

The role of university extension in promoting local economic development: A preliminary discussion in light of the specificities of a small municipality

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Abstract—Here we discuss the role of university extension in local economic development (LED) processes. For this, we use the theoretically based formulation of an operational concept of university extension and its application to the context of a small municipality (Iporá, Goiás, Brazil). We analyzed different requirements and indicators related to extension activities and how they are perceived, appropriated, and used by local actors. Therefore, the research was based on an exploratory-qualitative methodological approach, encompassing two procedures: document analysis to build an operational concept of university extension and semi-directive interviews with local actors. As a result, a consistent adherence of the operational concept of university extension to the interactions/relationships analyzed in the context of LED in Iporá was identified, corroborating and requalifying the meanings of these extensionist practices in favor of a progressive socioeconomic dynamism perceived by LED actors.

I. INTRODUCTION

In actions based on the teaching-research-extension tripod, the university emerges as a relevant actor in the gear of local development insofar as it plays multiple roles in the training of qualified human resources and as a catalyst for public and private investments in science, technology, and innovation (OLIVEIRA JR, 2014). Although integrated on a tripod, university initiatives in teaching, research, and extension can be subdivided according to different attributes, such as the type of impact generated in society and the nature of the link maintained between the educational institution and the external community. From this point of view, the extension stands out as the pillar that articulates and serves as a bridge so that resources and/or results of teaching and

research are taken to society in the form of projects that generally seek to engage and bring tangible benefits to this public not directly linked to the university (OLIVEIRA JR, 2014; WOLFF, 2013).

In this way, university extension actions can trigger more immediate impacts on the socioeconomic processes that occur outside the institution. Indeed, the university establishes itself as a member of the network of actors involved in the Local Economic Development (DEL) processes (PACHECO, 2010). However, the constraints and consequences of this university-society relationship, via extension projects in the face of LED policies and strategies, are little discussed, especially when referring to small localities characterized by a tenuous economic dynamism. To understand these phenomena, this

article uses two interconnected research stages: the formulation of an operational concept of university extension and its empirical application to the context of the city of Iporá, in the case of a small municipality located in the state of Goiás, Brazil.

The city of Iporá has grown to a population of approximately 30,000 inhabitants over the last decade, has been classified as an emerging municipality (IBGE, 2019) and, since 2010, hosts a campus of the Instituto Federal Goiano (IF Goiano), the only federal public education institution in highest of the entire micro-region (IBGE, 2019)

In general terms, these efforts aim to describe and analyze university extension as a dynamic instrument for local economic development in a small town. To this end, the methodological approach, anchored in a theoretical framework dedicated to the interrelationships between the performance of the university and the dynamics of LED, used two procedures: a) document analysis of the directive frameworks elaborated by the Forum of Pro-Rectors of Extension of Public Institutions of Higher Education in Brazil (FORPROEX), to meet the objective of building an operational concept of extension in an LED environment and, b) the analysis of empirical data obtained through 24 semi-structured interviews. In addition to this Introduction and Final Considerations, the article includes three other intermediate subsections that deepen the topics mentioned here: the Theoretical Framework, Methodology, and Results and Discussion. As a result, analytical contributions of the operational concept of extension are highlighted. It highlights the concrete and symbolic benefits of LED actors in the region, emphasizing the appreciation of extension activities based on transversality in meeting social and university-community integration demands.

II. THEORETICAL REFERENCE

This section presents the main theoretical assumptions that support the analytical model of Local Economic Development (LED) and compares these aspects with the key points that characterize university extension in general. It is worth mentioning that the LED model advocates a level of analysis that translates into an emphasis on networks of actors capable of building the reality of local economic development, understanding as an actor all agents (individual or collective) that influence public policy processes (SECCHI, 2013). Therefore, governmental actors (politicians, bureaucrats, judges) and non-governmental actors (civil society organizations, class associations, media) are covered, as well as clear importance to higher education institutions (public

universities, Federal Institutes of Education and private colleges) that often act as facilitators and/or bridges between the various parties involved (ROMEIRO; PREARO; MAZZALLI, 2011; FELDMAN; DESROCHERS, 2003).

