

# ***Material culture in the learning process of children with collections of objects in contact zones in binational contexts***

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## **Introduction**

The process of children learning with objects from museum collections has been the subject of study in the educational sciences for several decades in various countries, in addition to the interest of educational sciences in children learning with the materiality of objects in contact zones (Wagner, 2014). These researches seek to consider the children in the process of learning with objects, primary school children still have little access to collections. This is a fact if we consider that museum's exhibit and preserve an extensive material and immaterial heritage of object collections in which the educational and didactic potential of object collections and in co-operation with schools can be highlighted.

The aim of this article is to present children learning in binational contexts in order to understand material culture and the materiality of objects in children learning in contact zones. How do children learn with museum objects in binational contexts when materiality is present? Do children interact with objects and integrate their bodies in performances created in contact zones? The method of video-ethnography, based on reconstructive educational research, with the aid of observation and interviews, captures interactions of children in the field in two sub-studies, the exploratory and the contact zones.

This article aims to present material culture and materiality in children learning, contact zones and the transformation of children learning in interaction with material objects, the context of the research museums (Fondo Pizzigoni, Schulmuseum, Museu do Ipiranga and Forum Humboldt), method and design, the first results of the Italian-German research and perspectives for the development of new research that integrates children into object

collections together with critical understanding in their learning of objects exhibited in museums.

## **1. Background**

### *1.1 Material culture and materiality in children's learning*

Material culture and materiality have only recently attracted attention in education, especially in relation to the material dimensions of learning. The “material turn” has made it possible to reconfigure theoretical perspectives in the social sciences that understand materiality in learning with objects (Fenwick & Edwards, 2010) and the material culture that surrounds this process. In Germany, a field of research has been established in educational science on issues of materiality in educational processes, such as the cultural turn approach in cultural studies and the materialisation of objects (Priem, König & Casale, 2012), the importance of direct experience with material objects (Nohl, 2011), the educational potential of things (Dörpinghaus & Nießeler, 2012), the historical educational perspective of objects (Götz & Jung, 2008), the playful approach of objects in exhibitions (Parmentier, 2001, 2008; Chistolini et al., 2023).

Material culture and materiality in children's learning involves a complexity of meanings in which the action of objects on and with people is not static (Ludwig, 2020). Objects play a central role in children learning and interaction with their environment in which the subject can be transformed through material things and objects, as well as, in this learning process, children can transform the meaning of objects by establishing a new relationship with their world (Nohl & Wulf, 2013), based on their connection with the object and all their previous experience (Nohl, 2013).

The relationship between child and objects can motivate or provoke performative interactions in the processes of appropriating intergenerational social and cultural meanings (Fox, Panagiotopoulos & Tsouparopoulou, 2015; Norman, 1999; Nohl & Wulf, 2013), in which the embodiment of the meanings of material objects evokes relationships between the physical object and the child's context, i.e. its values and symbols are part of the learning process. The incorporation of meaning by children, then, happens when children interpret objects and transform their meaning based on a productive interaction between child and object. In this way, material culture plays an important role in understanding the object in order to connect the socio-cultural functions and symbolic meaning of objects with real everyday life (Stocking, 1985).

## 1.2 Contact zones and the transformation of children's learning through interaction with material objects

In their daily lives, children come into contact with countless objects, whether at home, in parks or, above all, in schools and museums. In this contact with objects, children learn through interaction in an exploratory process of discovery (Pech, 2009; Duncker & Kremling, 2010). The museum as a space in which children learn with objects is a space of contact zones because children interact with objects in the collection that can be related to their reality (Wagner, 2014; Vieira & Wagner, 2023) and can be understood as a space in which relationships involve valuing, collecting and displaying cultures and histories (Mason, 2006). Contact zones involve the encounter of disparate cultures in social places or spaces, in which people are transformed by the transcultural experience (Pratt, 1992) in which continuous relations of coercion, conflict and resistance are established (Clifford, 1997). Likewise, the encounter with an object can also be configured as contact zones. Furthermore, primary school children already have a background of exchanging experiences, as the classroom contains teachers and pupils who have already had some experience that will be shared with the other pupils (Pratt, 1991).

