

6. A new proposal for interaction with the territory: origin, potential, and challenges of Brazilian Federal Institutes of Education

Una nueva propuesta de interacción con el territorio:
origen, potencialidades y desafíos de los Institutos Federales
de Educación de Brasil

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ABSTRACT

Recent studies have shown that higher education institutions play a significant role in national development and can modify the socioeconomic and cultural context of their surroundings when acting in a civically engaged manner. In this perspective, this article analyzes the new institutional design of the Brazilian Federal Institutes of Education (IFE) and the process that gave rise to these institutions, highlighting the potentials and challenges for their civic engagement. The research consists of exploring the norms established by the IFE, outlining the way they operate and analyzing semi-structured interviews conducted with executives of the Brazilian Ministry of Education (MEC). We argue that the verticalization of teaching, research, and extension, and the emphasis on local development indicate that IFEs represent a new form of conception of technical and vocational education in Brazil. Behind the creation of this new institutional framework underlies the premise of difficulty of traditional universities in interacting with the territory in which they operate.

Keywords: Federal Institutes of Education; Civic University, Extension, Local Development

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RESUMEN

Estudios recientes han demostrado que las instituciones de educación superior juegan un papel importante en el desarrollo nacional y pueden modificar el contexto socioeconómico y cultural de su entorno cuando actúan de manera cívica. En esta perspectiva, este artículo analiza el nuevo diseño institucional de los Institutos Federales de Educación (IFE) brasileños y el proceso que dio origen a estas instituciones, destacando el potencial y los desafíos para su compromiso cívico. Esta investigación consiste en explorar las normas que establecen los IFE, delinear su forma de actuar y analizar entrevistas semi-estructuradas realizadas a directivos del Ministerio de Educación de Brasil (MEC). Argumentamos que la verticalización de la enseñanza, la investigación y la extensión y el énfasis en el desarrollo local indican que los IFE representan una nueva forma de concebir la educación técnica y profesional en Brasil. Detrás de la creación de esta nueva institucionalidad se encuentra la premisa de la dificultad de las universidades tradicionales para interactuar con el territorio en el que se desenvuelven.

Palabras clave: Institutos Federales de Educación; Universidad Cívica, Extensión, Desarrollo Local

Uma nova proposta de interação com o território: origem, potencialidades e desafios dos Institutos Federais de Educação do Brasil

RESUMO

Estudos recentes têm mostrado que as instituições de ensino superior desempenham um papel significativo no desenvolvimento nacional e podem modificar o contexto socioeconômico e cultural de seu entorno quando atuam de forma cívica. Nessa perspectiva, este artigo analisa o novo desenho institucional dos Institutos Federais de Educação (IFEs) brasileiros e o processo que deu origem a essas instituições, destacando as potencialidades e os desafios para o seu engajamento cívico. A pesquisa consiste em explorar as normas que estabelecem os IFEs, delinear sua forma de atuação e analisar entrevistas semiestruturadas com gestores do Ministério da Educação (MEC). Argumentamos que a verticalização do ensino, da pesquisa e da extensão e a ênfase no desenvolvimento local indicam que os IFEs representam uma nova forma de concepção da educação técnica e profissional no Brasil. Por trás da criação dessa nova institucio-

nalidade está subjacente a premissa da dificuldade das universidades tradicionais em interagir com o território em que estão inseridas.

Palavras-chave: Institutos Federais de Educação; Universidade Cívica, Extensão, Desenvolvimento Local

Une nouvelle proposition d'interaction avec le territoire: origine, potentialités et défis des Instituts Fédéraux de l'Éducation au Brésil

RÉSUMÉ

Des études récentes ont montré que les établissements d'enseignement supérieur jouent un rôle important dans le développement national et peuvent modifier le contexte socio-économique et culturel de leur environnement lorsqu'ils agissent de manière civiquement engagée. Dans cette perspective, cet article analyse la nouvelle conception institutionnelle des Instituts fédéraux brésiliens de l'éducation (IFE) et le processus qui a donné naissance à ces institutions, en soulignant les potentiels et les défis de leur engagement civique. Cette recherche consiste à explorer les normes établies par les IFE, délimiter leur mode d'action et analyser des entretiens semi-structurés avec des responsables du Ministère brésilien de l'Éducation (MEC). Nous soutenons que la verticalisation de l'enseignement, de la recherche et de la vulgarisation et l'accent mis sur le développement local indiquent que les IFE représentent une nouvelle forme de concevoir l'enseignement technique et professionnel au Brésil. Derrière la création de cette nouvelle institutionnalité se cache le postulat de la difficulté des universités traditionnelles à interagir avec le territoire dans lequel elles opèrent.