In this sense, it is assumed that the localities have diverse resources and unexplored economies of scale projected into a development potential whose objective is to promote greater socioeconomic dynamism and improve the community's quality of life (MORAES, 2016). According to Arbo and Benneworth (2007), competitive advantages tend to be created and sustained by highly localized processes, in such a way that the multiplication of links and connections in the form of networks of local actors, in parallel with the need to reduce transaction costs, make the proximity an important and strategic asset. As these networks consolidate, LED actors strengthen their connections and begin to share trust and reciprocity norms that are configured as a "public good" and, in this scenario, there are incentives for a better exchange of information and expansion of access to resources and a greater ability to seek collective solutions to local problems (FELDMAN; DESROCHERS, 2003).

In general, the role played by the university in these processes is multifaceted, and one of its pillars is the dissemination of knowledge. This idea is based on a type of positive externality triggered by typical activities developed at the university, and that reaches other social actors in terms of access and appropriation of knowledge and diverse knowledge. This chain of knowledge transmission is conditioned to a limited geographic scope and is materialized in two main aspects: formalized/codified knowledge and tacit knowledge. The first refers to formally systematized knowledge that can be stored, copied, and transmitted. The second concerns non-formalized knowledge normally accumulated through personal experience, practical learning, and social relationships (DÖRING; SCHNELLENBACH, 2004).

The articulation between formalized knowledge and tacit knowledge has particular weight in university extension since it tends to assume an interconnected posture between transmission and learning, through which knowledge can be constructed in the application/experimentation of different combinations of the two types of knowledge. The knowledge contributed to extension activities both by the technical-scientific body and external beneficiaries (ETZKOWITZ, 2001). It should be noted that university extension involves the execution of technical-scientific projects to be applied outside the educational institution for the benefit of the external community, thus bringing together researchers, students, and technicians from the university, on the one hand, and

public or private agents, and on the other hand, beneficiaries. In this context, it is expected that both parties will have opportunities to contribute solutions to the collective problem highlighted in the project and that all participants can improve and empower themselves throughout the process.

Therefore, the centrality of interpersonal relationships and community bonds is reinforced, which gains strength precisely in proximity spaces at the local level. Such ties can be seen as one of the main driving forces of local economic development (LARÉDO, 2003). Concerning university contributions, Arbo and Benneworth (2007) argue that three levels of interaction/relationship with LED actors can be identified: macro, meso, and micro. At the macro level, the emphasis is on the institutionalized articulation that unites the university – through its governing body and under the support of its legal mission – to key actors in the LED network (instances of public authorities and business and society leaders, for example). This link is usually more consultative and/or focused on the university's political action vis-à-vis other actors and not specifically related to specific public policies. The meso level is directly related to extension as it is embodied in research groups and extension projects that bring together teachers and students around specific thematic axes that, in turn, are associated with LED actors both in consultative and operational bases, with emphasis on delimited social groups and sectoral public policies. Finally, the micro-level of relationship revolves around the personal bonds established between highly qualified university employees and people in the community that contribute to the strengthening of civil society and creating positive impacts on LED processes (ARBO; BENNEWORTH, 2007; HARLOE; PERRY, 2004). The three levels of interactions listed above will substantiate the formulation of an operational concept of university extension activity whose characteristics allow us to understand the determinants and conditions that contribute to the empirically examined LED dynamics.

III. METHODOLOGY

This topic details the methodological procedures of an exploratory nature used in the article. Thus, anchored in the theoretical framework, the research design initially used the analysis of documents related to the National Policy for University Extension (PNEU), the guidelines for evaluating university extension practices contained in the publication entitled “Assessment of University Extension: practices and discussions of the permanent extension evaluation committee” (FORPROEX,

2013) and Resolution No. 7 of the Ministry of Education, of December 18, 2018 (BRASIL, 2018).

