# Analysis of the Brazilian academic production on typography: a survey in the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel

Análise da produção acadêmica brasileira sobre tipografia: um levantamento no Banco de Teses e Dissertações da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior

Maíra Woloszyn<sup>I</sup> D, Berenice Santos Gonçalves<sup>I</sup> D

## ABSTRACT

The projectual design practice is supported by different fields of knowledge, such as typography, which can be defined as the creation and use of orthographic and para-orthographic symbols. Studies related to this area can adopt different approaches such as the use of typography, type design, vernacular typography, history of the area and retrieve of graphic memory, and teaching of typography. Thus, we aimed to map and analyze the academic production on typography in Brazilian research. To this end, a bibliometric analysis was carried out based on the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel in order to visualize patterns and the development of research in typography. As a result, it was possible to demarcate consolidated approaches, such as the use of typography and the retrieve of graphic memory, and to indicate incipient topics that can point to potential axes of new and relevant research such as vernacular typography, type design, and teaching of typography.

Keywords: Typography Academic production. Bibliometric analysis.

#### RESUMO

A prática projetual do design é embasada por diferentes áreas do conhecimento, como a tipografia, que pode ser definida como a criação e utilização de símbolos ortográficos e paraortográficos. Os estudos relacionados à área podem assumir diferentes abordagens, tais como design com tipos, design de tipos, tipos vernaculares, histórico da área e resgate da memória gráfica e ensino da tipografia. Assim, o presente artigo objetivou mapear e analisar a produção acadêmica acerca da tipografia nas pesquisas brasileiras. Para tanto, realizou-se uma análise bibliométrica a partir do Banco de Teses e Dissertações da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior a fim de visualizar padrões e o desenvolvimento da pesquisa em tipografia. Como resultado foi possível demarcar abordagens consolidadas, como o design com tipos e o resgate da memória gráfica, e indicar temas incipientes que podem apontar potenciais eixos de pesquisas inéditas e relevantes, como tipos vernaculares, design de tipos e ensino da tipografia.

Palavras-chave: Tipografia. Produção acadêmica. Análise bibliométrica.

<sup>1</sup>Universidade Federal de Santa Catarina, Graduate Program in Design — Florianópolis (SC), Brazil. E-mails: maira.projetar@gmail.com; berenice@cce.ufsc.br **Received on:** 12/21/2022. **Accepted on:** 03/25/2023.

#### INTRODUCTION

Design is a field of knowledge that investigates the relationships of human beings with artifacts and languages. It was recognized during the Industrial Revolution with the purpose of increasing the quality of products in the process of industrialization. Thus, with design, it is possible to conceive technologies and meanings that influence the daily life of society (KOCHHANN; DAPPER, 2018). For Coelho (2011), design is a practice that aims at shaping artifacts considering theories and projects elaborated with a specific objective.

One of the areas that underpins the projectual design practice is typography, which, for many years, has assumed an important role in the composition and presentation of information of different kinds. Typography can be defined as the practice of creating and using orthographic and para-orthographic symbols regardless of the form of creation or reproduction (FARIAS, 2013).

According to Scaglione (2014, p. 19, free translation), "[...] typography plays a central role in graphic design. Most elements of graphic communication require, to a greater or lesser extent, the use of the written word to fulfill its function, and of typography to systematize writing." In addition, typography is present at all times of the day, in the items of the bills we pay, in food labels, posters, mobile devices, and big screens (SAMARA, 2011).

In this sense, Heller and Ilic (2012) point out that typography is essential for design, as it conveys most messages and is considered by Heller (2004) the most important element of graphic design. The author (HELLER, 2004) also suggests that typography is one of the bases for learning design, making the teaching of typographic approaches paramount for the training of professionals in this field of knowledge. Lupton (2018) stresses this point by stating that the most basic challenge of a designer is, precisely, to organize letters in a blank space.

Currently, there are different ways to create letters such as calligraphy, lettering, and typography. Calligraphy is characterized by the use of specific tools to draw the letters and, sometimes, it is based on the old form of writing and shows the characteristics of the instruments used for the practice. Lettering deals with a specific composition of one or more words, and it may present ornaments not always found in fonts or calligraphy. It can also be defined as the creation of an image for a message (UNGER, 2018). Popular lettering stands out, which concerns handmade letters drawn by sign writers and ordinary people, also known as vernacular typography (FINIZOLA, 2010). In turn, the term "typography" is also used to refer to typographic designs and to the production of digital fonts, a practice commonly referred to as "design of types" (type design) (MESEGUER, 2014).

