LEME: Laboratory of Spaces and Memories of Professional and Technological Education in Santa Catarina

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Abstract

Context: This article will address the LEME (Laboratory of Spaces and Memories of Professional and Technological Education of Santa Catarina). Method: This laboratory presents itself as a Scientific, Technological and Innovation Research Project (CTI Project), as it aims to identify and map spaces of practices and memories of Professional and Technological Education (EPT) in Santa Catarina, especially in the Federal Institutes, and develop a memorial and virtual archive. Results: The form of the article will address the proposal of constituting a space for memory and discussion of the EPT, with the intention of not only making materials and documents about the EPT available to other researchers and the community, but also to problematize and understand the vocational densifications in the mesoregions where Santa Catarina's Vocational Education Units are located.

Keywords
Memory, Virtual Space, Practices, Professional and Technological Education

Introduction

LEME (Laboratory of Spaces and Memories of Professional and Technological Education in Santa Catarina) is a Scientific, Technological and Innovation Research Project (STI Project), as it aims at identifying and mapping spaces of practices and memories of Professional and Technological Education in Santa Catarina, mostly in the Federal Institutes, and developing a PTE memorial and a virtual archive. More specifically, the proposed research aims at constituting a space for PTE memory and discussion, not only to provide materials and documents about PTE to other researchers and the community, but also to problematize and understand the vocational density in the mesoregions where Professional Education units in Santa Catarina are located.

This way, the virtual memorial will also help understand the PTE impacts in Santa Catarina, as it is necessary for the state to identify the consequences of its public policies in the territory. It is understood that PTE school institutions are the result of public policies located in all regions of Santa Catarina as a benchmark in Technical and Technological Professional Education and in teacher training. These institutions are located as strategic fixed points to produce technical-scientific knowledge for regional development, through articulation with local productive arrangements, structured in an omnilateral proposal of professional education integrated to secondary education.

The Portuguese acronym “LEME”, of unknown etymology, goes back to the meaning of sense, direction; on ships or aircraft, it is the instrument that helps direct and locate in space, facilitating the
driver's work. Based on this idea, LEME (Laboratory of Spaces and Memories of Professional and Technological Education in Santa Catarina) is a Scientific, Technological and Innovation Research Project (STI Project), as it aims at identifying and mapping spaces of practices and memories of Professional and Technological Education in Santa Catarina, mostly in the Federal Institutes, and developing a PTE memorial and a virtual archive.

The history of PTE institutions, as well as any school institution, is built from the narratives and stories of their actors (education professionals, students, parents, community etc.), from documents (regimes, legislation, photos, architecture, spaces etc.) and their educational practices. These stories, practices and documents (material and immaterial) are valued when retrieved, interpreted and systematized, enabling the preservation and communication of institutional memory.

The lack of PTE systematic historical documentation in Santa Catarina reveals the institutions’ negligence in archiving documents as a process of preserving their history and the history of STI institutions. This finding raises the following issue: how can one identify the impact of technological professional education in Santa Catarina from the space-memory dialogue? The general goal of the research is to understand the impacts that the studied institutions produce in the dialogue with the territory in which they are present, and, from that, build a virtual memorial that is effective as a space for identification, rescue and production of PTE stories and memories in Santa Catarina.

In this sense, it is necessary to reflect and have research proposals that aim at constituting a PTE memory space, in which educational practices developed by institutions in the recent past are also registered, contributing to the development of PTE and STI in the state.

To focus on the practices and guidelines of the daily practice of professional, technical and technological education carried out in PTE institutions, and understand the relations of this institution with the territory that hosts it and its intervention in time and space, in dialogue and action with other agents and organizations, it will be necessary to review the literature on the experience of PTE education in Brazil and Santa Catarina, as well as analyze documents, guidelines and indicators that refer to policies produced for demands that move broad social sectors. In this sense, this project is an applied research proposal with a qualitative approach and a documentary character at first. For document evaluation, content analysis will be used, having Bardin's analysis units as basis and instrument. Initially, the following analysis categories are proposed: work, professional and technological education, regional development, memory, and educational practices.

**Problematization and state of the art**

From the second half of 2019, as part of the activities of the research groups of the master’s program, an attempt was made to find documents on PTE institutions, which demonstrated the lack of PTE systematic historical documentation in Santa Catarina. This revealed the weakness in preserving the memory of these institutions, which are STI protagonists in Santa Catarina. This finding raises the following issue:
how to identify the impact of professional and technological education institutions in Santa Catarina from the space-memory dialogue?

