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The school goes to the museum(!)(?): a view of pedagogical coordinators and educational management in Uberaba, Minas Gerais

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ABSTRACT. School education, commonly called Formal Education (FE), invariably lacks support to align with the challenges of the contemporary, globalized, interactive and technological world. Non-Formal Education (NFE), represented in one of its aspects by museums, presents itself as a strong ally in terms of skill development that actually culminates in a humanized and interactionist educational perspective, a partner of FE. This research investigated the perception of pedagogical coordinators and the manager of the Department of Elementary Education (DEE) in the city of Uberaba, Minas Gerais, about the approach between FE and NFE, particularly in the school-museum relationship. We adopted Content Analysis as a theoretical and methodological contribution, according to Laurence Bardin. We used theoretical contributions from exploratory research with a semi-structured interview with the DEE manager and structured questionnaires with the pedagogical coordinators of this segment. The results demonstrate that there is a long way to go in order to align the actions developed by the schools in didactic-pedagogical approach with the museums of the city. Another finding evidenced the lack of knowledge on the part of the pedagogical coordinators about the local museums, despite understanding the importance of an approach with the school. It is hoped that the reflections brought by this research can contribute to the realization of a more fruitful dialogue between schools and museums, especially within the scope of Elementary Education II.

Keywords: formal education; non-formal education; elementary education II.

A escola vai ao museu(!)(?): um olhar de coordenadores pedagógicos e da gestão educacional de Uberaba, Minas Gerais

RESUMO. A educação escolar, comumente chamada de Educação Formal (EF), invariavelmente, carece de apoio para que se alinhe aos desafios do mundo contemporâneo, globalizado, interativo e tecnológico. A Educação Não Formal (ENF), representada em uma de suas vertentes pelos museus, apresenta-se como uma forte aliada em termos de desenvolvimento de habilidades que de fato culminem em uma perspectiva educacional humanizada e interacionista, parceira da EF. Esta pesquisa investigou a percepção de coordenadores pedagógicos e da gestora do Departamento de Educação Fundamental (DEF) da cidade de Uberaba, Minas Gerais, sobre a aproximação entre a EF e a ENF, em particular na relação escola-museu. Adotamos como aporte teórico-metodológico de pesquisa a Análise de Conteúdo, segundo Laurence Bardin. Utilizamos contribuições teóricas da pesquisa exploratória com a realização de entrevista semiestruturada com a gestora do DEF e aplicação de questionários estruturados com os coordenadores pedagógicos desse segmento. Os resultados demonstram que há um longo caminho a ser percorrido no sentido de alinhar as ações desenvolvidas pelas escolas em aproximação didático-pedagógica com os museus da cidade. Outra constatação evidenciou o desconhecimento por parte dos coordenadores pedagógicos sobre os museus locais, apesar de compreenderem a importância de uma aproximação com a escola. Espera-se que as reflexões trazidas por esta pesquisa possam contribuir para a concretização de um diálogo mais profícuo entre escolas e museus, em especial no âmbito do Ensino Fundamental II.

Palavras-chave: educação formal; educação não formal; ensino fundamental II.

(¿)(i)La escuela va al museo(!)(?): una visión de los coordinadores pedagógicos y la gestión educativa en Uberaba, Minas Gerais

RESUMEN. La educación escolar, comúnmente llamada Educación Formal (EF), carece invariablemente de apoyo para alinearse con los desafíos del mundo contemporáneo, globalizado, interactivo y tecnológico. La Educación No Formal (ENF), representada en uno de sus aspectos por los museos, se presenta como un fuerte aliado en términos de desarrollo de habilidades que en realidad culmina en una perspectiva educativa humanizada e interaccionista, un socio de EF. Esta investigación investigó la percepción de los coordinadores pedagógicos y el gerente del Departamento de Educación Fundamental (DEF) en la ciudad de Uberaba, Minas Gerais, acerca de la aproximación entre EF y ENF, particularmente en la relación escuela-museo. Adoptamos el análisis de contenido como una contribución teórica y metodológica, según Laurence Bardin. Utilizamos contribuciones teóricas de la investigación exploratoria con una entrevista semiestructurada con el gerente de DEF y cuestionarios estructurados con los coordinadores pedagógicos de este segmento. Los resultados demuestran que hay un largo camino por recorrer para alinear las acciones desarrolladas por las escuelas en un enfoque didáctico-pedagógico con los museos de la ciudad. Otro hallazgo evidenció la falta de conocimiento por parte de los coordinadores pedagógicos sobre los museos locales, a pesar de comprender la importancia de una aproximación con la escuela. Se espera que las reflexiones aportadas por esta investigación puedan contribuir a la realización de un diálogo más fructífero entre escuelas y museos, especialmente dentro del alcance de Educación Primaria II.

Palabras-clave: educación formal; educación no formal; educación primaria II.