Mots clés: Instituts Fédéraux de l'É; Université Civique, Extension, Développement Local

1. INTRODUCTION

The idea that the role of higher education institutions (HEIs) goes beyond the production of scientific knowledge (research) and professional training (teaching) is widely disseminated. There is a third role related to how they interact with the territory. As in other parts of the world, in Brazil and Latin America, these activities are called an extension (Castro & Tommasino, 2017).

Recent studies show that HEIs can modify the socioeconomic and cultural context of their surroundings and contribute to local, regional or national development (Harloe & Perry, 2004; Goddard, 2009; Goldstein and Glaser, 2012;

Goddard *et al.*, 2016; Mcneill *et al.*, 2020). The extension activities gain importance to local development when the HEIs act or show leadership to address community problems. These institutions interact in many ways with local communities, according to the concept of extension adopted and the organization's prevalent epistemological notion (Tripl *et al.*, 2015).

This paper was developed within the scope of the research study "Rethinking the civic university for the 21st century: new directions and practical propositions", conducted by the Center for Studies in Public Administration and Government of Fundação Getúlio Vargas (CEAPG/FGV). Assuming the existence of polysemy in the concept of extension, which is reflected in the performance of an HEI (Nonato *et al.*, 2018), this study focused on the case of the Brazilian Institutos Federais de Educação, Ciência e Tecnologia (IFEs) (Federal Institutes of Education, Science, and Technology). In the last decade, the national network of professional and technological education in Brazil has undergone a significant expansion. From 2005 to 2016, 504 new teaching facilities were inaugurated, adding to the 140 previously existing institutions. The network of IFEs has undergone a profound change both in conception and institutional design. The institutions were created based on Law 11892/2008, which provided for their role as teaching organizations offering undergraduate and graduate programs, as well as institutions of research and extension.

This article reflects on the institutional design attributed to IFEs with the 2008 law and the process that gave rise to these institutions, highlighting their potential and challenges in the light of the theoretical perspective of civic engagement (Goddard, 2009; 2016). We argue that the verticalization of teaching, the work with research and extension, and the emphasis on local development indicate that the IFE represents a new way of conceiving technical and professional education in Brazil. Behind the creation of these institutions lies the difficulty of traditional universities interacting with surrounding communities.

The next section presents the methodology adopted, followed by a theoretical background of the concept of civic university, which represents this study's theoretical-normative contribution to the reflections around the empirical object. The fourth section presents the case of the IFEs, considering these institutions as representatives of an innovative model of HEIs in Brazil. The last section contains the final considerations, summarizing the main findings, emphasizing the IFEs' potential and challenges.

2. THE UNIVERSITY'S CIVIC ENGAGEMENT

The notion of a civic university was first discussed in 1996 in the works of the American scholar Ernest Boyer. The author starts from the idea that the service universities provide must respond to the complex problems and needs of society, arguing that civic engagement gives the faculty four interconnected roles: 1) the scholarship of discovery, which involves a constant search for the expansion of knowledge; 2) the scholarship of integration, related to interdisciplinarity when producing knowledge; 3) the scholarship of sharing knowledge, taking on the task of disseminating and sharing academic production; and 4) the scholarship of the application of knowledge, to avoid the efforts and resources spent becoming irrelevant.

Goddard (2009) refines the concept of civic university, removing it from the individual sphere, of the professor, and placing it in a collective role, of the institution. According to the author, it is necessary to reinvent the general notion of a civic university, connecting it with people and places, taking responsibility for promoting well-being in the territory. Thus, knowledge application would be the universities' primary function.

In this sense, civic engagement must be the main *modus operandi* of universities, although not the only one. Goddard (2009) states that the British higher education financing model is useless with regard to the civic engagement agenda. It is necessary to identify new ways of assessing the institutions' civic impact to encourage and prioritize civic engagement.

Goddard (2009) corroborates Trippl *et al.* (2015) conclusions regarding the models of HEI in the UK, Sweden, and Austria. Despite the influence of other factors – such as path dependence, HEI tradition, general institutional context, community acceptance – the occurrence of one of the models depends on the policies that encourage or constrain the universities' behavior, as is the case with the financing policy.

In a more recent publication, Goddard *et al.* (2016) discuss civic university's concept, detailing its characteristics in 7 dimensions (Table 1). The first dimension refers to a sense of purpose. When looking at HEIs, the concern should not be what it is good at, but whether it is good for, so its cumulative impact on society is more important than the sum of its activities.