Typography is concerned with the creation of letters as well as being responsible for their use. Hence, the application of typographic systems in different materials and media is also entitled "design with types" (use of typography). In this sense, Stöckl (2005) proposes four domains for typography, namely microtypography, mesotypography, macrotypography, and paratypography, as shown in Figure 1.



graphic signs

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc iaculis fermentum augue at pulvinar.

MESOTYPOGRAPHY

Related to the configuration

in lines and text blocks

н <u>—</u>

MACROTYPOGRAPHY Comprises the structure of the document in general



PARATYPOGRAPHY Refers to materials, instruments, and techniques of production and typographic reproduction

Source: prepared by the authors. Figure 1. Typography domains.

Therefore, according to the author (STÖCKL, 2005), microtypography is related to individual graphic signs, such as the used type, size, style, and color. Mesotypography deals with the configuration in lines and text blocks — word spacing, amount of print on page, and alignment of type. Macrotypography encompasses the structure of the document in general, that is, the size of the text blocks, the existence of caps and initials, emphases, and typographic hierarchies, and the relationship between text and image. In turn, paratypography refers to materials, instruments, and production techniques.

In addition to practical issues, typography also studies the history and development of types. With the emergence of writing and the evolution of calligraphy, the need to organize graphic representations emerged, providing the mechanization of writing and the emergence of typography from Gutenberg's movable types, which many consider as the beginning of typography (VIRGÍNIO; ALMEIDA, 2014). Thus, printing systems evolved seeking to facilitate and popularize the composition with types until the emergence of digital media, when "[...] the types ceased to be objects with physical properties and became sequences digitized in binary code [...]" (ROCHA, 2012, p. 28, free translation), providing for the appropriation of this code by those who use it. Studies that highlight the peculiarities of the visual aspects of graphic artifacts and that bear relations with the fields of visual, printed, and material culture can also be named as "graphic memory" (FARIAS, 2017).

Taking this into consideration, this article aims to map and analyze the academic production on topics related to typography in Brazilian research. To this end, we propose a systematic survey and a quantitative bibliometric analysis. It is noteworthy that this type of search allows surveying the state of the art on the subject in question, identifying trajectories and pointing out trends and possibilities for future research.

## **METHODOLOGICAL PROCEDURES**

In order to identify the academic production on typography, this study performed an exploratory bibliometric analysis. This technique allows visualizing patterns of publications and can be used to analyze the impact of the scientific production of a field of knowledge, point out the development of a field of research, and analyze trends in investigations (FREIRE, 2013). To do so, Freire (2013) suggests defining the databases to be consulted and the filters applied for selecting the documents to be analyzed. Therefore, the present research was developed in three steps for carrying out the bibliometric analysis: search definition, selection of references, and presentation of results.

**Step 1:** search definition, in which the databases that would be consulted, as well as the search strategy, were identified. Thus, it was defined that the survey of research related to the topic would take place in the Theses and Dissertations Database (BTD – Sucupira platform) of the Coordination for the Improvement of Higher Education Personnel (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* – CAPES).<sup>1</sup> This platform aims to provide information about theses and dissertations defended in Brazilian graduate programs (GP). It is noteworthy that the information found in the CAPES BTD is provided by the GP themselves. In addition, as it is a referential database, the BTD enables the consultation of titles and abstracts; however, some authors indicate the address for access to the full text. Regarding the search term, the word "typography" was used in the database without limiting the results by date, type of document, or area. Considering this strategy, the search took place during the first half of March 2022, when 312 documents were found.

**Step 2**: in this second stage of the research, selection of references, inclusion and exclusion filters were applied for selecting the reference portfolio. In order to choose the theses and dissertations that dealt with topics related to typography, the titles and abstracts of the documents presented by the CAPES BTD were fully read, excluding those that did not have a direct relation to the study of typography as well as duplicate studies. It was sought to select studies that had typography as their subject and main focus. Research that touch on the topic, whose main focus is not on the understanding of typographic aspects, was not selected for this study. The selected studies were organized in a spreadsheet with data on the author, title of the document, year of publication, GP, and higher education institution. In addition, the studies were categorized according to the investigated topic, namely type design, use of typography, teaching of typography, graphic memory, and vernacular typography.