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Introduction

The school, as a democratic space where both knowledge exchange and construction take place, has a fundamental role in society, especially for the development of skills in social and cognitive aspects of a student. We understand knowledge exchange in the sense that members of the community inside a school (teachers, pedagogical coordinators, managers and students) carry within themselves personal experiences intrinsic to their lives in society, translated as popular knowledge that dialogue with each other outside of the school environment. On the other hand, building knowledge is also about studying and getting to know notions and ways to interpret the world from processes historically (re)constructed as scientific knowledge.

Freire (2000) argues that the construction of knowledge starts from the microcosm (which is closer to the student's own experience) to the macrocosm (which distances itself from its own reality). This way, everyday experiences and perceptions contribute to the teaching and learning processes occurring in a more natural way. It is a fact that such processes are continuous and take place before school hours, and do not stop once the student leaves school.

When considering education in a tripartite view, comprising Formal Education (FE), Non-Formal Education (NFE) and Informal Education (IE), we are faced with three educational biases that can be interpreted in different ways, a modern way of thinking about the educational setup. According to Marques and Freitas (2017), for example, there's a considerable diversity of classifications for NFE, which demonstrates why it's so hard to come up with a unanimous definition for the term.

We can interpret FE as something structured and organized that makes for part of the curriculum and school plans, which follow rituals based on institutional norms, documents and legislations. This bias carries purpose, intentionality, and is represented by institutions that grant credits at the end of each learning cycle or stage, diplomas and levels to be reached in the schooling process.

IE, in the perception of Falk and Dierking (2010) is never organized, as it solidifies in experiences and spontaneity. As an example, the author mentions conversations between friends, dialogues between parents and children, experiences within the core of the family, and even *MindfulTalks* (conversation circles) in people's daily lives. Along these lines, Libâneo (2010) reflects that IE can occur "[...] at home, on the street, at church or at school, in one way or many, we all encompass pieces of our life within it: to learn, to teach, to learn-and-teach" (Libâneo, 2010, p. 26). Marandino (2008), supported with descriptions by Smith (1996), presents the NFE as "[...] any activity organized outside the formal education system, operating separately or as part of a broader activity, which intends to serve clients previously identified as apprentices, and featuring learning objectives" (Marandino, 2008, p. 13).

Some researchers defend the idea of complementarities between these educational aspects. Cazelli, Costa and Mohomed (2010), for example, ponder that these three educational models have to be seen as complementary, and

that the school ends up being largely responsible for the educational alignment between them. For Braund and Reiss (2006 apud Colombo Junior, 2014), these strands have educational symmetries that dialogue and approximate, after all “[...] school-age students spend about two-thirds of their lives outside formal schooling, and there are still educators who tend to ignore, or at least minimize, the crucial influences that the experiences outside school have on students’ knowledge and understanding [...]” (Braund & Reiss, 2006, apud Colombo Junior, 2014, p. 48). Belle (1982, p. 162) adds that “[...] the school hosts NFE through extracurricular activities that have little to do with credits, grades or diplomas, but which deliberately and systematically reflect teaching and learning”. We align our interpretation with the idea that museums in their specificities and target audiences can be understood as environments that promote NFE, and agree with Marandino (2008) that,

[...] museums have been characterized as places that have their own way of developing their educational dimension. Identified as non-formal education spaces, this characterization seeks to differentiate them from formal educational experiences, such as those developed at school, and informal experiences, generally associated with the family sphere (Marandino, 2008, p. 12).

Given this, this research investigated the perception of pedagogical coordinators of municipal schools of Elementary Education II in the city of Uberaba, Minas Gerais (MG) and the view of the manager of the Department of Elementary Education (DEE) of the Municipal Department of Education (MDE) on the approach between FE (school) and NFE (represented by the city’s museums). From this objective, arise a few questions, such as: What is the perception of the pedagogical coordinators regarding the approach between FE and NFE, particularly the school-museum relationship? How has it happened (if it has) and how schools have been pedagogically organized to carry out visits to NFE spaces? What is DEE/MDE’s views regarding the integration between FE (schools) and NFE spaces (museums) at a municipal level? Are there ongoing continuing education actions being developed by DEE/MDE, directed at the assertive use of the city’s NFE spaces?

The theoretical constructs of Content Analysis (Bardin, 2011) are part of the theoretical-methodological design of this research. We used theoretical contributions from exploratory research, with the building of a structured questionnaire of Likert typology applied to pedagogical coordinators, and a semi-structured interview based on research data with the manager of DEE/MDE in Uberaba/MG.

Dialogues in a fruitful approach

Dialogue presupposes a reciprocal exchange of information, in which a web of ideas and debates contributes to the benefit of all those involved. The approach between the school and the museum contexts, through its agents, reflects this web of formative processes that go beyond school walls and are essential to broaden a student’s formative spectrum. Cazelli (1992), Almeida (1997) and Marques and Freitas (2017) discuss museums as educational spaces, coming from the perspective that these spaces are very important for the socialization that occurs outside the school, contributing to teaching and learning processes and, also, to student’s cognitive and affective development.