Another dimension points out that a civic university is actively engaged, demonstrating collaborative management that includes different social

groups. This practice implies mutual benefits from establishing a co-learning environment. The university must also envision civic engagement based on a holistic approach, making it the driving force behind its actions. Such territorial interaction cannot be a concern of a select group of academics or professionals at the university. This third dimension suggests that addressing external problems, or issues surrounding the institution, is part of its core activity rather than a mere additional contribution.

The sense of place is yet another dimension, according to Goddard *et al.* (2016). Although recognizing the importance of national and international bodies, this HEI model considers that the institutional identity is consolidated in local dynamics. Therefore, a civic HEI needs to focus its management on producing extra-academic impacts, willing to invest in objectives that impact beyond academia. Financial resources must be channeled to projects with practical effects in the territory, together with other incentives to encourage students, faculty, and other professionals to engage in activities with a local impact.

The civic HEIs must be transparent and accountable to stakeholders and the population in general. Not only do they need to produce indicators that allow monitoring of the implementation of civic missions, but must also encourage the community to evaluate its actions. This requires clear internal and external communication.

The last dimension of the civic university, according to Goddard *et al.* (2016), is related to the use of innovative methodologies. Activities aimed at inserting community actors in producing knowledge and the need to propose practical actions when conducting research lead HEIs to use forms of scientific production capable of promoting cross-cutting activities and social innovation.

When considered as a new university concept, the notion of civic is opposed to traditional models of university. However, the bias of civic engagement is the closest to a perspective of collaborative and participatory management and, mainly, the only one that moves the concept of territorial development, placing it as the HEIs priority. This represents a very useful theoretical lens to think about the peculiarities of the history and evolution of Brazilian universities.

Table 1. *Seven dimensions of a civic university*

1. Sense of purpose	Focus on solving social problems
2. Actively engaged	Must act collaboratively with individuals, groups, and global, national, and local institutions; reciprocity (mutual benefits); co-learning environment
3. Holistic approach	Civic engagement must be the institution's primary role, and such engagement is not limited to an individual or groups inside the university; attention to surroundings is not an additional contribution but part of the institution's core activities
4. Sense of place	Must recognize its role and function in the territorial economic and social life, and the university's infrastructure must be used to benefit the locals
5. Willing to invest	Channel financial resources to projects; offer incentives to students, faculty, and other professionals, so they are encouraged to engage in tasks that impact the territory; Hiring and training personnel takes into consideration profiles with skills and availability to act interdisciplinary and in partnership with organizations from different sectors, from the outside world
6. Transparent and accountable	University actions and activities need to be transparent and accountable to employees, stakeholders, and society as a whole; its mission is clearly disseminated internally and externally, allowing others to recognize the benefits of its activities
7. Innovative methodologies	Encourage its professionals to explore new approaches to face social challenges such as social innovation and using lessons learned to improve the work.

Source: Elaborated by the authors based on Goddard et al. (2016)

3. METHODOLOGY

This study adopts the case study method to deeply understand the phenomenon of the constitution of the Federal Institutes of Education (IFES) in Brazil, considering these institutions as representatives of a new institutional design (Stake, 1995). Official documents and normative provisions were submitted to content analysis to elucidate the institutional attributions of these HEIs. The data allowed us to identify possible incentives and constraints for implementing the IFEs in the country.

In addition, data were collected through semi-structured interviews conducted with Fernando Haddad, Minister of Education of Brazil (MEC) from July 2005 to January 2012, and with two managers from the Secretariat of

Professional and Technological Education (SETEC/MEC). The interviews were used to map actors, ideas, and concepts that contributed to the adoption of IFEs as a new model of Brazilian HEIs. The content of the interviews allowed the identification of the motivations for the creation of the Federal Institutes, allowing us to outline their trajectory. They also contributed to specifying the difficulties of implementing that new institution. Throughout the article, some excerpts from the interviewees' statements are highlighted as a way of illustrating and highlighting the investigation's findings. In short, the analysis of official documents and interviews allowed us to conceive the IFEs' potentials and challenges regarding institutional civic engagement.

We decided to omit the two managers' identities since their perceptions could somehow be harmful to them. Both managers interviewed worked at SETEC during the implementation of the plan to expand the national network of technical and professional education and participated in the discussions about the constitution of a new institutional framework, which culminated in creating the IFEs.

4. THE EMERGENCE OF A NEW INSTITUTIONALITY: CONTEXT, CONCEPTS, AND PROCESSES

In Brazil, professional education offered by the state goes back to the creation of the *Escolas de Aprendizes e Artífices (EAAs)* (schools of apprentices and craftsmen) in 1909. The Brazilian states' capitals received these schools to qualify the workforce in urban centers at a time when the industry was still incipient. In those years, known as the "First Republic," the need to reduce the social risks of marginalized people and control possible popular upheavals was on the government's agenda.