**Step 3:** this stage of the study concerns the presentation of results, when the analysis of the reference portfolio, discussion of the collected data, and presentation of the conclusions are carried out. This information can be found next.

### **RESULTS AND DISCUSSION**

From the aforementioned strategies, after reading the titles and abstracts, we selected 170 studies whose main topic was the understanding of typographic approaches. Among them, two are professional master's theses, 129 are academic master's theses, and 39 are PhD dissertations. For this analysis, the academic and professional master's theses were added. The analysis allowed us to verify the distribution of the number of publications by regions of the country, as shown in Figure 2.

<sup>1</sup> Available from: http://bancodeteses.capes.gov.br/. Accessed on: Mar. 10, 2022.



Figure 2. Distribution of academic research on typography found in the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel by Brazilian regions.

We observed that, mostly, typography research is concentrated in the Southeast region of Brazil, where, of the 170 analyzed studies, 26 PhD dissertations and 73 master's theses (academic and professional) were published, which corresponds to 58% of studies on the topic published in the country.<sup>2</sup> Subsequently, we noticed that the second largest concentration of academic research related to typography is in the Northeast, responsible for 20% of the published studies, followed by the South, which accounts for 17% of the aforementioned research. It is also noteworthy that, in the Midwest region, there are 3% of the publications and, in the North, 2%.

There are different GP that develop research related to typography. Nevertheless, most of the research is developed in programs in the areas of Design or related fields such as Architecture and Urbanism, Arts, Communication, and Education. It is note-worthy that, in relation to the graduate degree in Design, the programs comprise the area of Architecture, Urbanism and Design in the CAPES system, the same that integrates the large area of Applied Social Sciences. Currently, the Design subarea has 24 GP, of which eight are in the Southeast region of the country (CAPES, 2017).

In view of the data on the greater number of studies related to typography being concentrated in the Southeast region, this may be driven by the expressive concentration of master's and PhD courses as well as a greater concentration of the

<sup>2</sup> It is worth highlighting that the numbers listed in the present article refer to the universe of this study (studies included in the CAPES BTD platform). We stress that there may be changes as the institutions communicate their results to the platform, as GP are responsible for providing this information.

Brazilian population in this region. Moreover, the Southeast was also the pioneer in the emergence of GP in Design. The first course was implemented in 1994 at the Pontifical Catholic University of Rio de Janeiro (PUC-Rio), which was also the first to offer the PhD program in Design in 2002 (CAPES, 2017).

Considering the data on the universities and higher education institutions that have published the most academic research related to typography, we can demarcate the top five. The University of São Paulo (USP) is the institution that most published research in CAPES BTD, totaling 18 documents. Next, the University of the State of Rio de Janeiro (UERJ) accounts for 14 of the aforementioned studies. In addition, we mention the Pontifical Catholic University of São Paulo (PUC-SP), which accounts for ten of the analyzed documents; the Federal University of Minas Gerais (UFMG), which has eight published studies on the topic; and the Federal University of Pernambuco (UFPE), which also published eight of the studies related to typography in BTD. We observed that, even in relation to universities, there is a predominance of research conducted in the Southeast region of the country.

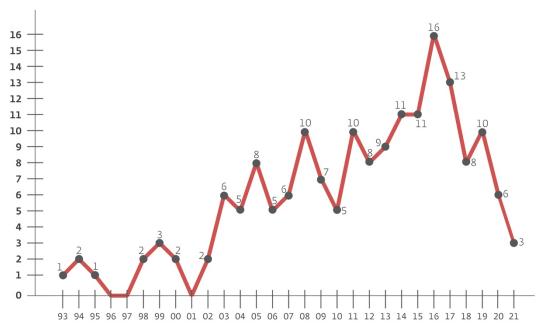
When analyzing the main GP of these institutions, we highlight that, at USP, most of the publications in the area of typography are concentrated in the GP in Architecture and Urbanism. This may be related to the date of creation of the GP in Design of the institution, only implemented in 2017, while the GP in Architecture and Urbanism has been in force since 1972. At UERJ, most of the research is linked to the GP in Design of the School of Industrial Design (*Programa de Pós-Graduação em Design da Escola Superior de Desenho Industrial* – PPDESDI). This program has been in force since 2005 at the School of Industrial Design (*Escola Superior de Desenho Industrial* – ESDI), one of the first Design schools in Brazil.