Subsequently, qualitative research was carried out to encompass a comprehensive group of social actors from different segments that work in the region's development processes. Thus, 24 semi-structured interviews were conducted with two large groups: actors from the internal community of IF Goiano (11 interviewees) and actors from the external community (13 interviewees). Among the first 11 are managers of the Rectory of IF Goiano, local managers of Campus Iporá and those directly responsible for the areas of research and extension. Among the remaining 13 are class and union leaders (both employers and workers), leaders of the municipal Executive and Legislative branches and representatives of civil society (community leaders and media outlets).

The interviews were guided by a semi-directive script dealing with themes that sought to explore from the actors' understanding of the concept of university extension to the empirical context of the presence of university extension in the city of Iporá (Goiás, Brazil), identifying the object and objective of the extension, the actors involved in the relationships, the target audience served and the perceived impacts on the location.

IV. RESULTS AND DISCUSSION

Considering the research *modus operandi* shown above, this subtopic discusses and problematizes the main results and indicators achieved. At first, we sought to highlight the attributes present in the operational concept based on document analysis.

It is important to highlight the guiding role of this Forum of Pro-Rectors of Extension (FORPROEX) since its creation in 1987. Considering a lasting legacy of national discussions on the subject, FORPROEX constitutes a collegiate instance composed of those responsible for extension policies (in the figure of the pro-rectors of extension) who meet periodically to debate, propose, monitor, and evaluate the actions carried out in universities and federal education institutes across the country (JEZINE, 2006). Based on these prerogatives is that FORPROEX prescribes the principles and guidelines contained in the documents considered here.

Additionally, Resolution CNE/CES 7/2018, when dealing with the integration of extension in higher education in Extension in the curriculum matrix (at least ten percent of the total curricular workload of undergraduate courses), explains its interdisciplinary, political-educational character (cultural, scientific,

technological). Thus, the articulation of extension with teaching and research reinforces its potential for transforming interaction between higher education institutions and the communities in which they are inserted or within their scope.

A synthesis of the attributes found in this resolution, especially in Article 7 with the attributes present in the other documents analyzed, promoted a first characterization of the operational concept of university extension that guided the theme of extension relationships between Ifgoiano and the locality of Iporá in the period of 2017 to 2020, as illustrated in Table 1, which are instrumentalized in the form of 18 attributes that are configured as indicators of good extension practices.

- ♣ Practice linked to the demands of reality;
- ♣ Practice linked to meeting social needs (e.g., housing, food production, employment generation, and income redistribution);
- ♣ Practice integrated to a university conception that implies multidisciplinary, interdisciplinary, and/or transdisciplinary, as well as interprofessional relationships;
- ♣ Activity involving the relationship between the university and sectors of society;
- ♣ Practice that promotes the university's participation in the elaboration of public policies;
- ♣ Practice that promotes the establishment of the university as a legitimate body for monitoring and evaluating public policies;
- ♣ Practice that enables the institutional evaluation of the activities of the university itself;
- ♣ Ability to monitor public policies;
- ♣ Practice that promotes new means of production;
- ♣ Practice that promotes new means of innovation;
- ♣ Practice of expanding access to knowledge/knowledge;
- ♣ Practice that promotes the availability of knowledge;
- ♣ Practice that promotes the availability of education provision;
- ♣ Practice that promotes the use of technologies to improve the quality of education;
- ♣ Practice that promotes environmental education;
- ♣ Practice that promotes sustainable development;
- ♣ Practice that promotes the solitary action of the university for international cooperation;
- ♣ University initiatives are socially committed to all areas, especially communication, culture, human rights and

justice, education, environment, health, technology, production, and work.

The operational concept of extension activity presents the different dimensions emanating from the three basic pillars that guide the university's performance, which explains the contemporary role of higher education institutions.