After the industrialization process in 1942, the EAAs were transformed into *Escolas Industriais e Técnicas* (industrial and technical schools). These schools were equivalent to secondary education, and offered technical courses linked to the needs of the industrial sectors of Brazilian developmentalism, such as the automobile sector.

In 1959, these institutions were named *Escolas Técnicas Federais* (federal technical schools) and assumed the legal format of *autarquia*, which are public agencies with a certain independence from the state apparatus. With the introduction of the First National Economic Development Plan (PNDE), launched

in 1971, the incentives to the petrochemical, transportation, and communication sectors induced these institutions to offer courses in these areas. During this period, the concern to rapidly train the workforce was such that the law establishing the national education guidelines changed the high school's curriculum, requiring the inclusion of technical-professional courses⁽¹⁾.

In 1978, the schools in the states of Paraná, Rio de Janeiro, and Minas Gerais were transformed into federal centers for technological education, known as CEFETs, and distinguishing from the federal technical schools in other states by training higher education professionals, offering degrees in engineering and other technical degrees. This movement for institutional change was only accompanied in other states after 1999, with the implementation of the normative provision of Federal Law 8984 of 1994 establishing the National Technological Education System. It should be noted that the states of Acre, Amapá, Mato Grosso do Sul, and the Federal District did not have these establishments, which were established in the form of Federal Institutes of Education (IFE) after 2007.

The evolution of technical and professional education in Brazil has been changing according to the incumbent governments' will, reflecting developmental conceptions in force in each period. Thus, although the 1988 Brazilian Constitution stated new rights, the prevailing economic vision was characterized by less government participation in the economic field. The privatization and state reform plans are proof of the effort to reduce public spending, including spending in technical education. In 1997, during Fernando Henrique Cardoso's government, a reform of professional education was launched. Among other things, this reform separated professional education from regular high school. The changes were standardized by Decree 2208, of April 17, 1997, which were heavily criticized by the academic community and unions (Casoliato & Garcia, 2014).

Following the decentralization bias that prevailed in the social policies of that period, President Cardoso created a program to expand professional education (PROEP) in partnership with the Inter-American Development Bank (IDB). PROEP aimed to finance the physical structure of the professional education network of states, municipalities, and the professional education offered by private actors. According to the program, the federal network was not allowed to expand without the partnership with subnational governments, players

of the business sector, or non-governmental organizations (art. 47, Law 9649/1998).

In the words of one of the managers of SETEC/MEC:

[...] This entire community involved in education – unions, associations, ANDES [union of higher education faculty], national education councils – asked Lula [Lula da Silva, Brazilian president from 2003 to 2011] to make changes, particularly in the area of technical schools, modifying the provisions of FHC's [President Cardoso] government, which enacted, in 1998, Law 9649. In article 47, the law explicitly said, "we are not going to take care of federal technical schools anymore." There, the entire expansion of the federal school stopped. (Interviewee 1)

During the government of President Lula da Silva, elected in 2002, the program contemplated strengthening the federal technical schools and the federal education centers. The program also envisaged revising all legislation related to vocational education, mentioning numerous conceptual mistakes in Decree 2208/1997. The first changes started in July 2004, by revoking regulations on the issue. This meant that the federal government could again expand the vocational education network by creating new teaching units, without necessarily counting on partnerships.

One of the changes that marked the new management of the Brazilian Ministry of Education (MEC) was the approximation and the establishment of a direct dialogue with the class entities and unions in the sector. This link was facilitated when professionals who were former heads in federal schools and worked directly in organizations such as CONCEFET (Council of Directors of Federal Education Centers) joined the SETEC's staff. In 2006, 64 CEFETs were established, using financial resources from the IDB and buildings repossessed by the federal government from private agents that failed to fulfill their duties as agreed in the program PROEP.

The plan worked so well that everyone wanted them [CEFETs]. The number of mayors in my office, in the office of [name of the Secretary of SETEC at that time], mayors that visited Lula's office, the Office of the Chief of Staff [...] And we started creating rules. This first time we did not have many studies at hand

[...] it was very empirical “we have this thing here; I can’t leave until this is working, you know?” And we started putting it to work [...] And the only thing we planned was to establish them where they were needed or where there were no units. Then we came up with the plan for the 64 technical schools; it was at the very end of Lula’s first term, we still managed to do so in 2006. (Interviewee 1)

In the course of the second expansion phase (2007-2010), when 150 schools⁽²⁾ were built, the need to create a new institutional format emerged. One of the motivations for this measure was the pressure of CEFETs to transform themselves into technological universities, as it happened with the federal center in the state of Paraná⁽³⁾.