Primary school children are activated in contact zones with collection objects to relate them to their familiar worlds in a contrasting way, so that the objects become both strange and familiar (Melin & Wagner, 2015). In this way, the museum as a contact zone is configured as a dialogical and transcultural space that favours children learning with objects that involve subjectivity, intergenerational exchange and performativity in the face of recent museum practices that consider transformation and educational engagement. The concept of contact zones based on anthropological considerations of object collections extends Pratt's (1991) concept of contact zones when considering children and can broaden didactic approaches in primary school in extracurricular learning. Furthermore, in contact zones, children learning is transformed through contact with material objects, as well as performatising their interactions with objects.

## 2. The context of the research museums

In the context of research on children learning with objects, four contexts (museums) are considered: *Fondo Pizzigoni*, *Schulmuseum*, *Museu do Ipiranga* and *Humboldt Forum*. The *Fondo Pizzigoni* and *Schulmuseum* are part of ongoing research in co-operation between Italy and Germany. The *Museu do Ipiranga* and the *Humboldt Forum* are research sites that will be the continuation of research between Italy and Germany. The research in Italy and Germany is in progress and the research between Brazil and Germany is a continuation of the Italian and German research.

### 2.1 *The context of the Schulmuseum and the Fondo Pizzigoni*

The *Fondo Pizzigoni* is located in Rome, Italy, and preserves documents and materials such as drawings, texts, images, materials, toys and constructions relating to Giuseppina Pizzigoni's Experimental Method. It was set up in 2007. The *Fondo Pizzigoni* has three sections: firstly, it stores the original material of Giuseppina Pizzigoni (1870-1947), secondly, it gathers the material of Sara Bertuzzi (1922-2016), and thirdly, it is made up of more recent works and documents on the experimental method. This space has always taken children's interests into account with a focus on outdoor activities.

The *Schulmuseum* is located in Leipzig, Germany, and documents the school and educational history of Leipzig. It is an institution run by the city of Leipzig in co-operation with the University of Leipzig and the HTWK Leipzig. The *Schulmuseum* has a collection of 50,000 objects, and they are available for research and for specialists. This museum houses various artefacts, mainly from the late 19th and early 20th centuries and related to the pedagogical reforms in the Weimar Republic, featuring objects designed for children to learn outdoors (Keidel, Wagner & Zehbe, 2023).

### 2.2 *The Context of the Museu do Ipiranga and the Humboldt Forum*

The *Museu do Ipiranga*, whose institutional name is the Paulista Museum of the University of São Paulo, is located in São Paulo, Brazil, and was inaugurated on 7 September 1895. This museum has historical significance for Brazil, as it represents Independence as a symbol of the aspiration for a new country, although this version has been disputed to this day. Its collection consists of 125,000 items dating from the 16th to the mid-20th century, such as sculptures, paintings, jewellery, coins, medals, furniture, documents, bandeirante and Indian utensils, iconography and archival documentation.

The *Humboldt Forum* is a museum of art, history and human culture inaugurated in 2020 in honour of the Prussians Wilhelm and Alexander von Humboldt. The museum was designed and architected by Italian Franco Stella. The 30,000 square metre space houses a collection from different parts of the world, such as Africa, Asia, America, Germany, Oceania and Europe.

## 3. Method and design

This research considers the first data presented by the Italian-German DFG-funded project *Bildung und Objekte: Historische Sachlernprozesse in schulbezogenen Sammlungen* [Education and objects. Historical learning processes in school-related collections] between *Università degli Studi Roma Tre* (Prof.

Dr Sandra Chistolini) and *Leipzig University* (Prof. Dr Bernd Wagner) and the developments of new research in changing contexts.

The empirical studies of the bilateral project between Germany and Italy were based on the pedagogical methods of the 20th century, in particular the method of Giuseppina Pizzigoni (1870-1947), recent studies on cultural knowledge (Chistolini, 2019) and the object-centred learning process of children (Scholz & Rauterberg, 2004; Wagner & König, 2023). Children's learning processes and experiences are methodologically reconstructed through ethnographic participant observation, ethnographic videography and interviews, in which researchers immersed in the field capture ethnographic scenes, children's participation and the meanings of objects constructed by children.