Studies on typography at PUC-SP are mainly concentrated in the GP in Communication and Semiotics, which promotes investigations on communication phenomena and processes. At UFMG, the analyzed studies were developed mainly in the GP in Education, which aims to contribute to the investigation and reflection about educational phenomena. The latter institutions do not have a GP in Design, which may justify the adoption of the topic of typography in programs of other related areas. In turn, at UFPE, most of the studies are linked to the GP in Design, which began to offer graduate courses in 2004.

The survey enabled us to analyze the distribution of research over time. Regarding the year of publication, we observed that the academic production on the subject does not maintain an annual average, as shown in Figure 3.

Based on Figure 3, we can see a significant growth in the number of academic research on typography published in 2016 on BTD. Conversely, when analyzing the last years, more precisely 2020 and 2021, we noticed a decrease in the number of publications. No documents published in 2022 were identified from the search strategies previously mentioned. It should be noted that the pandemic caused by the new coronavirus (COVID-19) between the years 2020 and 2022 may have influenced the decrease in the completion of graduate courses as well as the publication of documents by the GP on the CAPES platform.

In view of these data, we sought to understand the distribution of research, by quinquennia, in relation to the identified studies in total, as shown in Figure 4.



Source: prepared by the authors.

Figure 3. Graph of publications on typography, per year, found in the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel.

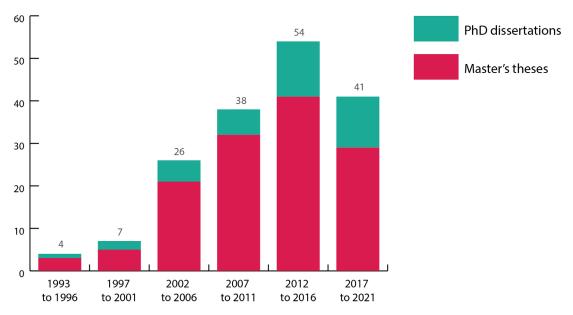
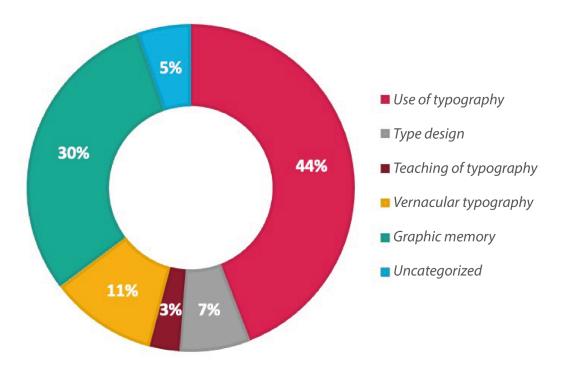


Figure 4. Distribution of publications on typography found in the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel per quinquennia.

The first publication we found on typography, considering the strategies mentioned in the BTD, dates from 1993. As of this date, in quinquennia, we can perceive, in relation to the number of produced theses, an ascending curve in the number of publications until the year 2016. However, in the last quinquennium, there is a decrease in production. The increase is also verified in the publication of dissertations in the first three quinquennia analyzed, namely between 1993 and 1996, 1997 and 2001, and 2002 and 2006. From the third to the fourth quinquennia (between 2007 and 2011), there is a stability in the number of publications, which increases again in the following quinquennium (between 2012 and 2016) and remains stable in the last analyzed quinquennium (between 2017 and 2021), diverging from the master's theses, which show a slight decrease in the number of publications.



Subsequently, we sought to understand which scopes are being addressed in Brazilian research on typography, as shown in Figure 5.

Source: prepared by the authors.

Figure 5. Graph of topics addressed in the publications on typography found in the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel.

