LUMEN ET VIRTUS

PROFILE OF SOCIAL INNOVATION AGENTS: METHODOLOGICAL PROPOSAL FOR THE FAMILY FARMING SEGMENT

https://doi.org/10.56238/levv15n40-005

Tercia Zavaglia Torres[1], Carla Geovana do Nascimento Macário[2], Stanley Robson de Medeiros Oliveira[3], Marcia Izabel Fugisawa Souza[4], Janaina Mitsue Kimpara[5].

ABSTRACT

This research outlined the professional performance profile of the 'social innovation agent' at Embrapa. This definition strengthens the social innovation actions in the Company and in the partner institutions, establishing the main roles to be played to promote socioeconomic development in the context of family farming. The research adopted the qualitative approach of the bibliographic review type. It was concluded that the exercise of the function of social innovation agent is comprehensive and involves a range of attributions that complement and interrelate each other. Three categories of roles were identified, considered essential to compose the professional profile of this function, namely: articulation, facilitation and management. The exercise of these roles does not require the development/acquisition of specialized technical and procedural knowledge (skills) that are the basis for the development of roles/competencies, and Embrapa should be the protagonist in the training of these agents to strengthen the Innovation ecosystem in family farming.

Keywords: Social Innovation, Family Farming, Institutional Strengthening, Local Governance, SDG 17.

[1] Doctorate
Federal University of São Carlos - UFSCar - Center for Education and Human Sciences
E-mail: tercia.torres@embrapa.br
ORCID: https://orcid.org/0000-0002-3320-5884
[2] Doctorate
State University of Campinas - Unicamp - Institute of Computing
Email: carla.macario@embrapa
ORCID: https://orcid.org/0000-0002-3441-0572
[3] Doctorate
University of Alberta, Canada
E-mail: stanley.oliveira@embrapa.br
ORCID: https://orcid.org/0000-0003-4879-7015
[4] Doctorate
State University of Campinas. Education Faculty
E-mail: marcia.fugisawa@embrapa.br
ORCID: https://orcid.org/0000-0002-6194-9354
[5] Doctorate
São Paulo State University - Unesp - Jaboticabal Campus
E-mail: janaina.kimpara@embrapa.br
ORCID: https://orcid.org/0000-0003-2872-7650

INTRODUCTION

Social innovation gains strength and dimension in society from actions intentionally promoted by various social actors without the direct intervention of the State. The social innovation practices carried out by these actors, in addition to signaling a direct relationship between the terms innovation and social innovation, point mainly to the understanding of innovation as a construct that enhances and leverages new productive arrangements for socioeconomic development. Muñoz and Muñoz (2017) argue that human ingenuity is driven by the occurrence of innovations and these, in turn, emerge more effectively when they are deliberately structured by public and/or private organizations.

In the Brazilian agricultural segment, as Holanda Jr et al. (2020) warn, the National Agricultural Research System (SNPA), conceived in the 1990s of the 20th century, thought of institutional innovation as a linear process that came "from the outside in" and it was up to researchers to produce new products, cultivars, methods, techniques, processes, etc.; to the extension workers to disseminate them; and farmers to adopt them. Today, the practice of agricultural innovation is anchored by the Agricultural Innovation System (SIA) whose emphasis is on the generation, aggregation and appropriation of value to drive innovation processes. This approach, reinforced by Holanda Jr et al. (2020, p. 76), "recognizes the high complexity of the context in which these processes occur, including those of learning, knowledge sharing, policies and mechanisms of interaction and feedback, and is influenced by different factors in the external and internal environments".

At Embrapa, agriculture is thought of in all its complexity, which involves understanding it as a way of life, identity, and culture conceived and practiced by a great diversity of people (Embrapa, 2024). In this scenario, social innovation is interpreted as part of the innovation ecosystem of a specific territorial context, being "the result of dialogue with different actors (people, organizations, and institutions), mobilized by problem situations, which collectively build alternatives or solutions to the challenges experienced within the scope of social groups and socio-technical networks" (Embrapa, 2024).

Considering the prominence and importance that social innovation has at Embrapa, the objective of this article is to present a proposal for a professional performance profile to support the construction of a continuous training process for the exercise of a function entitled 'social innovation agent' in the Company. It is understood that social innovation in the Brazilian family farming segment will be better performed if

innovation agents are trained; And in this sense, the first task is to outline the profile of action that is expected from this function that does not require appropriate training. Establishing the profile of the social innovation agent is an important task for Embrapa as it will serve to define medium and long-term strategies for the identification of people, both to work in this area and to receive continuing education.