For this qualitative reconstructive educational research, two sub-studies are conducted in museum schools in Germany and Italy, the exploratory and the contact zones. In this research, primary school children try out objects through direct physical interaction in contact zones (Clifford, 1997; Wagner, 2010) following an anthropological and pedagogical notion of "corporeality and movement" (Nohl, 1988; Gebauer & Wulf, 1998) where children react to the affordance of the collection of historical objects (Norman, 1999) and imagine the meaning of the objects. It makes possible to understanding of previous generations, current use and openness to new future experiences of use.

To operationalise the data collection, small exhibitions of objects were created so that the children could freely handle the original objects or their replicas, and contact zones were designed to accommodate the video ethnography. The video ethnography focused on individual (close-up) and group (wide angle) interactions and was subsequently divided into sequences for the creation of memos and for the interpretation of the children's interactions, based on the reconstruction of the children's experiences according to the Grounded Theory methodology (Corbin & Strauss, 1996). The data collected creates theories about the children's interactions and learning with the objects in the collection through their historical significance, highlighting the potential of the objects in the children learning process.

The research between Brazil and Germany will adopt the same methodology and will be a continuation of the research between Italy and Germany addressing transformational learning. The Museu do Ipiranga is in a phase of transformation with regard to the possible interpretations of objects and ways of displaying Brazil's independence, history and formation, while the Humboldt Forum intends to show the (ethnological) collections in the contexts of globalisation processes and decolonisation issues. Both state museums are designed for adult visitors, but children lack approaches that also allow them to question a world that can be formed through the representation of objects. To this end, the project uses qualitative-reconstructive educational research that contributes to the observation of children learning processes

and their transformation with museum objects (Coombes & Phillips, 2020) in order to develop perspectives on transgenerational dialogue regarding ideas for the future of society in museum collections, enabling new interpretations in the process of learning with objects.

#### **4. First results**

The first results of the comparative research between Italy and Germany, whose data was obtained from observation and video-ethnography in order to answering how children interact with objects in contact zones, show that historical objects are involved with the children world, which promotes social and corporeal interaction when in contact with objects in contact zones. As a result, two categories can be considered here: *social and political learning from historical objects* and *children's bodily and mimetic learning with material objects*.

##### *4.1 Social and political learning from historical objects*

Children are able to learn when they come into contact with historical objects through their own knowledge and experiences and in confrontation with the use of these objects. As primary school children already have previous experience (Pratt, 1991), the museum becomes a space for learning. A selection of data from research in Italy and Germany shows how children interact with objects.

Children build a city using a “construction kit”<sup>1</sup> as a representation of the German wall between East and West Germany. Children in Leipzig try to establish a connection with the German wall that existed between 1961 and 1989. The association between the built city and the wall that divided Germany into East and West shows the political and social significance. Moreover, that division also shows the country's history, the children knowledge of the historical construction of Germany and the potential political and social learning that can be generated.

Children in Italy use “wooden shapes” to construct a building. With the “wooden shapes”, the children gather in groups and sit on the floor to construct a building. Italian children often try to understand historical change by comparing or contrasting it with their life experiences and with Pizzigoni's proposal. The comparison between present and past and familiar and unfamiliar helps the participants to identify the difference which seemed to be the stimulus for understanding the past and its related objects, so the children destroy the building as a way of preserving nature.

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1. Collection object „Der kleine Schwede“ ca. 1910 - *Schulmuseum - Werkstatt für Schulgeschichte Leipzig*.

The children's creativity in interacting with objects in both contexts shows the social and political aspects involved in learning with objects, as the children socialise with each other, share experiences, exchange opinions and re-signify the object based on their political knowledge. The interaction with the current context of the children's lives also shows the relationship to the role that objects play in society, as any object used in social relations can be considered material culture.

## **5. Children bodily and mimetic learning with material objects**

Children's learning takes place when their world is reconstructed through gestures and actions, in which objects are appropriated through actions and create links with the outside world in a process of world appropriation that takes into account the bodily movements and material objects involved. The Leipzig context shows the children imitate, interact with other children and recreate actions from the "wooden figures"<sup>2</sup>. The image is a 1920s gymnastics figure inspired by historical sportswear. The children look at the wooden figures and watch a video of gymnastic exercises. From this moment on, the children physically execute the same movement as the wooden object in a process of bodily expression and *mise en scène* of the body (Wulf, 2002).