Regarding the subjects addressed within the analyzed scope, we identified that most of the research deals with the use of typography, that is, they address the use and application of typography in different contexts, such as packaging, editorial design, and digital media, accounting for 75 publications. Next, studies that refer to the history of typography and retrieve of graphic memory are in greater number, accounting for 51 studies. Subsequently, research on vernacular typography, letters that represent the characteristic of a region, total 18 publications. Furthermore, there are 12 studies on type design and five on teaching of typography. As for the nine remaining studies, we point out that, only considering the title, we could not categorize them — and they did not have a complete record in the BTD that could assist in this process.

In order to identify the research trends over the years, we made an analysis considering the aforementioned quinquennia and the percentage that each topic represented in this time period, as illustrated in Figure 6.

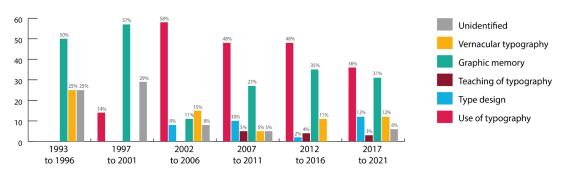


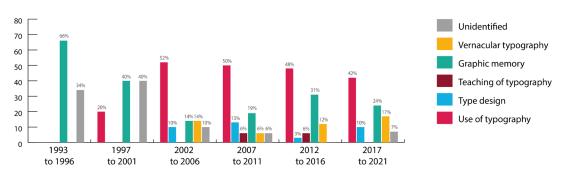
Figure 6. Frequency of topics addressed in the scientific production on typography retrieved from the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel.

When analyzing the addressed topics in the different time periods of the Brazilian scientific production on typography, we noticed that the only topic addressed in all quinquennia is the one related to the history of typography and retrieve of graphic memory, the second most researched subject in the total of publications. Despite being the topic most addressed in the investigations in the first two quinquennia, there was a significant decrease between the second and third quinquennia. However, from the period between 2002 and 2006 to the most current date, there has been an increase in research on the subject as well as the trend of stability. This may be due to the presence of GP research lines in Theory and History of Design in the main higher education institutions in Brazil, as well as the indirect influence of the fact that the topic is the thematic axis of the main Brazilian scientific congresses in the area of Design, especially the Brazilian Congress of Research and Development in Design (*Congresso Brasileiro de Pesquisa e Desenvolvimento em Design –* P&D) and the Information Design International Conference (*Congresso Internacional de Design de Informação –* CIDI).

Concerning use of typography, the most addressed subject in Brazilian research on typography retrieved from the BTD, its presence is verified since the second analyzed quinquennium, still with little expressiveness in relation to the total of publications of the period. However, as of the third quinquennium, the topic appears as the most adopted approach in all the other analyzed periods. Nevertheless, we observed a decrease in the representativeness of this topic from its greatest rise, between the years 2002 and 2006, to the most recent date, which may indicate the trend of stability and even decrease of Brazilian research on the use of typography.

Studies on vernacular typography are verified in five of the six analyzed quinquennia, not being identified only between the years 1997 and 2001. Although this topic presents a decrease in the fourth quinquennium, we verified a trend of stability in the number of publications on the subject due to its constant presence in relation to the other analyzed subjects. We also noticed stability in relation to research on type design. Despite low numbers in all publications and a decrease in research on the subject between 2012 and 2016, there has been an increase in the investigation of this topic in the last five years. When analyzing studies that address the teaching of typography, these are identified only in the last three analyzed quinquennia (from 2007 to 2021). It should be noted that the first publication on this topic present in the BTD repository dates from 2008. Despite the little expressiveness of the topic in the analyzed documents, we can indicate a stability, considering the proximity of the number of publications between the quinquennia in which they are verified.

When considering these same data in relation to master's and doctoral studies separately, we noticed some differences. In Figure 7 we show data on the master's theses regarding the presence of each topic over quinquennia.



Source: prepared by the authors.

Figure 7. Frequency of topics addressed in master's theses retrieved from the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel.

Overall, there is a similarity in the distribution of typographic approaches in master's research in relation to the total of Brazilian research. We observed a predominance of studies on use of typography and a stability with slight decreases over time of the topics type design and vernacular typography.

Nonetheless, based on Figure 7, the presence of studies on history and retrieve of graphic memory was only verified in the first analyzed quinquennium. It is noteworthy that, in this period, only three theses were published, of which two addressed the subject. In addition, in relation to this topic, there has been a decrease in the presence of theses on the subject in the last five years in relation to the previous five. Moreover, master's research on the teaching of typography is identified only between the years 2007 and 2016 (relative to the fourth and fifth analyzed quinquennia), making it impossible to infer the trend in master's research on this topic, considering that none addressed the subject in the last five years.