Griffin (1998) states that museums offer important tools for the learning process, such as the possibility for the student to observe, evaluate, classify, compare, analyze, and apply ideas, gather information, and use evidence critically and logically. The museum environment can provide students with the opportunity to experience a learning process that is remarkable, exciting, and long-lasting. Almeida (1995) and Kelly and Gordon (2002) also add that visiting a museum, in addition to contributing to cognitive gains, also promotes affective gains, which are inseparable within the student’s learning process. Almeida (1995) argues that “[...] starting from the point where schools frequently seek out and visit museums, it’s necessary to understand that they have the potential to surpass the school’s complementarities” (Almeida, 1995, p. 51), being essential for teachers to pay close attention to this fact.

From research developed at the Instituto Butantã Museum, Almeida (1995) recalls that the passive presence of the teacher during the visit to the space, leaving students dispersed throughout the place and passing on to the monitors full responsibility for the dynamics of the visit, leads to it representing a hindering agent for students’ learning. This finding has been shared by different investigators in the field of museums, culminating in questions such as: is this passivity linked to the lack of teacher training? Or, when planning guided tours, how has the dialogue between schools and museums been happening (if ever)?

Carvalho, Ballesterro and Arruma (2009), in an investigation on the acting of Basic Education teachers during guided visits to the Museum of Science and Technology in Londrina, mention:

[...] we did not observe any specific pedagogical planning that sought to understand the inner workings of the museum, its contents, and the dynamics of the visit [...] it would be up to the professor who proposes the visit to take care of this [...] this apparent conduct of indifference could precisely be lack of knowledge about the exhibition itself (Carvalho et al., 2009, p. 10).

Knowing the exhibition and appropriating the objectives that stimulated a visit to the museum are fundamental premises to enable interconnections between what's experienced in these spaces and what's approached in the classroom, which is a fundamental aspect to maximize the teacher's didactic-pedagogical work with its students.

In this scenario, this research sought to investigate the perception of pedagogical coordinators and the manager of DEE/MDE from Uberaba/MG about the approach between FE and NFE, particularly in the school-museum relationship. It is worth noting that the City Hall (via its Cultural Foundation) produced, in 2006, a booklet typifying eight institutions defined as museums in the city. It's also of note that the official website of the city hosts information about local museums (Uberaba, 2019), namely: Museum of Sacred Art, Museum of Decorative Art, Paleontological/Dinosaur Museum, Chapel Museum, Zebu Museum, Chico Xavier House of Memories, Chico Xavier Memorial and Living Memory Museum.

Theoretical-methodological research design

The general objective of this investigation is retrieved, based on the qualitative typology research, supported by the theoretical constructs of Content Analysis (CA) (Bardin, 2011). The construction of the empirical data of the research derived from the elaboration and application of structured questionnaires of Likert typology and from semi-structured interviews. Aguiar, Correia and Campos (2011) clarify that the Likert typology of questionnaire construction reflects a self-report, which consists of "[...] a series of questions asked about the subject, where respondents choose one of several options, usually five, being named as: strongly agree, agree, neutral/indifferent, disagree and strongly disagree" (Aguiar et al., 2011, p. 2) or similar denominations.

The research participants were 30 pedagogical coordinators working in school units that offer from 6th to 9th grade of Elementary School II. The choice to work with the pedagogical coordinators is justified, as they are responsible for the pedagogical follow-up of the teaching staff in schools; they promote continuing training for teachers and have a direct influence on the planning of school visits to extracurricular spaces. As for the interview, this was carried out with the manager of DEE/MDE, and was encouraged by the preliminary results built together with the pedagogical coordinators. This systematic data construction made it possible to elucidate *in loco*, through research data, the manager's perspectives regarding the subjects in question, her perceptions and paths outlined by DEE/MDE. We emphasize that this research was approved by the Research Ethics Committee (protocol: 89713218.1.0000.5154, nº 2.703.129) of the Federal University of Triângulo Mineiro, and the Terms of Free and Informed Consent were presented and approved by the participants of this research.

As for the analysis of the empirical material, Bardin defines CA as "[...] a set of communication analysis techniques aiming at obtaining, through systematic and objective procedures of message content descriptions, indicators (whether quantitative or not) that allow the inference of knowledge regarding the conditions of production [...]" (Bardin, 2011, p. 48). The CA suggests a systematic analysis based on three specific moments:

(i) pre-analysis: an initial phase of organization and systematization of all material built during the research. At this moment, the empirical material is skimmed through, basically paying attention to: the 'exhaustiveness' of the textual elements, the 'representativeness' within the initial universe to be analyzed, the 'homogeneity', following criteria in accordance with the objectives of the research, and 'relevance' to the subject of the study. In this research, this phase was based on prior reading and analysis of all the questionnaires answered by the pedagogical coordinators, the transcription and prior analysis of the interview that was carried out with the manager of DEE/MDE, and also exploratory research of municipal documents that rule education in the city.