How does the discussion about the institutes start? It starts at SETEC. It starts from the outside, [in debates] involving everybody, PT [Workers’ Party], and other political parties allied with the government. We went to a meeting at PT; it was the first meeting that I attended about IFE. And the [name of the secretary of SETEC] had called for us to prepare for the meeting, bring ideas, share our thoughts. There was an idea of transforming the organizations into institutes, changing the legal structure because the discussion was about the idea of a technological university. So, we had moved from the technical school to CEFET, the most important states had already made the transition, they had changed to CEFET, and the others were far behind. And the most advanced states and the others that had not changed their organizations to become a CEFET were already thinking about transforming the schools into technological universities. (Interviewee 2)

[...] So, this was the discussion in place. It was intensified with the transformation of Paraná into a technological university. This was the trigger. It was like a bomb. As they had very good academic staff, they managed to create the first technological university. It was their proposal; they managed to formalize it. This was their fight. (Interviewee 2)

CEFETs' perspective was to become a university, just as it happened with the CEFET in Paraná. But we did not want that. We did not want professional education to be seen as a university education. We backed the verticalization of supply. That was the difference. So much so that the federal technological university stopped offering high school because it is not their focus. (Fernando Haddad, former Minister of Education)

According to the narratives mentioned, MEC did not support transforming CEFETs into technological universities. The main argument was that technical and professional education in the federal system should play a different role from that provided by universities. The central premise was the verticalization of education based on high school and youth and adult education integrated with professional training, allowing the continuity of these young people's studies in undergraduate and graduate programs.

We developed a political-pedagogical project recognizing that, roughly speaking, while the university has a more horizontal view of knowledge, with several areas of knowledge [...] you have humanities, STEM, language and literature, the IFEs are designed vertically in the sense that you can offer professional EJA [youth and adult education], professional high school, higher education focused on technology, professional Master's degree. So the idea is that while the university emphasizes comprehensiveness of knowledge (as the term "university" suggests) [...]. The IFEs, on the other hand, do not seek this comprehensiveness. The institute may focus on certain professions. We made sure that the institutes included degrees in mathematics, chemistry, physics, and biology. The IFE model was created based on a specific vision of professional education, based on the thesis of verticalization; that we would have to offer professional education at all levels starting from basic education. (Fernando Haddad, former Minister of Education)

In addition to verticalization, interiorization was another argument of MEC to reject transforming CEFETs into technological universities.

First, being close to the community. I won't blame the university, but it is more difficult for the community to connect with the university, apart

from the people that managed to become academics, accessing the institution. It is difficult for the mayor of a very distant municipality in the countryside to seek help from the university because they often think that they won't find the support they need. (Interviewee 1)

So the university, in our history, has always been an academic world, restricted; a world that does not dialogue with the production world. These dialogues are very recent in the history of our university. So everything is capitalism. So there is a demonization of the market within the spaces of the university. (Interviewee 2)

The interviews' analysis suggests that federal technical and vocational schools should take on a new role in the country's socioeconomic context. When established in the inner regions, these schools had the imminent role of developing the territory, offering vocational education at different levels to meet the needs of the neighboring regions. Therefore, this expansion reflects a new conception of development in Brazil, migrating from a perspective of fostering national economic growth strategies and goals to a socio-territorial approach. According to one of the interviewees:

We are one of the entities in the field of education that has never been afraid of change. We have always followed the changes. Was the university implemented? No! The university is over! We changed and incorporated what we understood was important for the country's development. At first, the school of craftsmen [EAA] was preparing watchmakers, tailors, shoemakers [...] Then when we are going to change, the union [says]: "we are not going to change these characteristics." Then I say "my friend, so we should have become the best watchmakers in the world by today; if the idea is to keep going with the EAAs and train the best tailor, the best shoemaker" But things are changing. (Interviewee 1)

The design of the Federal Institutes of Education (IFE) expresses this new vision of development, bringing countless elements related to the concept of civic university.

4.1 The potential of Federal Institutes of Education in light of the civic university

The creation of the IFEs formalized through Decree 6095/2007. The use of this type of regulation instrument was frowned upon by the professional education community, not only because it presupposed the absence of debates for decision-making but also because of the negative experience of President Cardoso's period.