The same analysis is carried out considering PhD research retrieved from BTD and that has typography as its central topic. In Figure 8 we demonstrate the distribution of topics of the dissertations analyzed over the aforementioned quinquennia.

In this analysis, some differences in relation to the total of analyzed documents stand out. Initially, it should be noted that, in the first two quinquennia, we identified dissertations on only one subject in each period. In the period between 1993 and 1996, only one dissertation was published on BTD, whose approach focused

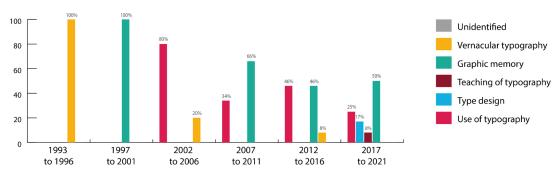


Figure 8. Frequency of topics addressed in PhD dissertations retrieved from the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel.

on vernacular typography. Conversely, in the period between 1997 and 2001, two investigations were identified, both on the history of typography and the retrieve of graphic memory.

Unlike the master's research, as well as the totality of the publications, in the analyzed dissertations, the approach regarding the history of typography and the retrieve of graphic memory predominates. Of the 39 analyzed documents, 18 deal with the subject and, in turn, 15 deal with the use of typography.

We can also highlight the PhD research related to type design and the teaching of typography. These topics are only verified in the last five years within the observed universe, being, of the 12 dissertations retrieved from this period, two related to the use of typography and one to the teaching of typography. The presence of these subjects only in recent years, and considering their presence in the previous quinquennia in master's theses, may indicate that researchers whose investigations began in master's degrees continued developing the topic in the subsequent graduate degree.

As for the research on vernacular typography in the consulted dissertations, there is constancy between their presence and absence throughout the analyzed quinquennia, making the indication of trends for the approach inaccurate. In addition, it should be noted that, among the dissertations consulted in this research, all had records that allowed us identifying the typographic approaches adopted.

The aforementioned survey also allowed us to investigate the most researched subjects in each educational institution, as shown in Chart 1.

State	Higher education institution	Main research approaches	
Midwest Region			
Mato Grosso do Sul	Federal University of Mato Grosso do Sul (UFMS)	Use of typography	
Federal District	University of Brasilia (UnB)	Use of typography	

Chart 1. Survey of the main researched approaches by higher education institution.

Continue...

State	Higher education institution	Main research approaches
Northeast Regio		· · · ·
Alagoas	Federal University of Alagoas (UFAL)	Use of typography
Ceará	Federal University of Ceará (UFCE)	Graphic memory
Maranhão	Federal University of Maranhão (UFMA)	Use of typography
Paraíba	Federal University of Paraíba (UFPB)	Graphic memory
Pernambuco	Federal University of Demonstry of (UEDE)	Use of typography
	Federal University of Pernambuco (UFPE)	Teaching of typography
Bahia	Federal University of Bahia (UFBA)	Graphic memory
	State University of Feira de Santana (UEFS)	Use of typography
	State University of Southwest Bahia (UESB)	Graphic memory
Piauí	Federal University of Piauí (UFPI)	Use of typography
Sergipe	Federal University of Sergipe (UFS)	Graphic memory
Rio Grande		
do Norte	Federal University of Rio Grande do Norte (UFRN)	Use of typography
North Region	-	
Pará	Federal University of Pará (UFPA)	Use of typography
	•	Vernacular typography
Southeast Regio		
	Federal Center for Technological Education of	Use of typography
	Minas Gerais (CEFET-MG)	
	Federal Institute of Education, Science, and	Use of typography
Minas Gerais	Technology of Minas Gerais (IFMG)	Graphic memory
	University of the State of Minas Gerais (UEMG)	
		Use of typography
	Federal University of Minas Gerais (UFMG)	Use of typography
Rio de Janeiro	Pontifical Catholic University of Rio de Janeiro	Use of typography
	(PUC-Rio)	Graphic memory
	University of the State of Rio de Janeiro (UERJ)	Graphic memory
	Fluminense Federal University (UFF)	Graphic memory
	Federal University of Rio de Janeiro (UFRJ)	Use of typography
	Rural Federal University of Rio de Janeiro (UFRRJ)	Graphic memory
São Paulo	Anhembi Morumbi University	Use of typography
	Estácio de Sá University	Use of typography
	Mackenzie Presbyterian University	Vernacular typography
	Pontifical Catholic University of São Paulo (PUC-SP)	Use of typography
	State University of São Paulo – Bauru Campus	
	(UNESP – Bauru)	Use of typography
	University of Compines (Unisemp)	Use of typography
	University of Campinas (Unicamp)	Graphic memory
	University of São Paulo (USP)	Graphic memory
South Region		
Paraná	Pontifical Catholic University of Paraná (PUC-PR)	Teaching of typography
	State University of Londrina (UEL)	Teaching of typography
	State University of Maringá (UEM)	Graphic memory
	Federal University of Paraná (UFPR)	Use of typography
	Federal University of Rio Grande (FURG)	Graphic memory
	Pontifical Catholic University of Rio Grande do	Use of typography
Rio Grande do Sul	Sul (PUC-RS)	
	Federal University of Pelotas (UFPel)	Vernacular typography
	Federal University of Rio Grande do Sul (UFRGS)	Use of typography
	UniRitter University	Type design
	Brazilian Jesuit University (Unisinos)	Use of typography
Santa	Federal University of Santa Catarina (UFSC)	Use of typography
Catarina	University of the State of Santa Catarina (UDESC)	Use of typography