PTE institutions in the public sphere, in their current conception, propose to offer courses that integrate professional training and citizenship training, seeking to provide students with access “to scientific-technological training and historical-social knowledge [...], the understanding of the technical, social, cultural and political foundations of the current production system in an articulated and integrated manner.” (FRIGOTTO; CIAVATTA; RAMOS, 2005, p.15). The definition of courses offered is based on the study of local productive, cultural, and social arrangements, contributing to the development and innovation in these geographic spaces.

For the purposes of this research, it is understood that

Economic growth, as we know it, has been based on preserving the privileges of the elites that satisfy their desire for modernization. On the other hand, development is characterized by its underlying social project. Having the resources to invest is far from being a sufficient condition to prepare a better future for the masses, but when the social project prioritizes the effective improvement of this population’s living conditions, growth metamorphoses into development.


It is from this development perspective that this project intends to identify the impacts of professional and technological education offered by the institutions studied through the analysis and reflection on the categories: technological education-work-development; pedagogical practices in formal spaces of Professional Technological Education; Professional Technological Education memory.

Based on the relationships of space and memory, have PTE institutions been able to contribute and exercise their roles as agents of regional development and citizenship promoters? Have they contributed to the development and diversification of local productive, cultural and social arrangements?

Considering the importance of archives, and from the clarity that there is not a preservation movement for these materials in PTE institutions in Santa Catarina, the problem of this research lies in analyzing the memory of institutions for the understanding of PTE in Santa Catarina and, in particular, identifying the impact on the educational scenario and on the State development.

The research in progress and the intended ones have the concept of comprehensive education as their background, understood as that which aims at contributing to overcome the structural duality in Brazilian education, allocating different training paths to different audiences according to their class origin.

It is thus defended that everyone is entitled to a complete education, which is not satisfied with the socialization of systematized culture fragments and understands access to a training process, including school, as everybody’s right, promoting the development of their broad physical and intellectual faculties.

(ARAUJO, 2014, p.9)

Although each research carried out in the scope of this group makes use of different authors considering the specificity of each object, they all have the concept of comprehensive education in common, defended by, among others, by Ramos (2008), Kuenzer (2000), Araujo (2014), Machado (2009),
Frigotto Ciavatta and Ramos (2005), when defending secondary education integrated with professional education as a possibility of moving towards the offer of integrated training (omnilateral), of the “integration of all dimensions of life in the formative process” (RAMOS, 2008, p.63). Such dimensions are work, science and culture, fundamental elements of life that structure social practice. By taking work as an educational principle (G. Frigotto, 2009; Kuenzer, Trabalho, Cad, Pesq, & Paulo, 1989), this perspective of professional training shifts “the focus of its objectives from the labor market to the human person” (RAMOS, 2008, p.6).

There are several possibilities to advance towards curricular integration and each institution will need to find the best way to promote it, in a process that will always be dynamic, seeking to “link educational processes to social processes, school and life, school curriculum and local reality, theory and practice, education and work” (MACHADO, 2009, p.88). Among the various possibilities of integration between the disciplines, the author suggests contemplating “temporal approximations; content mergers; accomplishment of shared studies and research; joint promotion of seminars and events; implementation of teaching methods by projects and by generative themes”, always having research as the nodal point. (MACHADO, 2009, p.93).

Grounded on the concept of integrated education briefly described, works and discussions carried out within the scope of the research group seek to understand how PTE has been constituted in past and present times, focusing on school culture and the educational practices that it entails, as well as memories, records and documents, which, from the perspectives of space and memory, capture this movement in Santa Catarina. These researches are based on a common theoretical and methodological framework that allows the group to delve into the literature in the field and identify with a particular methodology.

Some researches from the group are based on discussions that revolve around school culture, and professional and technological education from the perspectives of space and memory. The first categories raised in these surveys were: regional development, school culture, memory and memorial, cultural history, agricultural school. There are also works and scientific productions of the group that, by focusing on the development of school culture in educational practices, seek to understand the limits and possibilities of these practices within the PTE scope, as well as their contributions to the realization of the PTE goals and, consequently, regional development.

Regarding the debate on regional development, the proposal is in dialogue with the production of authors that appear in the bibliographic references and those who, based on the Development Superintendent of the Northeast (SUDENE) experience, have been qualifying the Brazilian regional debate: Celso Furtado, Francisco de Oliveira, Iná Elias Castro, Carlos Vainer and Tânia Bacellar. They are reference authors who are often found as bases in theoretical discussions in research sources and periodicals from development agencies in Santa Catarina, the Institute for Applied Economic Research (IPEA), and the Brazilian Institute of Geography and Statistics (IBGE), and allow the establishment of a dialogue with other Graduate Programs.