Going with that decree was hard work in Brazil because the idea of a 'decree' sounded 'authoritarian.' They say, "you criticized [President Cardoso] Fernando Henrique, but you do the same. You are doing things without talking to anyone." I say: "my friend, the consultation is here. Look, the decree is here. We want to turn this into a bill to launch in December." "But it needs support." "There will be a year to discuss." But nobody believed, and during this period we were improving. (Interviewee 1)

The choice for a decree to formally establish these organizations seems to have had a dual function. At the same time that it allowed a quick start and stimulated the debate – as the SETEC manager mentioned – the decree stopped the movement of CEFETs becoming technological universities.

Therefore, the IFEs were created at the end of 2008 as "higher education institutions offering also basic and professional education, pluri-curricular, and multicampus, specialized in offering professional and technological education in different teaching modalities, based on the combination of technical and technological knowledge in their pedagogical practices" (Article 2, of Law 11892/2008). Table II below presents the IFEs purposes and characteristics:

The first dimension of civic university proposed by Goddard *et al.* (2016), indicates that these institutions' primary purpose is to resolve societal problems. By focusing the training offer on the needs of the productive, social, and cultural arrangements present in the local territory and connecting teaching, research, and extension with the production of local technical and technological solutions, the IFEs' institutional design seeks to overcome obstacles to the development of the territory. Likewise, the economic and national bias are also supplanted by the concern with other aspects of the local context.

This perspective is already evident in phase II of the expansion plan for the federal technical and professional education network. The choice of locations

Table 2. *Purposes and characteristics of the Federal Institutes of Education, Science, and Technology (Law 11892/2008)*

<p>Art. 6 The Federal Institutes of Education have the following purposes and characteristics:</p>
<p>I – Offer professional and technological education, at all levels and modalities, training and qualifying citizens to work in several sectors of the economy, emphasizing the national, regional, and local socioeconomic development;</p>
<p>II – Develop professional and technological education as an educational and investigative process to create and adapt technical and technological solutions to regional peculiarities and social demands;</p>
<p>III – Promote the integration and verticalization from basic to professional education, as well as higher education, optimizing physical infrastructure, personnel, and administrative resources</p>
<p>IV – Guide the offer of education and training to consolidate and strengthen productive, social, and cultural local arrangements, identified based on mapping potentialities of socioeconomic and cultural development in the environment where the Federal Institutes of Education operate;</p>
<p>V – Become a center of excellence in offering education in sciences, in general, and applied sciences, in particular, stimulating the development of critical thinking, directed to empirical research;</p>
<p>VI – Become a center of excellence in supporting the offer of education in sciences in public educational institutions, offering technical training and updated pedagogical education for faculty working in public educational institutions.</p>
<p>VII – Develop extension programs and initiatives to promote science and technology;</p>
<p>VIII – Conduct and stimulate applied research, cultural production, entrepreneurship, cooperation, and scientific and technological development;</p>
<p>IX – Promote the production, development, and transfer of social technology, especially those related to environmental protection.</p>

Source: Elaborated by the authors based on Brasil (2008)

to receive the new schools considered the macro-regions that did not yet have such institutions. These locations had already been identified in a mapping carried out by the Ministry of Development, Industry, and Commerce. According to interviewee 1, of the 150 campuses built, 125 had some type of productive arrangement. In phase III (2011-2014), 208 facilities were built, with cities selected based on criteria such as low HDI, reduced per capita public revenue, universal service to the mesoregions, cities with extensive federal government investments through the federal government's Growth Acceleration Program (PAC) (Cassiolato & Garcia, 2014).

Civic activism (Goddard, 2016) advocates collaborative management, capable of promoting constant interaction with actors and institutions of different

scales and introducing an environment of co-learning. Producing, developing, and transferring social technologies suppose this interaction considering the environment exogenous to IFEs. Behind this premise, there is an acceptance that there is relevant knowledge produced outside academia. Therefore, it is possible to say that knowledge is territorialized.

Civic engagement is enhanced by the guarantee of administrative, patrimonial, financial, didactic-pedagogical, and disciplinary autonomy of the IFEs (art. 1, only paragraph, Law 11892/2008), as well as by the institutions' discretion to create and extinguish courses (art. 2, paragraph 3, Law 11892/2008). Such engagement is also maximized by the institutions' organizational structure as they have many campuses – a headquarter and other campuses spread across the inner states¹. The IFEs have two superior bodies of governance, Colégio de Dirigentes (board of directors) and the Conselho Superior (superior council) (art. 9 art. 9, paragraph 3, Law 11892/2008). The first is an advisory board, composed of the institution's president, the vice-president, and the deans of the IFE's campuses. The superior council issues norms and counts on the participation of civil society.