#### Chart 1. Continuation.

Source: prepared by the authors.

Based on the presented analyses, we observe that Brazilian research on typography remains stable, which tends to perpetuate in the percentage of investigations on subject over time. In this sense, we also highlight the predominance of approaches related to the use of typography, that is, research that aims at understanding the application of typographic systems in different materials and media, as well as those related to the study of the history of typography and retrieve of graphic memory. Thus, we understand that both approaches are topics deemed consolidated within graduate studies.

Conversely, we identified topics on typography that are still incipient in academic studies developed in Brazil. We highlight the approaches related to vernacular typography, which refer to popular lettering, type design, and aspects related to the production of digital fonts and, mainly, to the teaching of typography. These observations may indicate possibilities of investigation, especially in the academic context, in which research is carried out aiming to fill the gaps in the studies of an area or field.

### FINAL CONSIDERATIONS

The teaching and practice of design are underpinned by different areas. One of the most relevant is typography, whose studies involve different issues related to types such as historical studies, application of typography, creation of types, teaching, among others. In order to analyze the development of this area in Brazilian academic research, we carried out a bibliometric analysis in the CAPES BTD, a platform in which studies developed in the GP recognized in the country are registered.

The present research allowed us to visualize the profile of research on typography carried out in Brazil, as well as to reinforce the topics consolidated in the aforementioned academic research. Furthermore, we identified incipient topics that were little investigated in the studies on typography developed in the country, which represent potential subjects for new research addressing typography. In this sense, it is worth emphasizing that the largest number of retrieved studies concern the use of typography, which may indicate an increase in the number of dissertations and theses on this topic, as the vast production of existing documents tends to contribute and support new related studies. Nevertheless, we noticed gaps in research on the teaching of typography. Few of the consulted references address the subject, thus indicating a potential axis of unpublished and relevant research for advancing the field.

As for the technique chosen for conducting this study, namely the bibliometric analysis, we believed that it provided reflections on the evolution of scientific research in the field of typography in Brazil and the visualization of the intended data. Thus, we could understand and compare the characteristics of the surveyed investigations as well as to demarcate waves of interest and emerging areas for research focused on this topic. However, it should be noted that the present research is conditioned to the results found in the CAPES BTD considering the selected search strategies. Therefore, we stress that there may be deviations in the data, as GP are responsible for publishing theses and dissertations in the consulted platform. Our results may guide future research in the area of typography. Initially, the evidenced gaps reinforce potential approaches to be investigated. Moreover, based on the identified approaches, the present study can indicate possible ways to search for references on topics involving typography. In addition, we believe that visualizing the main research approaches developed in each higher education institution can indicate possibilities for future researchers in the area, according to their interests when presenting these data.