In Italy, the object used is the "hula hoops". In the process of interacting with the object, the children invent new games with the "hula hoops", such as handling the hula hoops in an open space. This emphasises the relationship between the use of the object in a given space, which configures bodily learning (Nohl & Götz-Dehnavi, 2022). The process of inventing the use of the object, which seemed to be a solitary activity, gradually led to interaction between the other children. In the process of inventing the use of the object, the children in Italy position themselves in front of the objects, handle the "hula hoops", move around the space, interact with each other and produce sequential actions of contact with the object.

The material objects used by the children in both contexts, Germany and Italy, allow them to physically perform postures inspired by the objects chosen for the research. The children use the objects in the contact zones intuitively based on their previous experiences (affordance) (Norman, 1999) in a process of mimetic appropriation, as they have the ability to stage, perform scenic images, imagine and produce sequential actions (Wulf & Zirfas, 2014).

The initial results of this research show the children developed specific ways of interacting with the objects in the contact zones, introducing their

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2. The gymnastics figures are inspired by historic sports dresses (Schulmuseum - Werkstatt für Schulgeschichte Leipzig, © Piesold) and the children try out postures inspired by the gymnastics figures (Schulmuseum - Werkstatt für Schulgeschichte Leipzig).

own know-how, experiences, creating object affordances, for example, using the objects according to their own understanding. When children used or appropriated objects, they imitated each other in their handling of the objects, and this resulted in social learning processes and children practice with material culture. It can be seen that anthropological notions of material culture emerge from the children performative interaction with the objects in the collections.

## 6. Outlook

Children learning with objects from collections is involved in a tangle of interactions that encompasses material culture, materiality and body. Primary school children, who already have experience and contact with their world, have the ability to learn from new situations. In a contact zone in museums, children interact with material objects, where they are able to learn the social and political meanings of historical objects from their life experiences, relationship with the world and their culture. Therefore the children made connections with historical and social aspects are present in their culture. Children also learn about their bodies through interacting with objects, as they perform physical activities that connect them to their environment and to other children.

Children contact with material objects can lead to objectifying experiences and sequences of activities that encourage abstract reflections on the material objects left by previous generations and open up to new questions and future experiences (Dewey, 1997). The children connect and contrast these experiences with their everyday lives and the world of life (Clifford, 1997; Wagner, 2010, 2013a, 2013b) where they construct meanings and connect cultural codes and materiality based on their interpretation of the object's changes throughout its history, forming a productive tension between the meaning constructed by the German and Italian children.

In this way, the contact zones serve to understand the dimensions of materiality in another binational context. The Humboldt Forum and the Ipiranga Museum, in continuity with research between German and Italian, indicate new educational perspectives for understanding the process of children learning with objects in places of transition. Today we have new challenges in the children learning process that involve a concern for materiality, i. e., the origin of the excessive production of materials criticised by the Anthropocene theories. This is explained by the fact that Western culture produces many more objects, for example, post-industrial societies keep an average of 10,000 objects in their homes, while an African tribal society keeps around 150 objects (Ludwig, 2020).

Another point to be considered as relevant for the continuation of the research is the decolonial debate on objects. The decolonisation of materiality considers reflecting on the colonial past in order to think about a decolonial



future that consists of understanding the routes of the object in the world, how the object is produced, what its purpose is and the stories involved in the objects. According to Nhemachena, Kangira and Mlambo (2018), the decolonisation of materiality encompasses two perspectives: one that shows the separation and disconnection between human beings and nature, and the second that shows the dispossession and deprivation of the colonialists. In this sense, new contact zones are opened up so that the members from which the objects originate can have their own voice (Augustat & Kapfhammer, 2017).

These points bring up many questions related to children learning with objects. How do children interact with objects when the impact of excess materials on the planet is known? How should the German museum deal with objects from the colonial era? How should the Brazilian museum deal with objects that stigmatise indigenous and black people? How do both museums intend to consider children in this process in which the objects stem from German colonisation and the ideal of whitening the Brazilian population? How do the children learn from the stigmatised objects on display? Can these new conditions influence children bodily interaction? These questions consider transformations of people in relation to the objects on display in museums, considering the sustainable and decolonial challenges in children learning (Vieira, 2024 in press) in the face of transformations and future projections for children learning in museums.

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