This permeability with the territory and the institution's concern with the community demands is explicit among the organization's purposes. It corresponds to the holistic approach, the third dimension of the theoretical-conceptual proposal of Goddard et al. (2016), which stresses the centrality of the concern with the local context in HEIs considered civic universities. It is assumed that the resolution of problems in the territory cannot be a desire of a few individuals or groups within the institution but the organization's main guideline.

The prerogative of autonomy and the discretion to offer courses aligned with the local potentials satisfy the fourth dimension of civic universities – the sense of place. The process of choosing the locations in which the IFEs would be established, considering the territorial needs, suggests recognizing the organization's role in the territory's economic, social, and cultural life. All these normative premises connect the IFEs with the ideal of civic universities. The willingness to invest in obtaining extra-academic impact, the guarantee of decision-making transparency and accountability, and the use of innovative methodologies – which are other characteristics of the concept – are aspects that require further research through case studies since they permeate the

institutional autonomy of each IFE. It is not by chance that the main challenges for implementing IFEs lie in these characteristics.

4.2 For the sake of identity: challenges during the implementation of the IFEs

When focusing on civic universities' characteristics related to investing in extra-academic impact, Goddard et al. (2016) advocated adopting management strategies capable of favoring the institution's interaction with the territory. In this regard, although the perspective of management autonomy of each IFE is accepted, the civic ideal depends on policies that encourage or constrain the adoption of this HEI model (Trippel et al., 2015). The MEC can promote these policies by creating specific programs or projects, organizing the budget to channel the required funds. When dealing with the issue of extension, the former minister of education clarifies:

It is the lack of money that limits extension, not the institution's autonomy. Within the university, there are sectors more or less committed to extension. It may happen that the organization's leaders are not so interested, but there will be people interested. The extension has an appeal. Now, if there is no funding, then it is difficult. Because the other demands end up using the resources [...] some things only work if funds are earmarked, that is the truth. These support programs are essential. The student aid program, for example, has its own earmarked funds. If the resources end up in the university's general budget, the money will not get to the student. Now, if it is earmarked, there is no discussion. (Fernando Haddad, former Minister of Education)

Although the IFEs are autonomous to establish their own budgets, the MEC can introduce incentives, stimulating projects that directly impact the local reality. As stated by Trippel et al. (2015), incentives are essential to influence the adoption of a specific HEI model.

Investing in extra-academic impact also means hiring professionals willing and able to work in the territory, generating local impact, with the ability to act in interdisciplinary and intersectoral projects. The people's development policy must be based on the training and qualification of professionals with this profile. According to one of the interviewees:

You have a faculty there on campuses who teach from Monday to Wednesday and Thursday they leave the region [coming back to the capital where they live]. They have no life in the community where they work. The reality is precarious in that community. [...] So, there is a precarious reality [in the IFES] regarding teaching because the rapid growth to attend political interests, and the broad purpose of the legislation, makes it hard; from the operationalization to the assimilation of the proposals. (Interviewee 2)

The interview excerpt points out some possible people management problems that can hinder the IFEs' institutional objectives. One of them is the lack of identification of professionals with the place. As the establishment of the IFEs' campuses occurs in locations with low socioeconomic indicators, the hired people usually come from the states' capital, attracted by salaries that are equivalent to the career of federal universities.

The faculty's potential lack of identity regarding the place where the institution is located may be followed by a symbolic resistance to fulfilling the organization's duties. To be more specific, the situation observed is that most people hired have academic degrees obtained from traditional universities, whose structure is still strongly disciplinary; extension is a practice of individuals or small groups; and most of the research does not bring results of immediate application. For one of the interviewees:

It is resistance "I am a doctor, I am a researcher, I will spend my nights teaching a PROEJA [youth and adults education/literacy program] student who cannot read, who cannot write the letters in a word." This is what gets my attention. The dilemmas that the institutes will face are facing today; they also go through these identity and cultural issues. (Interviewee 2)

Therefore, this new organization brings a problem of sedimenting an institutional identity. The problem starts with, among other things, the lack of connection of the faculty with the territory where the institutes were established, and the faculty's traditional academic training. In the words of one of SE-TEC's managers:

[...] we were aware that nobody knew what it was, nor did the minister himself know what it was. The network did not know what it was. It was

created first by decree, then a bill. After that came the first implementation, then it was subjected to a lot of political influences. In the first expansion, it was based in a cute document, and then it broke down. (Interviewee 2)

The hybrid format considering technical and professional training in basic and higher education requires hiring a new type of faculty. It requires a professor concerned not only with the classroom workload but, above all, with how their work impacts the community. The difficulty in finding professionals with this profile may jeopardize accomplishing the seventh characteristic of the civic university, i.e., adopting innovative methodologies to face social problems. Therefore, people management, including cultural issues, is one of the main bottlenecks for IFEs' civic engagement.