(ii) exploration of the material: after previous reading and selection of materials to be analyzed, we took a closer look in order to unveil ways of coding, decomposition or enumeration, and categorization of the data. At this moment, we defined what the author called the *Unit of Contexts* (UC) that is, a corpus of meaning from which the categories of analysis are outlined (Table 1).

Table 1. Unit of Contexts (UC) and outlined analysis categories.

UC	Categories	Descriptions
Visions and perspectives on the approach between schools and museum (FE and NFE) in Elementary Education II (6 th to 9 th year).	A. FE (school) and the approach with museums: importance and perspective as viewed by pedagogical coordinators.	Presents the views of pedagogical coordinators active in Elementary Education II on the importance of school-museum approach and its contribution as a pedagogical tool to the student's learning process.
	B. FE (school) and the approach with museums: importance and perspective as viewed by the Department of Elementary Education.	Presents the perception of the Department of Elementary Education, represented by its manager, on the importance of the school-museum approach. Also discusses the manager's views toward the data that was built along with the pedagogical coordinators.

Source: developed by the authors based on Bardin (2011).

(iii) treatment of data/results: based on the outlined analysis categories and analysis previously carried out, the researcher aims to answer their research concerns through interpretations and inferences. According to Bardin (2011), this moment of analysis allows the passage of initial research perceptions, derived from the constructed data to the conclusion of the research. Guided by the outlined categories, we seek, through inferences and interpretation, to raise notes and conclusions for our research questions.

Some notes and discussions

Category A - FE (school) and approach with museums: importance and perspective as viewed by pedagogical coordinators.

This first category of analysis presents and discusses the views of pedagogical coordinators who work in municipal schools in Elementary Education II, on the importance of the school-museum approach and its contributions as a pedagogical tool for the students' learning process. But first, we believe it is important to characterize the research participants. Thus, the first part of the questionnaire was intended to profile the 30 pedagogical coordinators, especially regarding their experience in the function.

Results showed that 50% of these professionals are fully working within their job, being placed within the payroll of Education municipal civil servants. The other half is made up of municipal employees allocated to the coordinator function. However, 83% of all civil servants are qualified to exercise the role of pedagogical coordinator, and the other 17% are teachers from the municipal Education system with previous experience in coordination and were therefore relocated to the job. As for their time of experience as a pedagogical coordinator, we found that 43% have less than three years of experience, 24% between three and seven years, and 34% have been working for more than seven years, that is, most are beginners in the pedagogical coordination job.

Investigating the perception of pedagogical coordinators on the approach between school and museum, we initially asked them to explain what they understood by NFE spaces. Among the feedback, the word 'learning' was mentioned by only three coordinators (10%), indicating that for them, extra-classroom activities also contribute to educational processes: 'Opportunity for learning experiences outside the school environment, in spaces such as, for example, the municipal library', 'A place where learning is present in a playful way', 'Spaces outside school that provide learning opportunities, such as theaters, museums, fairs'. It is also noted that a coordinator emphasized the playful nature of NFE spaces for learning purposes, which clashes with the statements made by Mintz (2005), where she argues that many times spaces outside the school (such as museums, science centers and zoos) are used solely as a source of entertainment, mischaracterizing its primary educational function (Colombo Junior, 2014).

The other participants mentioned generic answers or did not answer this question, for example: 'An informal environment', 'Tourism in the city's spaces', 'Any environment outside the school', among others. Such answers show lack of understanding of the pedagogical coordinators of what an NFE space should be, since most weren't able to clearly define an NFE space. We also observed that the coordinators' perceptions move towards a link between the 'physical space' component as the entity that defines the NFE. This is an

interesting finding, as, despite not being unanimous, many studies have argued that it is not necessarily the physical space that defines the educational model, but the intentions of those who practice and experience it.

As for visits, only 17% of pedagogical coordinators said that their school unit did not make any visits in the last school year, and 40% said that the school carried out at least one or two visits. Still on this, 43% of coordinators indicated that the school carried out more than three educational visits in the last year. At first, this number of visits may seem significant, however, when we consider the number of municipal school units in the city (73 units, from kindergarten to the final grades of Elementary School), some with dozens of classrooms and more than a thousand students, certainly the number of reported visits becomes quite small.

Based on answers, when asked which spaces were visited 43% of the pedagogical coordinators did not answer the question, and 10% mentioned 'different places in the city', without specifying which. Although the questionnaire was answered anonymously, this data is troublesome, as it highlights a contradiction between previous answers, or even a defensive nature of the coordinator in not classifying the spaces visited by his school. Among the other respondents, 30% mentioned: sewage treatment plant, city municipal library, local universities, public archives, zoo, planetarium and water treatment plant. Only 17% pointed visits to museums but didn't specify which.

