

## Dossiê 6

A modelagem integrada ao projeto de Moda no âmbito do ensino

DOI: 10.5965/25944630422020271

## EXTENDED SUMMARY

# COLLABORATIVE DESIGN METHODOLOGIES FOR CLOTHING FLAT MODELING

Élida Belquice de Araújo Santiago<sup>1</sup>

Raquel Gomes Noronha<sup>2</sup>

Ana Lucia Alexandre de Oliveira Zandomeneghi<sup>3</sup>

Cláudia Suellen de Carvalho Borges<sup>4</sup>

---

<sup>1</sup> Mestranda pelo Programa de Pós-Graduação em Design da Universidade Federal do Maranhão (UFMA). Docente do quadro efetivo do Eixo de Produção Industrial do Instituto Federal do Piauí (IFPI- Piripiri). E mail: elidabelquice@gmail.com | Lattes: <http://lattes.cnpq.br/6454581006921173> | Orcid: <https://orcid.org/0000-0002-0251-4166>

<sup>2</sup> Doutora (PPCIS-UERJ, 2015) em Antropologia e mestre (PPGC Soc-UFMA, 2008). Docente do Programa de Pós-Graduação em Design da Universidade Federal do Maranhão (UFMA). E mail: Raquelnoronha79@gmail.com | Lattes: <http://lattes.cnpq.br/4782161324909358> | Orcid: <https://orcid.org/0000-0002-3753-5143>

<sup>3</sup> Pós- Doutora em Engenharia e Gestão do conhecimento pela Universidade Federal de Santa Catarina (UFSC, 2012), Doutora e Mestre em Engenharia de Produção pela (UFSC, 1998 e 2005). Docente do Programa de Pós-Graduação em Design da Universidade Federal do Maranhão (UFMA). E mail: ana.zandomeneghi@ufma.com | Lattes: <http://lattes.cnpq.br/146820404435056> | Orcid: <https://orcid.org/0000-0001-6140-8841>

<sup>4</sup> Graduation degree in English Language and English Language Literature from the Federal University of Piauí (UFPI, 2018). She works as an English teacher at Minds English School. claudiab752@gmail.com

## 1 INTRODUCTION

This article reflects on the importance of collaborative design methodologies in the construction of new configurations for teaching flat clothing modeling. Within the field of teaching fashion and clothing, but specifically in the disciplines of flat modeling, several problems can be identified regarding teaching-learning. Silva and França (2018) state that there is little perceived ability to understand the execution of the molds on the part of the students, which cause the discipline to be seen with a high degree of complexity, causing dissatisfaction, both on the part of the students and by part of the teachers who teach it. This article is based on data, four surveys carried out in fashion and clothing courses in Brazil regarding teaching-learning of the flat modeling technique and from the gaps identified in its results, we will substantiate the paths taken by this research.

Based on the assumption that the understanding of the reasons and the difficulties present in the contexts of the researches carried out on teaching and learning of flat modeling in recent years, are not due to individual and solitary actions, but to collective constructions of all the authors involved. In this work, concepts of collaborative design methodologies are explored, as innovative and effective methods of this construction. Understanding that, through collaborative means, it is possible to contribute with activities and solutions from different fields, starting from a new perspective when conceiving formal concepts and solutions.

Thus, the question that guides this study and which will be answered is: how can collaborative design methodologies contribute to the flat modeling of clothing? The article is structured in four topics, which aims to clarify points and difficulties raised in research that were carried out in recent years on teaching and learning of flat modeling through a systematic literature review that points out data on the state of the art of flat modeling and its relationship with collaborative methodologies.

## 2 COLLABORATIVE DESIGN AND FLAT CLOTHING MODELING

Researches in the field of teaching flat modeling in Brazil, carried out in different contexts of the discipline within fashion courses, points to problems in teaching-learning. The search for new configurations for this teaching directed our look at the need for actions with the participation of the authors involved, in the construction of tools through collaborative steps. Thus, through key words and in order to answer a question regarding the state of the art, as well as through the systematic literature review, it was possible to understand the paths that need to be taken.

As research conducted recently in relation to teaching flat modeling, Araújo et al. (2019, p.44) "it is observed that not every student has identification and ease of learning this content". Also Filgueiras et al. (2016, p.51) point out that "there is a difficulty that fashion / design professionals have to do modeling". For Lervolino (2015), on the other hand, many students consider the modeling content in plaster when it comes to mathematical rules that seem to be meaningless. Nunes and Rocha (2018), affirm that little has been discussed about the quality and impacts of didactic resour-

ces in the teaching-learning of clothing modeling.

Driven by the various issues that permeate this field of flat modeling teaching, it is possible to perceive from the surveys that a collaborative work done with teachers and students in the area can contribute to the improvement of the quality of this teaching and the construction of teaching tools by collaborative means is one way. According to Imbernón (2009; 2011; 2016), when new relational and work models based on collaboration are generated in the context of the school, another meaning for individual and collective professional identity is made possible.

Collaborative processes have the peculiarity of flexibility in terms of steps and results, which guarantees the effectiveness of these methodologies. Following a collaborative direction at the end of this process, there is a new look at the subjects and the relationships established, the problems and solutions built, the role of each and the collective during the process, resulting in a solid and real project. In this sense, we understand the need to relate collaborative work to teaching flat modeling.

The methodological procedures applied were divided into three stages: the first consists of referential theoretical research, which corresponds to the validation of the research problem, through a bibliographic and systematic review of the literature, where in line with Luna (1997), the literature review can be carried out with the following objectives: determination of the "state of the art"; what gaps exist; and where are the main theoretical or methodological barriers.