From another perspective, studies like Silva and Melo's (2018) have shown that the multifunctional profile required from IFEs' faculty affects working conditions. According to the authors, these professionals work under precarious conditions regarding the need to act in several distinct institutional attributions. The situation is aggravated by the lack of resources to carry out the activities. In other words, in both institutional and professional points of view, there is a mismatch between the normative requirement and the IFEs' capacity to fulfill their promise of promoting local development.

Finally, management transparency and accountability, the sixth characteristic pointed out by Goddard et al. (2016), encompasses adopting a more participatory institutional decision-making process involving local actors. In the administrative design of IFEs established by the legislation, the superior council is an open and plural decision-making space. However, it is constituted as a body that is internal to the organization. In addition, the IFEs' headquarters are usually located in capitals or large cities. In other words, the campuses, most of which based in the inner states, do not have deliberative and participatory management forums that contribute to the offices of the general management. This configuration can reduce the institutions' capacity to interact with the territory. Furthermore, there is no provision for the participation of the leaders of subnational governments in the superior councils, which is also a limitation in terms of intergovernmental cooperation actions and policies.

5. CONCLUSION

Reflections on the university's role in the twenty-first century bring up issues beyond professional training and high-impact research. The focus on internationalization and academic productivism deepens scientific knowledge entrenchment, causing these institutions to enter a logic of competition and distancing themselves from their connection with the territory. The effort to résumé the theoretical notion of a civic university (Goddard, 2009; 2016) appears as an attempt to stop this movement. One of the fronts of this update is the scope of the concept, which also includes the different types of HEI.

The new theoretical-conceptual contribution of the civic university defends an intense interaction of the HEI with the territory. In this sense, the resolution of territorial problems is a central concern, the management is collaborative and includes local actors, there is a widespread consensus on the importance of local development, the institution is willing to invest to generate extra-academic impacts, the administration is transparent and accountable, and the institution implements innovative methodologies, capable of coordinating and engaging the territory's different knowledge, actors, and arrangements.

When looking at the Brazilian experience, the case of the Federal Institutes of Education, Science, and Technology (IFEs) stands out. From a macro-sociological frame, the IFEs reflect a new notion of development – which overcomes the economicist bias and embraces a territorial and social perspective. From a policy process view, the emergence of the IFEs as an alternative to state action in the governmental agenda results from the configuration of the Ministry of Education's bureaucracy during President Lula da Silva's government. The ministry staff was composed of enthusiasts of the interiorization of professional education and, mainly, who shared the view that traditional universities could not move forward in greater interaction with their territory. The pressure of CEFETs to become technological universities, following the steps of what had happened with the Federal Center of Parana, was the trigger to create the institutes.

In this research, we identified much potential for civic engagement in IFEs' institutional design. The emphasis on local development, the search to connect its actions with the productive, social, and cultural arrangements, the production of social techniques and technologies, the encouragement to carry out

applied research, entrepreneurship, and cooperative, as well as the managerial autonomy and discretion to create courses are elements that largely satisfy the characteristics outlined by Goddard et al. (2016).

However, there are numerous challenges to overcome in the process of increasing the IFEs' civic engagement. The main one appears to be related to the organizations' identity. This issue encompasses the faculty's profile. The professionals need to absorb and understand the main goal and ideals of the IFEs since their traditional, disciplinary, and entrenched academic background underpins everything that IFEs do not want to be. The development of this new type of professional, combined with the consolidation of organizational culture in line with the IFEs' organizational goals, are important challenges to overcome.

The IFEs spread around Brazil may already be advancing to overcome these challenges, mainly due to their autonomous management. Therefore, further research to deepen these issues may be conducted, identifying and exploring successful cases. That said, although the constitutional prerogative of inseparability between teaching, research, and extension refers to universities, the Brazilian Federal Institutes of Education seem to be better positioned to accomplish the coordination of these three activities.

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NOTAS

⁽¹⁾This obligation was valid until 1982, changing when Law 7,044 again separated the propaedeutic from the technical-professional education.

⁽²⁾ This new expansion adopted more technical criteria to choose the places to receive the schools of the federal network of professional education. Socioeconomic indicators were used to guide such decisions.

⁽³⁾ The Universidade Tecnológica do Paraná (technological university of Paraná) was established in 2005 after presidential sanction of a bill proposed by members of the Brazilian Congress representatives of that state.