It is admitted that social innovation is an interactive and organic process that involves several actors with different dynamics (Leeuwis & Aarts, 2011) and whose exercise does not require the identification of specific roles of action and the continuing education of actors in the specific context of family farming.

The article has five sections, including the introduction. Section two presents the conceptual frameworks abstracted from the literature on the themes of professional profile and social innovation. The third section presents the methodology adopted to propose the professional performance profile of Embrapa's social innovation agent. In the fourth section, the profile proposal for the social innovation agent is presented and the training model for this professional is described. In the fifth and last section, the final considerations about the work are made.

CONCEPTUAL FRAMEWORK

Social innovation is understood as a concept that contributes to changing power relations, especially in rural areas, since it acts to minimize the effects caused by the processes of social exclusion. For Bignetti (2011, p. 4) there is no consensus on the definition of social innovation, but there is a range of notions that show how this type of innovation is beneficial to human beings, characterized as "the result of knowledge applied to social needs through the participation and cooperation of all actors involved, generating new and lasting solutions for social groups, communities or society in general".

In this context, it is stated that the processes of social innovation are strictly focused on collectivity, the plurality of actors and the establishment of conditions for the production of knowledge, such as the one that has been constituted by the International Hub for Sustainable Development (HIDS) created in Campinas, SP in partnership with the International Development Bank (IDB); State University of Campinas (Unicamp); City Hall of Campinas, SP and Pontifical Catholic University of Campinas (PUC-Campinas). HIDS aims to develop a space for interaction between various social actors to form a district of knowledge aimed at facing the challenges of social transformation from the interface between urban areas, agricultural areas and forest fragments.

The term innovation can be understood both as a result manifested in new products through the use of resources and differentiated methods/techniques used for their production; and as an organizational and social process deliberately designed to mobilize the production of new products, such as human creativity, organizational structure, environmental context, and social and economic factors (Kanter, 1983).

According to Phills Jr et al., (2008) an innovation, whether it is a process or result, must meet two criteria: novelty and improvement. Innovation must be something new to the user or context in which it will be applied, although it does not necessarily have to be something original. At the same time, innovation must be something more effective or efficient than pre-existing alternatives, and it must also be sustainable and fair, that is, it must be something that continues to work for a long period of time.

There are at least three approaches that we can consider to think about the concept of social innovation. The approaches to social demand, societal challenge and systemic changes (Mendes et al., 2012). In the approach to social demand, social innovation is understood as a response to the social demands of vulnerable groups in society that are not traditionally met by the market or other social agents. In the societal challenge, social innovation is seen as an opportunity to generate value for society, since it is understood as an integral part of the socioeconomic development process. Under the systemic change approach, social innovation is conceived as a comprehensive process that contributes to the construction of a more participatory society. In this approach, the focus is on empowering and learning specific segments of society by changing core values and establishing policies, structures, processes, methods and ways of working, etc., that enable valuable outcomes for all involved (Hubert et al., 2012).

Behind the actions of social innovation, promoted through the efforts of various actors, regardless of the conceptual approach, is the idea of development as a continuous and integrated process. In the essence of this development perspective, the term 'social innovation' can be conceived as collective and collaborative actions that seek to identify and solve multifaceted problems in a specific social context, that is, it is linked to a set of convergent efforts of various social actors who are interested in the creation of added value for society as a whole (Prim et al., 2020). Seen from this perspective, social innovation is considered a vector for inducing change, since the results of this collective and collaborative process revert value to the whole society and not just to a specific group of actors (Phills et al., 2008).

Among the challenges to be overcome for the implementation of social innovation actions are the need for financing, governance and coordination, skills and training of people, the absence of data and mediation, social integration and, above all, a culture where the answers to social problems come from the interaction of various social actors and not only from public institutions (Hubert et al., 2012).

Considering the aspects inherent to the concept of social innovation, the continuing education of professionals becomes something strategic and relevant, and should privilege the formation of visions, thoughts, postures, knowledge and skills distinct from all actors, who are involved in the process of developing social innovation strategies for family farmers in Brazil or abroad.

It is known that the effective results of any social innovation action depend on iterativeness, evolutionary interaction and the learning of professionals who work in this area (Wettasinha et al., 2008). To produce, exchange and use knowledge through the articulation, facilitation and management of the processes that take place within a given social segment to promote social innovation, according to the documents produced by The Tropical Agriculture Platform (2016a, 2016b), means facilitating learning among people and allowing the various actors involved in the innovation process to be able to reflect on their experiences in order to create critical thinking about your past and existing assumptions and preconditions.