It is worth remembering that the city of Uberaba/MG has a population of approximately 331,000 inhabitants (according to the 2018 census of the Brazilian Institute of Geography and Statistics) and as reported maintains eight institutions classified as museums by the City Hall's Cultural Foundation. No museum space in the city was mentioned by the pedagogical coordinators, which allows us to infer that the municipal schools of Elementary School II rarely visit the city's museums, clashing with research in other scenarios, such as in Portugal, where it is evident that "[...] school audiences are the main museum attendees, reaching in some cases a percentage of 45% and, in others, more than 50% [...]" (Xavier, 2004, apud Feio, 2014, p. 2).

Although there were few educational visits to NFE spaces, we questioned pedagogical coordinators on the initiative to carry out these visits. As a result, we found that only 14% stated that the visits took place at the initiative of teachers from the school units, with 20% claiming an initiative from their pedagogical coordinators and 47% indicating that they were MDE initiatives. Only 2% of coordinators indicated that the visits were made from initiatives by the school board and 17% did not respond to the question. The fact that almost half of the visits were initiated by MDE may indicate a concern of the Municipal Secretariat with extra-classroom actions. However, it can also be an indication of the need to deepen discussions on such themes with school managers and pedagogical coordinators in school units.

In the municipal school system of Uberaba/MG, the annual teaching plans for teachers are endorsed by the pedagogical coordinators at the beginning of each school year. Considering that only 14% of teachers showed initiative to visit NFE spaces, we infer that only a small portion included such actions in their teaching plans, which is worrying. Also, the data revealing that 47% of the visits were MDE initiatives provokes a question: did teachers and pedagogical coordinators have a voice in this decision, or are they immersed in a power relationship in which their opinions are veiled? We point out that, although the organization and articulation of a visit is an initiative of MDE, giving a voice to teachers and pedagogical coordinators is essential, since the necessary alignment between schools and museums necessarily involves school grounds, by the direct participants of the teaching process, the coordinators and perhaps, even the school's management team.

Regarding the planning of visits to NFE spaces, especially to museums in Uberaba/MG, 10% of the pedagogical coordinators responded that they did not carry out any type of planning with the students, as the scheduling was carried out directly by MDE, through the DEE. As for the other respondents, 70% stated that even though the visit was an initiative of MDE, planning was carried out along with teachers. This result is important, as it shows harmony between these professionals in their own schools, but it does not minimize the need for a closer dialogue between the actions of the Municipal Secretariat and the city's schools and museums. In this regard, Martins (2006) argues that "[...] museums have enormous educational potential which, in order to be used constructively by schools, brings out the need to establish inter-institutional dialogue in the pursuit of common goals" (Martins, 2006, p. 179).

When asked whether MDE encourages education workers to use NFE spaces, especially museums, 20% of pedagogical coordinators answered "yes", indicating (generically) that courses with this theme were held, offered to teachers by *Casa do Educador* (a continuing education space maintained by MDE). On the other hand, for 40% of the pedagogical coordinators, *Casa do Educador* has not offered courses of this nature, and the school organizes itself for visits, sometimes with support from MDE.

We asked coordinators about support for carrying out visits. For 40% of the pedagogical coordinators, there are always obstacles that end up making visitation proposals difficult or even discouraging them. Among these obstacles, they mentioned the unavailability of workers in the school unit to monitor activities outside the classroom and the lack of transportation for all students to visit. This is a worrying result, since 47% of coordinators mentioned that most visits took place at the initiative of MDE, which has the duty to provide support (logistics and personnel) for these visitations. We also sought to hear from the pedagogical coordinators about the degree of agreement or disagreement about some statements concerning the topic under discussion (Table 2).

Table 2. Guiding statements regarding the degree of agreement or disagreement of the participants.

QUESTION: Regarding the statements below, point with an X your degree of agreement or disagreement.	Strongly Agree	Partially Agree	Indifferent	Partially Disagree	Strongly Disagree
Normalization of data in percentage with 100% bars					
Teachers in the municipal education system are unaware of the importance of non-formal education spaces.	12	32	12	12	32
School transportation is one of the biggest obstacles regarding the non-use of non-formal spaces (such as museums).	64	24	0	8	4
Non-formal education spaces don't help students to learn.	0	8	0	12	80
We have support regarding training of professionals, at the level of continuing education, in the use of non-formal spaces.	0	12	16	36	36
Non-formal education spaces are used for entertainment purposes only.	0	24	16	16	44
All the teachers in my school unit know the museums that are located in our city.	4	32	32	24	8

Source: data referring to the participation of 25 pedagogical coordinators, 5 of which did not respond, systematized by the authors (2020).

A data that stands out from the analysis of the table above is that among the coordinators who answered this question, 80% indicated strong disagreement with the statement that NFE spaces do not help in the students' learning processes. This result can be an indication that they see the importance of including visits in the didactic practices developed in schools. However, it can also show a lack of dialogue in school units, since more than half of the pedagogical coordinators (64%, last line of table 2) do not know or disagree that their teachers know of the city's museums, for example. Another noteworthy result refers to the school transportation of students when visiting NFEs, such as the city's museums. More than half of the coordinators (64%) fully agreed that this is one of the biggest obstacles regarding the non-use of these spaces, corroborating the findings of Coelho (2009), in which the professors participating in his research report the lack of transportation as one of the main challenges for students to go to the museum. This result is also in line with other studies that reflect the need to rethink the planning of school visits to such spaces (Colombo Junior, 2014), especially when planned by Municipal Secretariats, as in the present case.

