teaching and research? what do you understand about this statement?

It was possible to perform the socialization (round of conversation) between the teacher and the students involved in the project, with the teacher assumes the role of mediator of the discussions (Silva et al., 2019). With each question read out, all participants were invited to discuss about the various themes related to the extension project and the

experiences of the students in the rural extension. This work is qualitative, classified as descriptive-exploratory. It was approved by the Research Ethics Committee of the Institute of Health Sciences (CEP) of the Federal University of Pará (UFPA), registration number 2,576,907. The reports obtained were analyzed and discussed with the support of the scientific literature.

3. Results e Discussion

The importance of students involved in aquaculture extension projects in Marajó is evidenced in the speech of a student of the technical in Agriculture course:

[...] By simple fact working with artisanal fishing, I saw in the project a chance to learn and have new techniques to be able together with my community to properly cultivate the management without harming nature [...] (Student, 26 years old, Agriculture).

Volpato et al. (2016) emphasizes that the participation of students in extension projects contributes to their training and is configured as a way to improve their qualification, where they can experience the real problems of society, including aquaculture.

Created in 2008 by Law No. 11,892, Federal Institutes of Education in Brazil have as one of their purposes the development of extension programs and scientific and technological dissemination (Brasil, 2008). Among the various campuses in the territory of Pará, the *Campus Breves*, throughout its history, presents a continuous evolution that accompanies and contributes to the development process of Marajó, in the Brazilian Amazon. Among the extension students participating in the project, 70% were male and 30% were female. The age of the interviewees ranged from 22 to 35 years, and the age group between 24 and 28 years represented the majority of those involved.

All students participating in the project are from Pará, mostly born in the Marajó region, from the municipalities of Afuá, Catfish, Breves and Currealinho. The *Campus Breves* is a renowned institution in Marajó that, since its foundation has served students from various municipalities, especially in its area of coverage (Ordinance No. 017/2013 - CONSUP), it promotes professional and technological education through teaching, research and extension,

articulating knowledge and sociocultural diversity for the formation of citizens committed to the sustainable development of Marajó.

In regard to students' opinion on the aquaculture extension project, all they agreed that the activity was necessary within the Institute. The project is seen as an integrative curricular component of utmost importance for the area of knowledge, as well as the contents that were taught and practiced during the execution of the action. For Rosário et al. (2013), academics approach society and have the opportunity to experience the application of knowledge of their future profession, thus being able to identify aspects that need to be improved to expand their professional competence.

According to the speech of two students in the Aquaculture extension project:

[...] We know that in Marajó the precariousness of technical assistance is low index, causing inadequate management. So, in a way, the extension project in aquaculture is of total importance for the strengthening of fish farming, thus being a source of income and family support [...] (Student, 28 years old, Agriculture).

[...] The Marajoara Fish Farm Project was a project of great importance, because through it was made a diagnosis of fish farming in PA 159 and its vicinai, something that had not yet been carried out in the municipality of Breves/PA [...] (Student, 22 years old, Fish Farmer in Excavated Nurseries).

We observed that in the above statements the subjects understand the extension project in aquaculture and the practice of the knowledge acquired in the Institute. The context presented dialogues significantly with Freire's educational ideas (2001), in defense of a critical education at the service of social, economic and political transformations, aiming at overcoming social inequalities, called pedagogy of problematization. This mobilizes and stimulates the autonomy of the subject, of the dialogical relationship between teacher and students, the democratic social relationship that promotes the construction of knowledge (Sonzogno et al., 2013).

Aquaculture is understood as an agricultural activity (Garutti, 2003). A necessary theme in technical courses in agriculture and fish breeder in excavated nurseries. Thus, it is inserted among the competencies of these professionals, which is provided for in CEB Resolution No. 4, of December 8, 1999 (CEB/CNE, 1999). It is worth noting that it is also of paramount importance in initial and continuing training courses, especially in the area of aquaculture. The students demonstrated that the extension project in aquaculture was important both for the basic knowledge of agricultural technicians and for the professional

performance of the technician, which corroborates the recommendation of the Resolution mentioned.