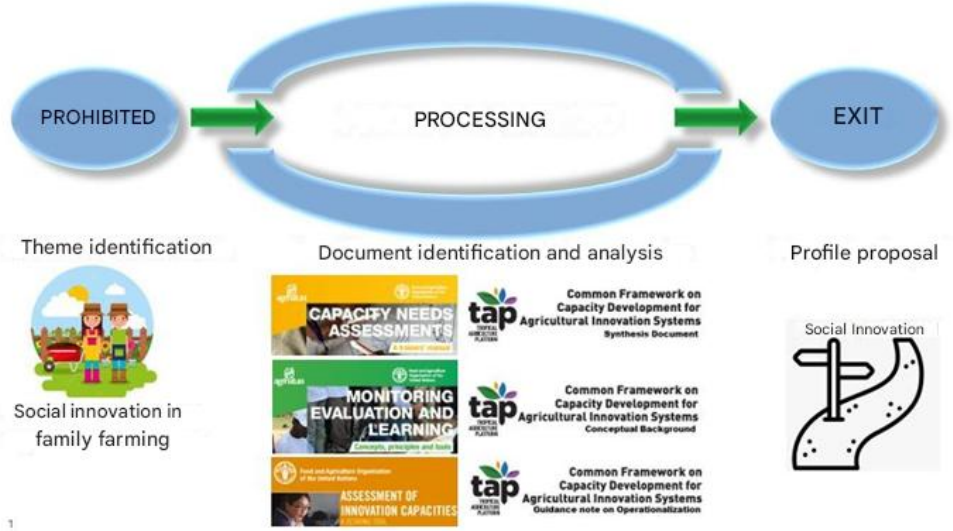
METHODOLOGY

To propose the professional performance profile for the social innovation agent, a qualitative research of the narrative review type was carried out. This type of review uses bibliographic and non-bibliographic sources of information to understand a specific subject , from a theoretical or contextual point of view. This type of review does not establish a structured way of searching for references, nor the sources of information used, or the criteria used in the evaluation and selection of the works. Basically, it is an interpretation and critical analysis made by the researcher about the chosen literature (Rother, 2007).

The use of this method was the option chosen to guide this research, aiming with this review to make it possible to acquire and update knowledge about the development of professional skills for social innovation. Thus, from the identification of the literature, a critical analysis was carried out to identify the common elements that constitute the profile of the action of the appropriate social innovation agent for family farming. Although the method chosen does not present rigidity in this work, the steps

presented in Figure 1 were followed: input, processing and output. In the entry phase, social innovation in family farming was defined as the central theme of the study, since this theme circumscribes the interest of Embrapa and partner institutions. The processing phase consisted of the identification and analysis of documents. In this phase, six documents were identified, selected and analyzed that deal specifically with training and capacity development for innovation in family farming (Table 1). In the third phase, the exit, based on the analysis of the documents, it was possible to create three categories of roles: articulation, facilitation and management, whose attributions are considered fundamental for the exercise of the function of agent of social innovation.

Figure 1. Methodological model of the work.



Source: Authors, 2024.

Table 1. Documents used in the process of Phase 2 of the methodological model.

Documents
1. Dobson, H., Ekong, J., Kalas, P. P., Grovermann, C., Vermeulen, H.; d'Aquino, P., & Wopereis-Pura, M. (2019). Capacity needs assessments: A trainers' manual (2nd ed.). Agrinatura, FAO.
2. Toiller, A., Guillonnet, R., Bucciarelli, M., Vermeulen, H., & Wopereis-Pura, M. (2019). Monitoring, evaluation and learning: Concepts, principles and tools. Agrinatura, FAO.
3. Grovermann, C. (2017). Assessment of innovation capacities: A scoring tool. FAO.
4. The Tropical Agriculture Platform. (2016c). Common framework on capacity development for agricultural innovation systems: Synthesis document. CAB International.
5. The Tropical Agriculture Platform. (2016a). Common framework on capacity development for agricultural innovation systems: Conceptual background. CAB International.
6. The Tropical Agriculture Platform. (2016b). Common framework on capacity development for agricultural innovation systems: Guidance note on operationalization. CAB International.

Source: Authors, 2024

PROFESSIONAL PROFILE OF THE SOCIAL INNOVATION AGENT

The synergistic and organic action of all actors so that they can dispose of their individual/institutional capacities to generate, systematize, adapt the knowledge they have and develop, experiment, tune, adopt and improve new technologies to promote social change (The Tropical Agriculture Platform, 2016a, 2016b) is one of the ways that leverages social innovation.