Finally, we recommend, for future studies, the continuity in the collection and analysis of data to deepen the survey and identify new research approaches in the field of typography. Moreover, we propose a survey of research on the subject in scientific journals and annals of the main congresses and conferences in the country, enabling the analysis of the main authors and researchers in the field.

#### REFERENCES

COELHO, L. A. L. Conceitos-chave em design. Rio de Janeiro: Editora PUC-Rio / Novas Idéias, 2011.

COORDENAÇÃO DE APERFEIÇOAMENTO DE PESSOAL DE NÍVEL SUPERIOR (CAPES). Plataforma Sucupira. **Cursos recomendados por área de avaliação Arquitetura, Urbanismo e Design**, 2017. Available from: https://sucupira.capes.gov.br/sucupira/public/consultas/coleta/programa/ quantitativos/quantitativoAreaConhecimento.jsf?areaAvaliacao=29. Cited on: Mar. 21, 2022.

FARIAS, P. L. Tipografia digital: o impacto das novas tecnologias. 4. ed. Teresópolis: 2AB, 2013.

FARIAS, P. L. Sobre o conceito de memória gráfica. Bitácora Urbano Territorial, v. 27, n. 4, p. 61-65, 2017. https://doi.org/10.15446/bitacora.v27n4esp.65744

FREIRE, P. S. Aumente a qualidade e a quantidade de suas publicações científicas: Manual para a elaboração de projetos e artigos científicos. Curitiba, PR: CRV, 2013.

HELLER, S. The education of a typographer. New York: Altworth Press, 2004.

HELLER, S.; ILIC, M. **Stop, Think, Go, Do:** How Typography and Graphic Design Influence Behavior. Beverly, MA, USA: Rockport, 2012.

KOCHHANN, R.; DAPPER, S. T. H. Design em transformação: uma análise do pensamento e da prática. *In*: CONGRESSO PESQUISA E DESENVOLVIMENTO EM DESIGN, 13, 2018, São Paulo. **Anais** [...] São Paulo: Blucher, 2019. p. 77-90.

LUPTON, E. **Pensar com tipos:** Guia para designers, escritores, editores e estudantes. São Paulo: Editora Gustavo Gili, 2018.

MESEGUER, L. Escrita, caligrafia, desenho de letras e design de tipos. *In*: HENESTROSA, C.; MESEGUER, L.; SCAGLIONE, J. **Como criar tipos:** do esboço à tela. Brasília: Estereográfica, 2014.

ROCHA, C. Projeto Tipográfico: Análise e Produção de Fontes Digitais. São Paulo: Rosari, 2012.

SAMARA, T. Guia de tipografia. Porto Alegre: Bookman, 2011.

SCAGLIONE, J. Processos e métodos. In: HENESTROSA, C.; MESEGUER, L.; SCAGLIONE, J. Como criar tipos: do esboço à tela. Brasília: Estereográfica, 2014.

STÖCKL, H. Typography: body and dress of a text – a signing mode between language and image. **Visual Communication**, v. 4, n. 2, p. 204-214, 2005. https://doi.org/10.1177/1470357205053403

UNGER, G. Theory of type design. Rotterdam, Países Baixos: Nai010, 2018.

VIRGINIO, R.; ALMEIDA, F. Do códice ao leitor digital: a reconfiguração do livro na cibercultura. *In*: NICOLAU, M. O livro digital e suas múltiplas perspectivas. João Pessoa: Ideia, 2014.

## About the authors

Maíra Woloszyn: PhD in Design from Universidade Federal de Santa Catarina (UFSC). Berenice Santos Gonçalves: PhD in Production Engineering from Universidade Federal de Santa Catarina (UFSC). Professor of Design in the Graduate Program in Design at UFSC.

Conflict of interests: nothing to declare - Financial support: Coordination for the Improvement of Higher Education Personnel (CAPES) – Financing Code 001.

Authors' contributions: Woloszyn, M.: Conceptualization, Data Curation, Formal Analysis, Investigation, Methodology, Writing - original draft, Writing - review & editing. Gonçalves, B. S.: Conceptualization, Investigation, Methodology, Supervision, Validation, Visualization, Writing – review & editing.

© 2023 Escola Superior de Propaganda e Marketing — Rio de Janeiro This is an open access article distributed under the terms of the Creative Commons license.