When asked what led to being interested/engaging in the extension project, many were emphatic in saying the search to deepen more knowledge in the area of aquaculture, but what caught the attention was a scholarship student who exalted:

[...] I had already a passion for raising fish when the professor Júlio César Vieira Frare gave me a great theoretical lesson of fish firming (even knowing that is not his area), I became more literate with the subject, I started to research more on the sites to have knowledge of fish farming in Brazil. Then come professor Fabrício Nilo Lima da Silva with the extension Project in pisciculture, as I like the area I decided to participate it [...] (Student, 35 years, Agriculture).

The student affirm that the extension project in fish farming is the own extension of the discipline to the community. There are different ways of conceiving education inside and outside educational institutions. Pedrosa (2007) criticizes the positivist conception, discussing popular education, in which one has a formation of political character of the subjects (critics, actors and transformers of their context).

The contents that are taught in the classroom come from experiences carried out in communities, where a certain phenomenon was identified that was studied (aquaculture diagnosis), in which the results were applied in the Institute (teaching) and disseminated to the communities (extension). A strong point of the extension is the emergence of a movement (dynamic), in which the diagnosis obtains new results that are disseminated through teaching and disseminated by extension (Mendes, 2010).

When they were asked with the following question: how is/was his routine in rural extension activities in aquaculture, another scholarship holder out:

[...] Feeling the pleasure of helping the fingerlings producers is a feeling of enormous gratitude, being a focus of activities despite going through situations of difficult access such as the road, this did not prevent to apply the questionnaires and answer the producers' questions that were numerous. It was a pleasure for me to be part of this project and feel the difficulties faced in the daily life of extensionists within the agricultural course [...] (Student, 26 years old, Agriculture).

The relationship of curricular component with the extension project is identified by the student. Specifically in this report, it is possible to understand that there is still a practice of extension that can be seen as a assistentialist work, and that the transmission of knowledge occurs through technical methods. It is perceived that learning is not restricted to technical knowledge, because the students approach reality, demonstrating motivation in the realization of activities and living with the farming families and colleagues a collective experience of knowledge exchange.

The students were asked if there was any change in personal and student life within the Institute from the moment they were involved in extension activities.

[...] In classes within the institute, I became more participative in technical visits, in classes in other disciplines when we students were going to make diagnoses at PA 159 de Breves, I already had this experience of how to arrive and talk to farmers and how to treat them so they could feel more comfortable expressing themselves with us, so that was a knowledge that I learned within the fish farming project and that contributed a lot to my life and that made this change happen [...] (Student, 25 years ago, Agriculture).

[...] There were several changes, it brought me back to the Federal Institute of Pará (IFPA) as a student of the Technical Course in Environment, even after the end of the Initial and Continuing Training course in Fish Breeder in Excavated Nurseries [...] (Student 'F', 22 years old, Fish Farmer in Excavated Nurseries).

With the interaction between IFPA and communities, the subject becomes aware of the context in which it is inserted, encouraging its to be more participative. It captures significant knowledge for its place of experience, expanding its critical and reflective view on the determinants of the fish farming production chain in Marajó. The extension in Brazilian institutions is one of the ways to develop a complete academic formation, which integrates theory and practice in communication with society and enables an exchange of knowledge between both (Manchur et al., 2013).

The student's contact with the professional environment and with the agents that compose it (farmers and fish farmers) stimulated the exchange of knowledge and experiences, salutary to all who participated in these activities, such as the dialogue about the production chain of fish farming, as well as structures of creations, cultivated species and commercialization of cultivated fish.

In terms of training, what does/did the experience in the fish farming extension project influence in your life at IFPA? How do you perceive the relationship between these experiences and your education? The following reports were obtained:

[...] It influenced a lot in my knowledge, I came to have a totally different view of what I saw before entering the IFPA, I realize that the experience within the project I experienced and joining with my training within the institution will help me a lot in my future, because I already have a basis for how to raise a business plan and how to make a diagnosis in the area of rural extension [...] (Student, 25 years old, Agriculture).

[...] I brought more knowledge, thus contributing to my training and qualifying myself in my daily life on fish farming, as well as for other interested people who want this type of experience [...] (Student 'C', 26 years old, Agriculture).