In this sense, learning and collaboration, facilitation, articulation and management are keywords that permeate the interactive processes of generating social innovation in the family farming segment. Learning is a process generated within a culture, and it is therefore valid to register that each social segment that is part of a society produces its own ways of learning. This process is no different in the family farming segment. Thus, it is not possible to detach learning from the social context that produces it because both are interrelated. Each culture imprints its own dynamics that are integrated into the learning processes. Thus, in addition to learning different things in each culture, the forms and processes of learning also vary depending on it. In other words, the learning process that occurs between the individual and the cultural environment that permeates him derives from the social organization of the activities and goals imposed by the social actors who participate in them.

Underlying the context of family farming is a peculiar social system that allows social actors to develop accumulated knowledge and know-how, which gives meaning to local development and leads them, in a more or less elaborate way, to construct ways of interpreting, categorizing and memorizing collective expectations, which are used as a guide to action in their daily lives. However, this social system is also a locus of cultural production and, therefore, constitutes a learning space.

Scholars on the subject argue that deeper social changes are more feasible to occur when they alter people's rationality, that is, when these changes are associated with the learning and collaboration developed between them and the various actors that permeate them (The Tropical Agriculture Platform, 2016a, 2016b). When a learning process of this nature occurs, learners gradually weave complementary cognitive understandings about the same phenomenon and share them with each other. Learning occurs mainly when people work together in a social space and, concretely, build meaning for the things that surround them in a collaborative and collective way. Collaborative learning in the context of social innovation is the process by which communities, groups of family farming stakeholders learn to innovate and adapt in response to changing social and environmental conditions (Woodhill, 2010).

Facilitation is also an inherent aspect of the learning and collaboration process that is related to social innovation. Many studies have shown that innovation processes are almost always the result of collaborative networks where information is exchanged and learning processes are enhanced (Knickel et al., 2009). Family farming communities generate social capital, that is, in them the relationships that are established in these spaces are the result of norms and values created by the subjects who compose them (Costa, 2005). These relationships result in the metaphor of the network which, once constituted, offers the understanding that the joint action of farmers is something dynamic, capable of changing and developing, based on the connective movement that they weave with each other to achieve the goal that unites them (Torres et al., 2020), so collaborative network is essential to learning.

The interdisciplinary focus present in studies on innovation in learning and collaboration processes shows that both individuals and organizations learn through living with the various social and physical contexts with which they interact. Therefore, both contexts dictate the pace and direction of learning. Studies on social innovation highlight the systemic and organic nature of the innovative process, that is, it is the result of collective action and depends on the social structure in which the agents that are part of it operate (Hubert et al., 2012).

In this sense, facilitating the innovation process implies supporting the learning and adaptation processes that these farmers promote in a specific context, going beyond conventional tasks such as communication and information sharing to increase collective decision-making capacity. Facilitation improves interaction between individuals and between them and organizations and their social, cultural, and political structures because it creates a mesh of social learning and negotiation. Facilitation also fosters entrepreneurship actions because it helps to mobilize resources and overcome family farmers' resistance to change (The Tropical Agriculture Platform, 2016a, 2016b). At this point lies the importance of social innovation agents being able to act as mediators in complex situations.

Articulation is another concept that is directly related to the performance of the social innovation agent. It refers to the capacity that this agent must develop to promote the engagement of the various actors with whom they interact in strategic and political processes . It is a complementary action to the actions of learning, collaboration and facilitation, being eminently of a political nature and related to changing the status quo. As already mentioned, social innovation involves the joint action of several local actors and is surrounded by power relations.

Understanding and influencing the political and power relations between individuals, within the structures of the various organizations with which the social innovation agent will relate is crucial to create new ways for these stakeholders to interact with each other. The ability to know how to articulate gives power to farmers because it makes them capable of seeking alternative solutions through collective responses, a fact that makes the enterprise of co-creation of the future a community product. This ability requires learning/collaboration, facilitation, articulation, and also management.

The ability to articulate will require the social innovation agent to iteratively promote partnership actions, build mutual and reciprocal trust and create synergy among all those involved so that there is the development of activities, investments, policies and strategies, making it possible to take advantage of opportunities in order to make changes happen. Forming networks that bring together family farmers and all other actors linked to innovation should be the focus for the co-creation of new knowledge and new markets.