It is interesting to note that when the coordinators were confronted with the statement “Teachers in the municipal education network ‘don’t know the importance’ of non-formal education spaces”, the results showed a uniform division of perceptions, that is, 44% indicated agreed and 44 % disagreed with this statement, and 12% chose not to voice an opinion. This data reinforces the need for coordinators to have a more fruitful approach with the teachers in the teaching staff of their own school units, since knowing the school’s teaching staff is a fundamental requirement for the development of joint actions, such as the planning of didactic visits to the non-formal spaces of education. In addition, 72% of pedagogical coordinators disagreed with the statement that there is support for continuing education for the use of non-formal spaces, which further reinforces their role as manager of school units.

At another point in the questionnaire, we asked the pedagogical coordinators to voice an opinion on the statement: “non-formal educational spaces, such as museums, are very well used by the final years of Elementary School and these spaces help students to learn in the classroom of class!”. The big surprise was to see that most pedagogical coordinators chose not to answer this question. We infer that they did not do so because they didn’t know if teachers in their school units know the city’s museums, as indicated in Table 2. The answers of the coordinators who were willing to reflect on this statement are transcribed in Table 3.

Table 3. Answers from coordinators to the statement on museum-school approach.

PC*	Views/Perceptions	Tone of the answer
I	I believe that for the student to be able to visit these spaces, we first need to prepare the teachers who are going to school. Each day [these professionals are] less prepared, professionally and socially. (PC-I)	Limitations in initial training
II	[Museums] are not well used due to many challenges, such as lack of transportation, unavailability of informed teachers in school and of monitors in some of these spaces. (PC-II)	Lack of transportation and of teacher’s training.
III	I don’t consider that museums are well used spaces, many lack investments and personnel to work as guides [visit mediators] and instructors during these visits. (PC-III)	Lack of mediators in the spaces.
IV	Non-formal education spaces cement student’s learning, since they synthesize the content from the classroom. (PC-IV)	Idea of complementarity.
V	Everything can enrichen a class. Everything is learning [referring to the NFE spaces]. (PC-V)	Learning in the NFE spaces.
VI	With good planning, any visit [to museums] will bring good learning advantages. (PC-VI)	Need for previous planning.
VII	[Visits to the NFE spaces] helps in history lessons, where more visits could occur. (PC-VII)	Learning in the NFE spaces.

*PC stands for Pedagogical Coordinator. Source: data gathered with pedagogical coordinators, systematized by the authors (2020).

We realized that for PC-I, the challenge in bringing school and museum closer relates to deficient initial teacher training, being necessary to think about the teacher’s preparation before envisioning a didactic visit to the NFE spaces. It is interesting to remember that no initial training ‘delivers’ society a professional that is ready and done, with teacher training being a continuous form of training (Pimenta, 1996) and the constitution of a teaching identity, which is shaped and formed on school grounds. We share of the CP-I opinion that, even if during initial training the teacher doesn’t have access to processes that relate FE with NFE, the school environment should provide teachers with such training.

PC-II and PC-III listed difficulties such as the lack of transportation and of qualified personnel to help in the visits, respectively. As for the lack of transportation, we have already raised this discussion, as this is a recurrent difficulty manifested by teachers, coordinators and school principals when carrying out extra-classroom visits. As for the lack of qualified personnel to receive visitors, it is worth mentioning some specific features of the museums in Uberaba/MG. In the course of this research, we carried out some spontaneous visits to 08 (eight) museums in the city (all public) and we verified the complaint of the pedagogical coordinators, that is, in most museums there were no mediators, and information (of schedule and functioning, not of the exhibitions themselves) ends up being given by the patrimonial security staff. This was an observation that we took to the DEE/MDE manager and will be discussed further in the text, since dialogue with the Department of Culture is urgent in order to overcome this obstacle that often prevents school visits to city museums.

For PC-IV, an approach between school and museum is very positive, making it possible to consolidate student learning and synthesize the contents studied at the school. Martins (2006), investigating school visits to the Museum of Zoology of the University of São Paulo, reports that teachers see the museum as an aid in student learning, as a different class, or even as a moment to put into practice what it was taught in class. This perception reflects the idea of complementarity between spaces, that is, if on the one hand it broadens the spectrum of teaching and learning possibilities, on the other hand, it may represent a reduction in the possibilities provided by museums, which go beyond merely content-based teaching, collaborating with the student's formation as a citizen.