It was questioned from the experiences, what relationships can be observed between Extension, Teaching and Research? What do you understand about this statement? The group emphasized the non-dissociability between research-teaching-extension, understanding that the extension project in fish farming in Marajó was a collective work. The group understands it as an opportunity to add value, knowledge and other possibilities to strengthen the professional side:

[...] I observe the extension as a way to bringing information to farmers/fish farmers in the field, I see the education as our training within the institution and the knowledge we acquired during our studies and that this knowledge we may be passing on as Technical Assistance and Rural Extension [...] (Student, 25 years old, Agricultural).

Speech demonstrates the duty to teach, to transmit the knowledge acquired in academy and to insert it into society. In order to have this transmissibility of knowledge, one must have a good knowledge about the message to be processed and understand the context that the receiver is inserted, so that the transcription of the message is correctly transformed into necessary and real information. The school unit has not only the function of making the pedagogical process attractive and challenging, in order to promote intellectual, social, affective progress, but must also be a democratic, reliable and culturally rich space, inserted in the sociocultural context (Ferretti et al., 2004).

The activities realized during the project period were important for the professional training of the students, because it provided the opportunity to study school contents. It is perceived the project incorporated fundamental elements for the local development and, in order words, didactic aspects of rural extension for local development and educational and communicational approach.

The training of a professional in the area of agrarian sciences who is in accordance with the principles of the School/Institute/University cannot occur fragmented and discontinuous manner. The appreciation of extensionist practice as a fundamental part of training assumes the idea that subjects enter an institution of Technical and Initial and Continuing Education to have access to knowledge, and that teachers are responsible for transmitting this during the practice because they have this knowledge.

We noticed that the exchange of knowledge among the students of the technical course in agriculture and initial and continuing education of IFPA *Campus Breves* with the communities, integrates several areas of knowledge and social sectors, determines a broader view of the local reality.

Therefore, the study in rural communities makes the student perform works such as: diagnostics, booklets, organization of fairs, rural extension, among other experiments and techniques. This promotes the development of skills that favor their training and obtaining information, assisting their educational and agrarian practices.

The interventions realized by students in aquaculture extension project promoted the self-management of fish farms, respecting their forms of organization and tacit knowledge, which becomes an essential element of reflection and operationalization of exercises in the planning of teaching activities, research and practical procedures. Thus, it has proved to be an important tool for learning in various areas of knowledge, mainly for the areas of agriculture and livestock.

Concern to the importance of aquaculture extension project in the training of students, we can conclude from the perspective of two statements:

[...] Being an extension scholarship student in the Course of Fish Breeder in Excavated Nurseries contributed to us having a school education with a knowledge in expanded fish farming, provided by new experiences and existences, making future professionals more aware [...] (Student 'F', 27 years old, Fish Farmer in Excavated Nurseries).

[...] The opportunities offered allowed us a greater knowledge regarding to fish farming, whose approach is very restricted in our curriculum of the Technical Course in Agriculture 2016 [...] (Student 'M', 25 years old, Agriculture).

The training of a professional in the field of agrarian sciences who is in accordance with the principles of IFPA *Campus Breves* cannot occur random and inaccurate. Therefore, the extension practice should be value as a fundamental part of the training, assuming the idea that subjects enter a Technical and Initial and Continuing Education institution in order to have access to knowledge and that teachers are responsible for transmitting them during practice.

4. Conclusion

The extension project in aquaculture and rural extension in technical professional education in Marajó has become a learning channel. It was perceived as a series of mutual benefits among the actors involved. The students, as holders of techniques when introduced in extension projects, experienced and sought to understand the problems identified with the communities, improving the knowledge acquired in the relationship between theory and practice. While the fish farmers, who have a vast network of knowledge from experiences/practices, contributed to the understanding of this process.

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Porcentagem de contribuição de cada autor no manuscrito

Fabricio Nilo Lima da Silva – 20%

Luã Caldas de Oliveira – 20%

Wania Alexandrino Viana – 20%

Elaine Vasconcelos Bezerra Alves – 20%

Ludmila de Freitas – 20%