Knowledge of management actions, effective coordination, decision-making, etc., must shape the relational dynamics that the social innovation agent needs to establish to build an environment conducive to innovation with incentives and political commitment. According to the document prepared by The Tropical Agriculture Platform (2016a, 2016b), the "enabling environment" is the context in which individuals and organizations are willing to act collectively, making their skills and capacities available to each other. This involves, on the one hand, reviewing social conventions, values and beliefs and, on the other hand, working on aspects related to governance, management, structures, rules, norms, formal regulations and political aspects that underlie the innovation process.

Management is the process of determining and guiding the path to be followed to achieve objectives and goals, involving specific knowledge, skills, decisions, motivation, analysis, planning, organization, leadership and evaluation. It brings together the various representatives of groups of actors with a view to enhancing the capacities they have to achieve common objectives. Knowing how to manage the set of actions that must be carried out in an articulated, facilitated way and, in collaboration with the other actors involved, will require from the social innovation agent knowledge about the use of tools such as strategic planning, analysis of scenarios, opportunities and threats, systemic thinking, organization of actions, mobilization of actors, leadership of technical actions, dialogic communication, etc.

Management also involves the development of evaluation and monitoring actions that aim to assess the level of technical and functional capacity of all people linked to different institutions and who will be part of the joint innovation actions; in particular, to assess the capacity for adaptation and response in the various dimensions. Management may involve interorganizational actions, such as the development of leadership programs or change management; training of multipliers; political dialogue with actors in the sector; guidance from legislators, etc.

In order to define the professional performance profile of the social innovation agent, we started from the logic exposed so far, arising from the critical analysis and abstraction of the documents, corresponding to the second phase of the methodology. This phase resulted in three important categories of roles, represented in Figure 2, below.

Figure 2. Categories of roles of the social innovation agent

Source: Authors, 2024

The three categories of roles, abstracted from the analysis of the documents, bring together the essential functions that must be performed by the agents of social innovation, so that they are able to promote the desired transformation in the family farming segment. Each category of roles adds a set of skills and capabilities that can and should be developed with innovation agents so that they can apply them intentionally in solving problems with farmers. Competencies can be defined as "structural modalities of intelligence, or rather, actions and operations that we use to establish relationships with and between the objects, situations, phenomena and people we wish to know" (Ministério da Educação, 2000, p. 8). The development of such competencies will necessarily require from the actors/agents a set of knowledge (conceptual and specialized technical) and skills.

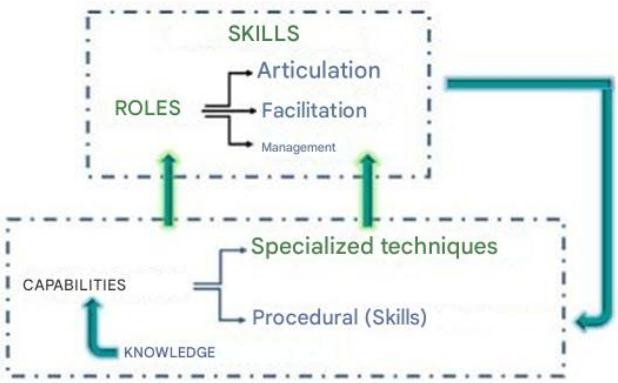
Competence can also be understood as being that knowledge considered basic of a conceptual and/or technical-specialized nature that favors the construction of the analytical, critical and reflective capacity of the agents of social innovation. They are

knowledge related to the various domains of specific knowledge, linked to the development of family farming in a given locality; therefore, circumscribed to the area of professional activity of farmers and their interface with other social actors. In general, in the case of the agent of social innovation in family farming, knowledge such as that related to the efficient use of water, mechanization, information technologies (IT) in the field, optimization of the use of organic fertilizers, integrated pest management, certification and multiplication of production of special seeds or improved varieties, organization and management of associative enterprises, Property management models and systems, organization and governance of available resources and circular economy, articulation with the market and fair trade, short circuits of direct marketing to the consumer, participatory models with an inclusive approach, rural entrepreneurship, among others, are important actions to be developed. The domains of this knowledge generate essential skills for the performance of the three categories of roles (articulation, facilitation and management) identified and, consequently, for the good performance of the social innovation agent.

Skill is defined as a 'know-how', that is, as operational/procedural knowledge that will require knowledge of rules, techniques, methods, inductions, analogies, deductions, practical applications to be exercised. It can be said that skills derive from the acquired competencies and refer to the immediate plane of practice. Through actions and operations, skills are improved and articulated, enabling a new organization of competencies (Ministério da Educação, 2000). Thus, the same skill can contribute to the performance of agents in the three categories of roles (articulation, facilitation and management). On the other hand, the set of competencies that brings together conceptual or technical-specialized knowledge presupposes the development of several skills, including skills with different degrees of complexity (Boff & Zanette, 2010), consequently generating new competencies.