The research group carries out the results of other researches with similar approaches, based on queries in the Scielo and Capes Journal Portal databases. In these searches, the following isolated terms were used: school culture; educational practices; collective memory; individual memory; dynamic memorial; cultural history; agricultural school (most of the PTE institutions were agricultural schools). The search carried out in these platforms retrieved results on the terms researched and selected for dealing with the themes similarly to what is projected in this work.
It is noteworthy that the research of the “school culture” and “cultural history” terms had significant results, as they are themes that are theoretically well explored and that allow a satisfactory bibliographic review, mainly from authors such as Julia (2001) and Viñao Frago (1995; 1998), and Viñao and Frago (1995). Most articles have the same theoretical line from this work, with common authors cited, such as: Le Goff, Roger Chartier, Jacques Revel, Michel de Certeau, and Peter Burke. The selected articles show a predominance of the historiographical approach, and that are somehow related to the proposed theme, object and research problem.

Using the “educational practices”, “professional and technological education” and “Federal Institute” indicators, the Scielo platform showed no results. In turn, BDTD showed two doctoral studies that relate to the scope of this study. Antônio (2018), through educational practices with local productive arrangements, sought to relate the implementation of the Federal Institute of Maranhão with government intentions. Kandler (2019) aims at understanding how music presents itself as an educational practice in PTE. Both theses are close to this research, as they are based on the understanding of PTE as the articulation of technology, science and culture, and, respectively, part of the local, social and cultural productive arrangements in Santa Catarina.

In addition to the search for isolated terms, the group adopted the search for combined ones, aiming at approaching the theme of the proposed research. The "collective memory", "individual memory" and "cultural history" terms were associated with education and/or schools (not necessarily agricultural ones). Articles dealing with education since the military regime were considered to contextualize aspects of school culture in agricultural colleges.

Searches were also carried out in the Digital Library of Theses and Dissertations (BDTD), with the following terms:

a) agricultural school and green revolution, with no relevant results;

b) agricultural school and memory, with no results;

c) agrotechnical school and memory – a dissertation by Ribeiro (2015) was retrieved. The relevance of this dissertation is due to the fact that it is a research on the experiences of servants and students of an agrotechnical school, from the perspective of cultural history, when the military intervention in Brazil was in force;

d) agrotechnical school and military intervention – the same dissertation mentioned above was obtained as a result;

e) agricultural school and boarding school – a dissertation by Dalpiaz (2005) was retrieved. It works with former students' memories through oral history, with interviews and authors who dialogue with this research project, such as Ecléa Bosi and Maurice Halbwachs;

f) boarding school and indiscipline – a dissertation by Marcelino (2013) was retrieved. The interest in this dissertation is due to the fact that it uses a similar methodology and content analysis using Laurence Bardin as a reference;

f) school culture and agricultural/agrotechnical school – the result was a thesis by Campos (2016). This thesis investigates the history of school culture through the school’s memory, with oral testimonies and documentary sources, problematizing cultural history in parallel with the history of education. It uses authors such as Le Goff and Jacques (2013), Julia (2001), Viñao Frago (1995; 1998) Viñao and Frago (1995) and Certeau (1998) as theoretical support.
h) cultural history and agricultural/agrotechnical school – no dissertation or thesis with a significant approach to contribute to the research was retrieved.

The selected theses and dissertations contemplate concepts, approaches and authors that are similar to those studied in the current research proposal. Therefore, they will enrich its discussions and theoretical construction. However, none of these productions approach the research object with the same extent and the same analysis perspective.

By proposing the constitution of a virtual memorial, available to society as a whole, as the main result, the intention of this research is anchored in the concept that the State should be an inducing agent of social development in all its aspects. Consequently, its structures must operate in the sense of elaborating and producing alternatives that contribute to an epistemological leap that brings intelligence and fluidity to spaces, and translate into regional development.

We think about intentionality based on John Searle’s contribution and this formulation, elaborated by Fernandes, in which intentionality is understood

The intentions propose different readings for reality, generating conflicts materialized by disputes in the interpretation of facts. Intentionality as a historical option is also a political position, a preference for the readings of a particular social class.

(FERNANDES, 2009, p.202-203)

This historical and political option, which denotes taking a stand in defense of the interests of the working class, is not the expression that could compromise the research results.

The choice of class is not and cannot be an action that leads the subject (collective or not) to distort reality with the intention of favoring the conception believed in and understood as an expression of equity, because, according to the English historian E. P. Thompson, the class

[...] happens when some men, as a result of common experiences (inherited or shared), feel and articulate the identity of their interests with each other, and against other men whose interests differ (and often oppose) from their own. Class experience is largely determined by the relations of production into which men were born – or have unwittingly entered.