In this condition, the Campus Iporá of IF Goiano is the main executor of extension projects in the locality whose regulations observe the principles of FORPROEX, since the pro-rector of extension of the institute is a full member of the collegiate, which are reinforced in Resolution CNE/CES 7/2018.

In the opportunity to scrutinize these conditions that interconnect the local to the national and the internal practices and perceptions of the external needs and demands in terms of extension, the manifestations of the interviewees about their conceptual understanding are that actors from the internal community of IF Goiano and actors were interviewed.

The extension activities reveal that the contents expressed in the speeches of the interviewed actors converge to part of the operational concept defined in this study. For this, a comparison of the terms and their respective meanings evidenced in the manifestations to the attributes of the operational concept was carried out to generate a conceptual and practical synthesis of the extension activities that take place in that locality. Thus, there is an effort to encompass both the aspect of formalized knowledge and the aspect of tacit knowledge (DÖRING; SCHNELLENBACH, 2004; ETZKOWITZ, 2001), providing a leaner list of attributes by bringing together some requirements (Practice promoting new means of production together with a practice that promotes new means of innovation, for example) and by suppressing items identified as unverifiable in the specific case (the case of the Practice promoting solidarity action by the university for international cooperation). Nine extension attributes were measured from the perspective of LED actors in Iporá:

- ♣ Initial and Continuing Training Courses;
- ♣ Meeting the demands of the community, especially the rural community;
- ♣ Improvement of people's quality of life through extension actions;
- ♣ Bringing the IF Goiano - Campus Iporá closer to the community;
- ♣ Extension as a means of transforming the region where it is inserted;

- ♣ Extension as a form of interaction between the internal community and the external community, with reciprocity regarding the exchange of knowledge;
- ♣ Benefits brought to the external community;
- ♣ Identification of needs in the community and, therefore, opening the institution so that this community seeks to resolve its needs within the institution itself;
- ♣ Staff qualification.

There is an understanding that the extension activities would effectively work as a bridge between the university and the community, permeating meanings, such as “approaching the IF Goiano - Campus Iporá with the community”, and extending through conceptions that emphasize the mutual gains provided by these activities. Interactions (“extension as a form of interaction of the internal community with the external community, with reciprocity with regard to the exchange of knowledge”; “identification of needs in the community and, therefore, opening the institution so that this community seeks to resolve its needs” in the institution itself”). There is also an aspect that points to a public policy character of local development linked to extension, as it is possible to infer through concepts such as “meeting the demands of the community, especially the rural community”, “improvement of people’s quality of life through extension actions”, “benefits brought to the external community” and “personnel qualification”.

A more precise meaning refers to “initial and continuing training courses”, a modality in which short-term vocational courses are offered, primarily aimed at serving the local labor market. Such courses, known by the acronym FIC, have been valued in recent years as an extension format encouraged by sectoral public policies such as the National Program for Access to Technical Education and Employment (Pronatec) and the New Paths Program. The view of several interviewees confirms this prominence:

It has an important part which are these initial and continuing training courses. They are those courses for training professionals for a need that really exists in the city... baker, for example (interviewee nº 01).

In these courses, we seek to serve people who do not have access to education. Their objective is to qualify people with short courses to be able to enter the job market (Interviewee nº 04).

It can be said that these designs help in understanding the meaning of extension as a “means of transforming the region where it is inserted”. In fact, there are different emphases, ranging from valuing FIC courses to civic and citizen training extension actions, including a focus on rural communities and family farming. But there is a common thread in all of them: the main idea that the region’s transformation necessarily involves differentiated support for populations in situations of socioeconomic vulnerability, corroborating to affirm that “Campus Iporá has been developing an extension activity”.