Figure 3 presents a guiding approach that indicates the interrelationships between knowledge, skills and competencies and how these three concepts are articulated to support the development of the professional performance profile of the social innovation agent. Figure 3 also indicates that knowledge is the basis for the production of capacities (technical-specialized and/or procedural) that, consequently, generate competencies that expand skills and provide more conditions for the social innovation agent to perform their roles within the desired profile.

Figure 3. Guiding approach to the development of the professional performance profile of the social innovation agent.



Source: Authors, 2024

The profile of the professional performance of the social innovation agent in the three categories of roles, considered essential to the exercise of this function is described below:

Articulating Role:

In this category, the role of articulator stands out, to be exercised by the professional innovation agent, so that he is able to:

1. Establish partnerships of mutual trust and reciprocal with the various local actors to promote social innovation;
2. Explore and exchange ideas about the different perspectives of farmers (values, problems, aspirations, context, etc.), through discussions, meetings, visits, interviews, recreational and informal activities, etc.;
3. Promote dialogues with the public sphere for the establishment of access to local, regional, national and global agricultural markets;
4. Demonstrate and visualize the interdependencies between farmers' practices in order to enhance social innovation;
5. Discuss the influences of the social actors that are part of the local social innovation system that reinforce the existing patterns/problems and/or enhance the identification of alternative solutions;
6. To elicit uncertainties that prevent farmers from promoting change and to design collaborative actions and experiments with social actors to develop common starting points in the process of social innovation;
7. Develop entrepreneurship with a vision for change and resource mobilization;
8. Adapt to emerging challenges and seek opportunities for social innovation.

Facilitation role:

In this category, the role of facilitator stands out, to be exercised by the professional innovation agent, so that he is able to:

1. Communicate, share information, listen, negotiate, strengthen interactions to promote the participatory decision-making process with the various actors that make up the social innovation system;
2. To favor the interaction between farmers and between them and the other actors involved in innovation in the various segments (agronomic, economic, political, environmental, cultural, etc.), aiming at the construction of a social learning network;
3. Collaborate with the various local actors to propose and implement social innovation actions;
4. To make an inventory of existing initiatives, complemented by a stakeholder analysis;
5. Work towards the formation of alliances with farmers willing to promote the process of social innovation;
6. Mobilize/mediate contacts with other social actors to enhance the learning capacity of farmers and the collective results of social innovation;
7. Create, through the use of digital technologies, a social innovation network composed of all the actors that make up the local innovation system to develop continuing education actions and dissemination of information for the benefit of sustainable territorial development.

Management role:

In this category, the role of manager stands out, to be exercised by the professional innovation agent, so that he is able to:

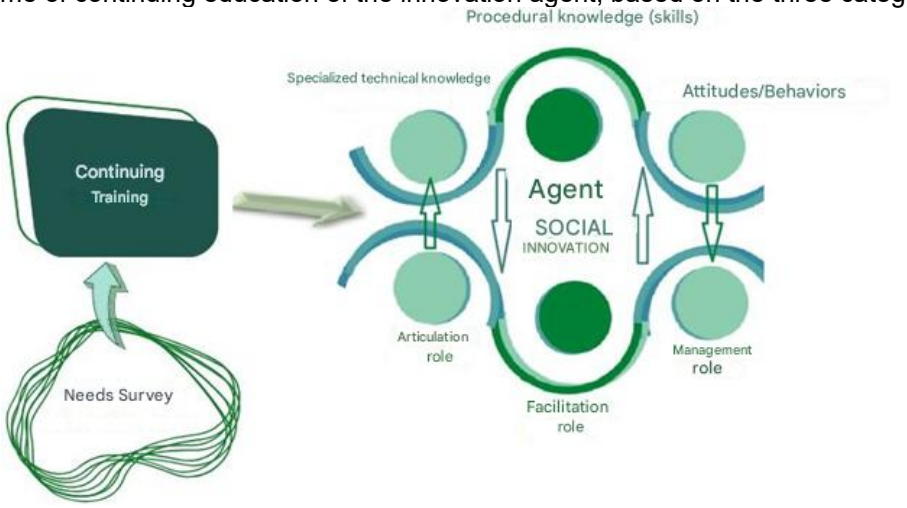
1. Use planning and analysis tools to build scenarios about the situation of farmers in terms of social innovation for local sustainable development;
2. To think in an integrated way about the agronomic, economic, sociocultural and environmental processes that permeate the local reality;
3. Identify opportunities and articulate with the various social actors with a view to promoting local social innovation;
4. Organize actions and mobilize resources to develop social innovation together with the various local actors;
5. Lead technical and practical actions aimed at the implementation of social innovation

together with the various local actors;