We agree with the statements of PC-V, PC-VI and PC-VII that learning processes are a continuum of actions and are present in different spaces beyond school, including museums. A fact that dialogues with Marandino (2001) when he mentions that "[...] museums are also spaces with their own culture and, in this sense, it is expected that it offers the public a form of interaction with knowledge different of that in school" (Marandino, 2001, p. 88). We understand that the experience provided by educational visits, in addition to contributing to the motivation of students for studies in the classroom, also favors the feeling of belonging to the city and to society, in a move to acquire sociocultural role.

Category B - FE (school) and the approach with museums: importance and perspective as viewed by the Department of Elementary Education.

In this category of analysis, we were interested in knowing the view of the DEE, represented by its manager, regarding the importance of the school-museum approach. Also, what is the manager's perception of these spaces' contribution as pedagogical tools for the students' learning process and for the training of teachers. Thus, we conducted an audio interview recorded for approximately two hours, on a day and time scheduled by her, at MDE's premises. In order to preserve her identity in our analysis we will call her Athena.

Athena is 38 years old and has been with the Municipal Education Network for eight years, being allocated in the position of pedagogical coordinator. In recent years she has been a pedagogical advisor at MDE and about a year ago she assumed the role of manager of the DEE. Initially, we presented the research to Athena, talked about the theme, the problem, and the perspectives of the investigation in the scope of municipal schools. Finally, we asked her to tell us a little about Elementary School in the city and the knowledge she had about NFE spaces in the city, especially museums.

Today in the city of Uberaba we have 73 (seventy-three) educational units. I follow, specifically, the Elementary School [...]. I understand that non-formal teaching spaces greatly contribute to the learning of children and adolescents. We always encourage municipal school units to interact with these spaces, where we have scheduled several visits, this year, we had Elementary I actions at the Zebu Museum and Elementary II at Living Memory. In addition, the units themselves hold some classes in public squares or sports courts, in the neighborhood in which they are located (Athena, in an interview).

When Athena mentions "[...] that non-formal teaching spaces greatly contribute to the learning of children and adolescents [...]", we extract two aspects for discussion: 'non-formal teaching spaces' and 'learning of children and teenagers'. The term 'teaching', in this context, can enunciate the idea or be understood as synonymous with content learning, that is, when we refer to non-formal spaces such as museums, we use the term 'non-formal education'. In this way, we demarcate that the actions developed in these spaces go beyond the teaching of content, adding values and experiences that contribute to the shaping of the visitor as a citizen. Continuing, the reference to 'learning' reveals Athena's perception that the visit goes beyond the (simplistic and rooted in the school context) idea of walking, that is, it has an educational purpose,

corroborating previous research in the area (Marandino, 2001; Colombo Junior, 2014). Regarding this aspect, Figueroa and Marandino (2013) mention that nowadays the importance of science museums as an educational space is evident, making reflection on the concepts of learning in these places increasingly important. We also questioned Athena about how she analyzes the role of the pedagogical coordinator in this action to bring schools closer to museums:

We always say here at MDE that the pedagogical coordinator is the professional who can mark the success or failure of the school unit. We punctuate it! It is per excellence the manager of the pedagogical process. The pedagogical coordinator can and should recognize the importance of these spaces in the city and value them. So much so that we are reformulating the municipal curriculum matrices in the light of the BNCC and we were careful to list such spaces [of non-formal education] and their importance for the students' academic success. These matrices will be available for consultation and used by the entire Municipal Education System from February 2020, but in the matrices that are under way in 2019, such aspects are already listed, but in a very timid way (Athena, in interview).

The importance of extra-school spaces is evidenced in Athena's speech, however, previous analysis (Table 2) revealed that the perception of pedagogical coordinators is that 44% of teachers do not recognize the importance of these spaces, and therefore alignment between the DEE and visitation actions to these spaces by school units is urgently needed. As a way to guide the interview, some research data was extracted from the questionnaires answered by the coordinators and presented to Athena. This way, we asked the manager about how the approach between schools and museums has been carried out and if there has been any course in this regard in the Municipal Education System. Athena mentioned that:

[...] MDE is comprised of many different departments, and the demands that are observed, which are pointed out by the school units themselves, come as proposals for continuing education. At a certain moment, a form is sent to the units, in which they fill in the main emerging themes for that group. For those who stood out on the System, after a round of discussion between department heads, courses are then open. And for others who had low demand, sometimes due to specific problems [...] we asked these unit to work on these themes with its group in the working hours allotted for training in the teaching unit itself (Athena, in an interview).

When we analyzed Athena's statements, especially the part in which she mentions: "[...] we request that the unit itself work on these themes with its group in the working hours allotted for training in the teaching unit itself [...]", we noticed a clash with the position expressed by the pedagogical coordinators (Table 2). In other words, 72% of the pedagogical coordinators disagreed or did not express an opinion (16%) about having support for the training of professionals, at the level of continuing training for experiences in non-formal education spaces. With that in mind, we asked the manager: 'Regarding the NFE theme, is there currently any course offered by DEE/MDE in progress that involves this theme for teachers/coordinators?'. According to her:

We have a course that works the human body with the main teachers of the 4th and 5th years. As we are not specialist teachers, we feel the need to encourage perspective and importance in valuing and knowing the body and, within this proposal, teachers from all school units visited the Living Memory Museum, halfway through the 2nd semester of 2019 and at the beginning of this year and took several groups along to this space. It was and is still being very positive, because students get to know another world, another way of seeing and perceiving things. And, it is clear that if it weren't for the school, they would not have this opportunity within their family environment (Athena, in an interview).