From this perspective, part of the interviewees considered the Thousand Women Program particularly notable, concerning the performance in the different areas of knowledge present in the daily life of that location:

The Thousand Women Project is aimed at vulnerable women, identifying this audience through the Social Assistance Reference Center. Hence, we work first on self-esteem and then on specific technical training. Through it, we have already managed to create a large number of women who were in deplorable conditions and today have formal jobs; others have already returned to the school opened their own small businesses in Iporá. This is a project that has a very strong interface with the local and regional areas” (Interviewee No. 05).

Certainly, the objective of promoting greater socioeconomic dynamism and improving the quality of life of the community (MORAES, 2016) is present here, having as a starting point the strengthening of interpersonal relationships and community bonds. Similarly, an effort to promote the dissemination of knowledge in a socially engaged way is observable, prioritizing the neediest people and valuing the beneficiaries’ previous experiences in the formatting/adaptation of the projects. That is, formalized knowledge and tacit knowledge are aligned in articulation between the macro and micro levels of interaction/relationship between the university and the external community, valuing preexisting potentialities and requalifying them with new approaches and possibilities built together (ARBO; BENNEWORTH, 2007; DÖRING;

SCHNELLENBACH, 2004). In the case of the Thousand Women Program:

We promoted a salting course. We selected vulnerable women who, at times, had never worked but who knew how to cook. And this had a very positive impact because most of them didn't give up and learned a lot, giving them the opportunity to transform the skill of cooking (which many already had) into a profession. Since many of them actually work like this today... (Interviewee No. 19).

According to another interviewee, extension actions with these characteristics are made possible through “an X-ray that we have shown the needs of the region, and so we have many projects to meet these demands” (Interviewee No. 04). Resuming the term of Döring and Schnellenbach (2004) that these relationships would be like positive externalities that flow from the university towards the community, a vision according to which these benefits would return to the university is evident: “the extension of Campus Iporá is very good for its role in bringing the campus closer to the community. And this community later becomes a defender of the campus” (Interviewee No. 02).

This support and social recognition, in turn, represents a validation of the relevance of the institution's role and the dialogue and negotiation of LED policies and strategies with other actors. In this sense, macro-level interactions/relationships are also strengthened in this scenario (HARLOE; PERRY, 2004). As a result, we empirically verify the adequacy of this theoretical approach in association with the operational concept of extension activity developed here, since the reality of the LED context signals a process of dynamization that has as one of its foundations the extension activities headed by the IF Goiano installed in the city of Iporá. In effect, the extension principles, guidelines, and attributes now advocated become, at the same time, supported and re-signified in the light of the extension activities developed in that locality.

V. FINAL CONSIDERATIONS

As discussed, interactions/relationships resulting from university extension play multiple roles in the context of policies and strategies that condition local economic development (LED) processes. In this sense, it is

important to define attributes and indicators that allow understanding these phenomena and provide a consistent theoretical-conceptual and empirical framework for this purpose. The operational concept of extension activity elaborated here, based on the frameworks conceived by FORPROEX (2012; 2013) and Resolution CNE/CES 7/2018, can be applied to the specific case of Iporá from the perspective of LED actors working in the locality, which illustrates an exploratory process of validating a hypothesis regarding the promising contribution of extension activities and brings up important reflections.

Understandably, the combination of formalized knowledge and tacit knowledge seems to be a watershed in the achievement of extension activities since it presents itself as a way to strengthen interpersonal relationships and community ties, which are essential for the successful development of LED efforts. Furthermore, the centrality of giving priority to action in the different areas of knowledge present in the daily life of that locality by the institution studied and the pressing social demands are highlighted to make the reciprocal benefits of university-external community integration more important effectively recognized. In the context of a small municipality like Iporá, identifying this set of characteristics in the extension actions is congruent with a progressive socioeconomic dynamism highlighted by LED actors and adequately captured by the operational concept of extension activity developed here. Finally, these results are promising for a future research agenda covering replication in other locations and incorporating other attributes or even using them differently to assess trends and specificities in the light of other concrete cases.

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