6. Work on political and institutional agreements to increase the results of social innovation with the actors that make up the local innovation system;
7. Guide collaborative activities among farmers on issues relevant to local social innovation;
8. Ensure regular communication with farmers to promote transparency in the social innovation process;
9. Translate the problems and solutions agreed in the social innovation process into practical actions that involve all farmers;
10. Use local media to influence the social agenda and advocate for solutions agreed upon by farmers in the process of social innovation;
11. Organize a regular reflection on the dynamics of the process and farmers' satisfaction by evaluating the results.

Finally, it should be noted that the elaboration of a continuing education program with the objective of developing the professional performance profile of the social innovation agent must be structured according to the scheme presented in Figure 4.

Figure 4. Scheme of continuing education of the innovation agent, based on the three categories of roles.



Source: Authors, 2024

FINAL CONSIDERATIONS

The literature review pointed out that the exercise of the function of social innovation agent is comprehensive and involves a range of attributions that complement and interrelate each other. As a result, three categories of roles were identified, considered essential to compose the professional profile of this function, namely: articulation, facilitation

and management. Being able to exercise and gather competencies and skills inherent to these three categories is the starting point for the satisfactory performance of this function.

However, the exercise of each of these roles does not require the development and/or acquisition of technical-specialized and procedural knowledge (skills) that are the basis for the development of roles/competencies. That said, it is worth highlighting the relevance of this proposal for a professional performance profile for Embrapa and partner institutions, given its potential for the development of a set of knowledge, skills and attitudes, essential to the performance of this function. Based on this proposal, new directions necessary for the organization of knowledge and the development of capacities in social innovation for family farming may be the object of future research.

It is admitted that this profile proposal is a starting point, therefore, it should be widely discussed in various instances of Embrapa and, in particular, in the scope of the Social Innovation Portfolio. It is believed that the proposal should be validated with some internal and external actors at Embrapa.

REFERENCES

1. Amabile, T. M. (1988). A model of creativity and innovation in organizations. In B. M. Staw. & L. L. Cummings (Eds.), Research in organizational behavior (Vol. 10, pp. 123-167). JAI Press.

2. Bignetti, L. P. (2011). Social innovations: An incursion into ideas, trends and research focuses. Ciências Sociais Unisinos, 47(1), 3-14. http://doi.org/10.4013/csu.2011.47.1.01

3. Boff, D., & Zanette, C. R. S. (2010). The development of competencies, skills and the formation of concepts: Founding axis of the learning process. In: Proceedings of the 5th International Congress of Philosophy and Education. Caxias do Sul University. https://www.ucs.br/ucs/tplcinfe/eventos/cinfe/artigos/artigos/arquivos/eixo_tematico8/O%20DESENVOLVIMENTO%20DE%20COMPETENCIAS.pdf

4. Costa, R. (2005). For a new concept of community: social networks, personal communities, collective intelligence. Interface – Comunicação, Saúde, Educação, 9(17), 235-248. https://doi.org/10.1590/S1414-32832005000200003

5. Dobson, H., Ekong, J., Kalas, P. P., Grovermann, C., Vermeulen, H., d'Aquino, P., & Wopereis-Pura, M. (2019). Capacity needs assessments: A trainers' manual (2nd ed.). Agrinatura, FAO.

6. Embrapa. (2024, March 5). How Embrapa works for social innovation. https://www.embrapa.br/inovacao-social/como-a-embrapa-atua-para-a-inovacao-social.

7. Embrapa. (2020). Work Plan 'Promotion of knowledge to qualify the innovation process for family farming']. [Unpublished manuscript]. Embrapa.