(THOMPSON, 2001, p.274)

This theoretical survey made it possible to verify a theoretical and methodological basis for the development of researches, undergraduate theses, dissertations and scientific communications about some PTE institutions and practices, which will add to this reflection.

Research methodological proposal

The scientific statute requires a certain corpus to think about the world we live in and its constant transformations. Such theoretical-methodological corpus is delimited by notions, concepts and categories, and the structures of new reflections and the theoretical-methodological approach make a given theory a possibility of a methodical approach supported by a given conceptual field.
From a methodological point of view, this research is of a basic nature, with a view to contributing to the expansion of existing theoretical knowledge about the histories and memories of the researched institutions, and also of an applied nature by presenting an educational product, resulting of the study to be carried out. It is also qualitative in approach, concerned with issues that cannot or do not need to be quantifiable. It is also instrumental and of a documentary character at first.

In the direction of Gerhardt and Silveira (2009), qualitative research is concerned with understanding and explaining the dynamics of social relations, based on reality aspects, to the detriment of quantified data. These may be part of qualitative research, but they are not its essence. The authors also define documentary research as being “(...) the one carried out from contemporary or retrospective documents, considered scientifically authentic (non-frauded)” (GERHARDT and SILVEIRA, 2009, p.69).

The approach applied in this work is mesoanalysis. Lima (1992, p.7) explains that the mesoapproach favors the study and understanding of elements “(...) resulting from macro and micro approaches” enabling “(...) an articulation between the different levels of analysis (macro, meso, micro)”. In this sense, Magalhães (2007) points out that the relationship between educational institutions and the community goes through this approach, in which there is a crossover between the spheres of macro, meso and micro history.

Placido, interpreting Nóvoa's thinking, elucidates that

> [...] the school institution, although subject to a set of State laws placed above and as regulators of the school itself, is endowed with its own structure and language that allows it to be more than a space for mechanical or systematizing reproduction of society’s thoughts.

(NÓVOA, 2014, p.32)

According to Nóvoa (1999), this perception of the school allows us to understand that it imposes itself as an institution constituted by “relative autonomy”, as an “intermediate territory” that goes beyond simply reproducing a macro system's values and norms, not perceived as just a micro universe (NÓVOA, 1999, p.20).

Thus, the proposed research starts from a macro contextualization of national policies and the PTE history, while it works with the reality of each of the institutions to be researched and their relations with the local society in the micro aspect. The meso approach will be based on Nóvoa (1999); Magalhães (2004, 2007) and Lima (1992).

Having the definition of the methodological approach, it is necessary to define the research sources with the science of its scope, nuances and suggestiveness. Understanding that memory can be perceived and analyzed by various elements, such as the reports of those who are and work in the institution, whether those who lived a certain time or situation, by photos, objects, architecture, the culture of a certain community, records from everyday life, among other possibilities; all these elements can be considered in the process of identifying the overview of PTE school institutions in Santa Catarina, which is the focus of the research.

The researcher who considers the totality of sources (the different sources that involve a research object, making the necessary analysis clippings) and the totality that involves the sources (the economic aspects,
political, social, educational, cultural etc. – of the particular, singular, general and universal), walks with firm steps towards the explanation of the movement of the real, that is, of the studied institution

\textit{(TURMENA, 2014, p.33)}

Documentary research is considered a safe source as basis for several studies (LÜDKE; ANDRÉ, 2013), because, depending on their intent, each researcher can analyze the documents with different perspectives and objectives. Amorim states that “[...] for professionals who work with memory, the archive offers itself as a laboratory where the bases for their research are found” (2000, p.90). Therefore, the researcher may choose to read the documents and retrieve aspects that meet his objective and purpose of study. In this sense, Magalhães points out the importance of the archive in the construction of the

[...] history of an educational institution, and points out that: as a memory, the archive basically documents what has been lived, giving it meaning; but as an image of reality, the archive is a frame, so it refers to action, enabling its reification. This critical and integrated approach gives the archive the main importance in the development of an updated rationality, which allows, regarding the construction of the past, to think about education with history

\textit{(MAGALHÃES, 2007, p. 74)}

The author also points out that the archive has a memorial purpose in its creation, but assumes a characteristic of reconstitution in a historical approach, as it is “[...] in the form of variables and specific informational records that the data existing in a given archive becomes part of the historiographical narrative” (MAGALHÃES, 2007, p.74).