Based on an exploratory investigation of official documents in the city of Uberaba/MG for the continuing education of teachers, we found a total of 364 courses offered by Casa do Educador between 2012 and 2018. Indeed, the course cited by Athena represents one of only two courses on the subject offered to teachers throughout this period. We point out that, given the diversity and size of the Municipal Education System, it is necessary to expand discussions related to the theme of NFE and museums, given the meager offer of courses in the last seven years. It is important to highlight that, due to the short amount of time that Athena has been in this position and her vast experience in school units as a pedagogical coordinator, the school-museum approach has great potential to germinate within the scope of the city's educational efforts during her term of office. Athena was very receptive to new views and perspectives on the themes addressed, which may be an indication of this movement.

We hope that the consequences of this investigation are to further contribute to the (re)thinking of actions in the Municipal Education System, especially regarding the school-museum approach. This way, at a given moment of the interview, we presented, along with the manager, some of the results of our previous analysis, gathered from the answers of the pedagogical coordinators. We understand that the discussions we held may represent a way to reach this goal. Given this, Athena mentioned that:

Terms are often signed for concession, authorization for research in the Municipal Education System and we almost never get a return. Even though your research has not yet been completed, it already gave me a series of internal questions about the potential of these spaces [of non-formal education] and the need to work on actions that are actually formative. We'll align some necessary actions and redirect when needed (Athena, in an interview).

Feedback of research carried out in educational systems is important and can contribute to overcoming obstacles identified in the development of these investigations. Every year, several researchers request authorization to MDE and school units to carry out academic research, but few present the results of their studies. Athena brings attention to something that needs to become the rule and not the exception in the academic sphere: the feedback of research to schools.

As for the perceptions of the pedagogical coordinators, we pointed out to Athena that they agonize over the need for a more effective dialogue with the DEE, given the school's approach to museums in Uberaba/MG. For many pedagogical coordinators, it is necessary to advance in continuous training and also to advance in institutional support from DEE/MDE, so that this effectively takes place in the municipal scenario. The manager was very solicitous and engaged in thinking of actions to overcome this situation, stating that:

[...] the pedagogical coordinators are key players in this endeavor, as they coordinate the entire pedagogical practice in their units. I was surprised, worried and also at the same time happy to see these data and have this conversation, as it is always possible to change and propose new perspectives [...] (Athena, in an interview).

Presenting and discussing the research data collected with the pedagogical coordinators along with the DEE manager played an important role in our investigation, that is, providing reflections on the research theme and giving 'voice' to protagonists who coordinate the educational process in the units' municipal schools in Uberaba/MG, especially in Elementary School.

Final considerations: epilogue of a dialogue under construction

This investigation was concerned with raising and discussing the perception of the pedagogical coordinators and the manager of DEE/MDE from Uberaba/MG on the approach between FE and NFE, in particular in the school-museum relationship. Regarding the pedagogical coordinators, we realize that although the majority understand and interpret this approach as important for the teaching and learning processes, this movement has not been reflected in the work they carry out with teachers in their school units, whether through continuing education courses or by supporting actions in schools.

Results indicated that most pedagogical coordinators were unable to inform whether the teachers at their school units know the museums in the city of Uberaba/MG, which is worrisome, as they are the main mediators between classroom and actions outside school grounds. Although the coordinators understand the importance of this alignment for the full education of the student, they listed several obstacles regarding its consolidation, such as: lack of logistical support for transporting students, lack of dialogue between DEE/MDE and school units, mismatch in the schedules made by MDE and lack of alignment with the school. These are questions dear to school domains and suggest a review of practices adopted in the context of MDE and in the training of teachers.

With regard to the aspects discussed with the DEE manager, we highlight her surprise with the survey data we presented. Athena was very receptive and willing to work towards the realization and maximization of educational processes towards a closer relationship between FE and NFE, especially between municipal schools and the city's museums. She also explained that she recognizes the need for continuing education, even taking an interested and willing position during the interview, to further promote a dialogic environment through the reformulation of the municipality's Curriculum Matrix. This result motivates and nourishes hope on the aforementioned approach, as their decisions and convictions directly impact the pedagogical and formative path of the Municipal Education System as a whole. Finally, it was evident in this investigation that there is a long way to go in order to align the actions developed in schools in a didactic-pedagogical approach with the museums present in Uberaba/MG. We hope that these reflections can contribute towards improving the school-museum relationship and, therefore, collaborate with the integral and civic education of our students.

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