8. Grovermann, C. (2017). Assessment of innovation capacities: A scoring tool. FAO.

9. Holanda Jr, E. V., Amancio, C. O. da G., Farias, J. L. de S., & Borba, M. F. S. (2020). Science, technology and innovation for the social and productive inclusion of Brazilian family farming. In , D. M. de C. Bittencourt (Ed.), Strategies for family farming: Vision of the future towards innovation (pp. 67-94). Embrapa. https://www.alice.cnptia.embrapa.br/alice/handle/doc/1125388

10. Hubert, B., Ison, R., Sriskandarajah, N., Blackmore, C., Cerf, M., Avelange, I., Barbier, M., & Steyaert, P. (2012). Learning in European agricultural and networks: Building a systemic research agenda. In: I. Darnhofer, D. Gibbon, & B. Dedieu, B. (Eds.), Farming systems research into the 21st. century: The new dynamic (chap. 9, pp. 179-200). Springer. https://doi.org/10.1007/978-94-007-4503-2_9

11. Kanter, R. M. (1983). The change masters: Innovation & entrepreneurship in the American Corporation. Simon & Schuster.

12. Knickel, K., Brunori, G.; Rand, S., & Proost, J. (2009) Towards a better conceptual framework for innovation processes in agriculture and rural development: From linear models to systemic approaches. The Journal of Agricultural Education and Extension, 15(2), 131–146. https://doi.org/10.1080/13892240902909064

13. Leeuwis, C., & Aarts, N. (2011). Rethinking communication in innovation processes: Creating space for change in complex systems. The Journal of Agricultural Education and Extension, 17(1), 21–36. https://doi.org/10.1080/1389224X.2011.536344

14. Mendes, A., Batista, A., Fernandes, L., Macedo, P., Pinto, F., Rebelo, L., Ribeiro, M., Ribeiro, R., Sottomayor, M., Tavares, M., & Verdelho, V. (2012). Barriers to social innovation. Danish Technological Institute.

15. Ministry of Education. (2000). ENEM - Basic document 2000. https://curriculo-uerj.pro.br/wp-content/uploads/exame-nacional-do-ensino-medio-documento-basico.pdf

16. Muñoz, E. F. P., & Muñoz, A. E. P. (2017). Social innovation for rural development: Challenges for Brazilian institutions. Brazilian Journal of Agricultural Technology, 1(2), 146-158. http://www.revistas.fw.uri.br/index.php/rbdta/article/viewFile/2514/2527

17. Oliveira, S. R. de M., Souza, M. I. F., & Torres, T. Z. (2020). Proposal of a methodological model for the training of multiplier agents for the project "Promotion of knowledge to qualify the innovation process for family farming" [Unpublished manuscript]. Embrapa Agricultural Informatics.

18. Phills Jr, J. A., Deiglmeier, K., & Miller, D.T. (2008). Rediscovering social innovation. Stanford Social Innovation Review, Fall, 34-43. https://doi.org/10.48558/gbjy-gj47

19. Prim, M. A., Aguiar, R. R. S. de, & Dandolini, G. A. (2020). Inovação social: Diferentes perspectivas para o mesmo conceito. In Proceedings of the 10th International Congress of Knowledge and Innovation. Organización Universitaria Interamericana. https://doi.org/10.48090/ciki.v1i1.872

20. Sustainable and Appropriate Development in Rural Territories Project - DESATAR - Ecuador: Design Report: Template of the project design report (available in ORMS). (2019).

21. Rother, E. T. (2007). Systematic review vs. narrative review. Acta Paulista de Enfermagem, 20(2), vii-viii.

22. Toiller, A., Guillonnet, R., Bucciarelli, M., Vermeulen, H., & Wopereis-Pura, M. (2019). Monitoring, evaluation and learning: Concepts, principles and tools. Agrinatura, FAO.

23. Torres, T. Z., Souza, M. I. F., Ternes, S., & Pereira, B. G. (2020). Virtual communities in Embrapa's research networks: A proposal for a communicational model. In: R. R. S. Silva-Matos, P. S. T. Oliveira, & R. Y. F. Pereira (Org.). Agricultural Sciences: Scientific and Technical Knowledge and Diffusion of Technologies 4 (Chapter 7, pp. 67-86). Athena. https://www.alice.cnptia.embrapa.br/alice/handle/doc/1123946

24. The Tropical Agriculture Platform. (2016a). Common framework on capacity development for agricultural innovation systems: Conceptual background. CAB International.

25. The Tropical Agriculture Platform. (2016b). Common framework on capacity development for agricultural innovation systems: Synthesis Document. CAB International.

26. Wettasinha, C., Wongtschowski, M., & Waters-Bayer, A. (2008). Recognising local innovation: Experiences of PROLINNOVA partners. Prolinnova International Secretariat.

27. Woodhilll, J. (2010). Capacities for institutional innovation: a complexity perspective in capacity, reflecting collectively on capacities for changes. IDS Bulletin, 41(3), 47–59. https://doi.org/10.1111/j.1759-5436.2010.00136.x