With the clarity of all these categorizations and possibilities, it is understood that the research that reflects the institution’s memory should occur with a better perception and accuracy. Consequently, it is intended that the research is carried out by analyzing the educational practices in progress or registered, the documents of the PTE institutions, as well as possible student documents, minutes, photos, regulations, plans and other documents that may be part of the process of building and reporting the institution's memory during the research.

The historical and sociocultural dimension is of paramount importance in the investigation suggested here, due to the theoretical-conceptual and methodological context already exposed. Julia (2001) suggests that, for researchers in the memory of education, “sources can be found if we have the tenacity to go look for them”, and that this is a particularly interesting way of “concerning with the analysis of the contents taught and of school practices” (JULIA, 2001, p.19). In this sense, after mapping and selecting the sources, content analysis will be adopted as a procedure for analyzing the information, which is “a research technique that works with the word, allowing the production of inferences from the content of the communication of a text in a practical and objective way, being replicated in their social context” (CAREGNATO & MUTTI, 2006, p.682).

In this research, content analysis will be used, based on Bardin’s units of analysis. Thus, when proposing the use of content analysis, we aim at a method for interpreting documents to avoid a superficial reading. A reading of the sources supported by the bibliographical research that accompanies the analyses is intended. According to Bardin, content analysis methods aim to:
the overcoming of uncertainty: what I think I see in the message is actually contained, but can this very personal ‘vision’ be shared by others? - and the enrichment of reading: if an immediate, spontaneous look is already fruitful, can’t a careful reading increase productivity and relevance? (...) what is sought to demonstrate regarding the messages or by clarifying elements of meanings that could lead to a description of mechanisms that we did not have a prior understanding of [...]

(BARDIN, 1977, p.29)

Once the choice of analysis method has been conceptualized and explained, we will continue with the steps and names created by Bardin, Content, Reto, and Paulo (1977), in which three stages or “[...] three chronological poles [...]” (BARDIN, 1977, p.95), are established for content analysis: 1) pre-analysis; 2) material analysis; 3) treatment of results, inference and interpretation.

In this sense, as it is a qualitative research, content analysis also allows us to infer the perception of presence or absence of any registration unit, and absences can be as significant (or more) than presences, being also applied on several reduced sources (Bardin et al., 1977). According to Bardin, it is necessary

[...] establish more discriminating categories, as it is not linked, as a quantitative analysis, to categories that give rise to sufficiently high frequencies so that calculations become possible. It raises problems in terms of the relevance of retained indices, as it selects these indexes without exhaustively dealing with all the content, with the danger of important elements being left out, or of non-significant elements being considered

(BARDIN, 1977, p.115)

Bardin et al. (1977) still emphasizes the importance of establishing relationships with the context of the analyzed source production, such as the conditions of production, who speaks, to whom and in what circumstances, among others. In this research, the analysis will proceed with previously defined categories while maintaining the possibility of adding new categories or altering them through the analysis of the material found. Initially, the following categories of analysis are proposed: work, technological education, development, local productive arrangement, history, memory, and educational practices.

In order to analyze the categories related to the daily activities of PTE institutions, and to understand the relationships of these institutions with the territory that hosts them and their social and historical intervention, in dialogue and action with other agents and organizations, it is necessary to review the literature on the experience of PTE education in Brazil and Santa Catarina, the search and selection of documents dealing with educational memory and practices, carrying out individual fieldwork and with the research group, and the consequent disclosure of the results.

As a final step, it is possible to propose the construction, application and evaluation of an educational product conceived as a Virtual Memorial, containing the result of the work carried out with documents and interviews, aiming at being a space for teaching institutional history and, consequently, the PTE history in Santa Catarina, in addition to preserving memory.
Final considerations

LEME will propose to create a virtual PTE memorial that will be a device or equipment to understand educational practices and the impacts that institutions of this nature produce in the dialogue with the territory in which they are present, through the identification, retrieval and production of stories, memories and PTE in Santa Catarina.

PTE institutions produce impacts through dialogue with different sectors and actors in the territories where they are located. This dialogue occurs through the specific educational practices of these spaces, their interaction with the local productive order and their relationship with the social and cultural arrangements, characteristic of each community. Therefore, when it comes to history in this project, it does not refer to a linear and periodized history, but to stories, from a cultural perspective. Moreover, memory stands out, as it is found in everyday practices and is the living movement itself, which feeds documents, regardless of what these documents are, the history and the possibilities of analysis.

In this sense, understanding the impacts that the studied institutions produce in the dialogue with the territory where they are present allows the retrieval and production of PTE stories and memories in Santa Catarina, in addition to building a virtual memorial that is effective as a space for identification.

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