The second point of focus was the contextualization of collaborative methodologies for the elaboration of a proposal for a methodological model based on the analysis of the literature review carried out. Finally, the time for conclusions and reflections on the importance and use of collaborative methodologies for flat clothing modeling.

Therefore, as a methodology, exploratory-descriptive research was used, with a qualitative approach. As for the objectives proposed in this research, it is basic in nature, as it aims to generate specific knowledge, according to Silva (2005, p. 20), "aims to generate knowledge for practical application and aimed at solving specific problems." Thus, this research deals only with a methodological arrangement, in which it will proceed in order to apply the proposed methods, being carried out in a next stage in the fashion and clothing design courses at the Federal Institute of Piauí, with professors and students in the area.

The characterization of the research, based on collaborative molds, mainly regarding its objectives and within a categorization of research in design, can be classified as an action of research, which, according to Lewin (1946), is an exploratory method, in which the researcher has direct involvement with the research object, assuming the role of observer and observed. The application of action research will be carried out through a group engaged in collaborative action, in which the researcher is also part of this group. In this way, the analysis of the investigation is done from the contrast between literature, the researcher's reflections and collective self-reflection.

### 3 CONCLUSION

The analysis and discussion of the results point to the relevance of the concepts and applications explored in this research, in order to present the contributions of collaborative methodologies for the flat modeling of clothing. Collaborative design methodologies are innovative and carry ideas for a new way of designing. This new form transcends an isolated vision and a solitary work of a designer, or in a vague vision of a problem, it contextualizes several situations, listens and is performed by a collective work between designers and users, through tools and metadesign concepts. And dynamic forms, as well as establishing relationships for defining roles and characterizations of the users for whom they will be designed.

It is concluded that the essential steps for the foundation and modeling of a collaborative methodology were presented, and a minimum conceptualization of the steps, aiming to provide the first steps for the academic community that intends to proceed with research that contribute to the field of teaching and, mainly, that use collaborative methodologies.

### REFERÊNCIAS

ALMEIDA, Camila Caroline Teixeira de. **The concept of Metadesign**. The Colloquium on Metadesign: London: Goldsmiths University: SIGRADI, v.1, p. 62, ten. 2014. Available at: [http://papers.cumincad.org/data/works/att/sigradi2014\\_200.content.pdf](http://papers.cumincad.org/data/works/att/sigradi2014_200.content.pdf). Accessed on: 12 dec. 2019.

ARAÚJO, M. do S de; SOUZA, W. G. de; FILGUEIRAS, A. P. A. Methodological experiment for the teaching-learning process of female flat modeling: teaching x student praxis in the design-fashion course - UFC. In: **Teaching**. [s.l. : s.n.] v. 3, n. 2, jun./set. 2019. Available at: <http://www.revistas.udesc.br/index.php/EnsinarMode/issue/view/Dossi%C3%AA%204>. Accessed on: 12 dec. 2019.

BERG, Ana Lara Marchi. **Modeling techniques Female plane**: construction of bases and volumes. Sao Paulo: Senac Sao Paulo, 2017.

BORBAS, M. C. ; BRUSCAGIM, R. R. Flat and three-dimensional modeling - moulage - in the clothing industry. In. : **Rev. Business Sciences at UNIPAR**, Umuarama: [s. n.], v. 8, n. 1 and 2, Jan./Dec. 2007. Available at: <https://www.revistas.unipar.br/index.php/empresarial/article/viewFile/2679/2043>. Accessed on: 10 nov. 2019.

BOTERO, A. ; KOMMONEN, K.-H. ; OILINKI, I. & KOSKIJOKI, M. Co-Designing Visions, Uses, and Applications. In: **Electronic Proceedings of the 5th International Conference of the European Academy of Design. Techne- Desing Wisdom. Barcelona: European Academy of Design: Universidad de Barcelona**, 2003. Available at: [https://www.academia.edu/5847867/Expanding\\_Design\\_Space\\_s.\\_.\\_Design\\_in\\_Communal\\_Endeavours](https://www.academia.edu/5847867/Expanding_Design_Space_s._._Design_in_Communal_Endeavours). Accessed on: 08 oct. 2019.

CREPALDI, Renata Nogueira. **Modeling teaching:** experiences and challenges in the search for the formation of independent constructive thinking. Bauru, 2017. Available at: [http://www.coloquiomoda.com.br/anais/Coloquio%20de%20Moda%20-%202017/COM\\_ORAL/co\\_2/co\\_2\\_ENSINO\\_DE\\_MODELAGEM\\_EXPERIENCIAS.pdf](http://www.coloquiomoda.com.br/anais/Coloquio%20de%20Moda%20-%202017/COM_ORAL/co_2/co_2_ENSINO_DE_MODELAGEM_EXPERIENCIAS.pdf). Accessed on: 30 Nov. 2019.

FILGUEIRAS, A. P. A. ; ARAÚJO, M. do S de; SOUZA, W. G. de; CARVALHO, M. A. Reflections on ergonomic modeling in the planning and elaboration of clothing products. In: **3rd INTERNATIONAL FASHION AND DESIGN-CIMODE CONGRESS**. Buenos Aires: [s.n.], 2016. Available at: <http://www.revistas.udesc.br/index.php/Ensinarmode/article/view/14568/10074>. Accessed on: 25 nov. 2019.

FONTANA, Isabela Mantovani; HEEMANN, Adriano; GOMES FERREIRA, Marcelo Gtirana. Collaborative Design: Critical Factors for Co-design Success. In .: **4th South American Interaction Design Congress**. [S.l .: s. n.], 2012. Available at: [https://www.academia.edu/9203614/Design\\_Colaborativo\\_Fatores\\_Cr%C3%ADticos\\_para\\_o\\_Sucesso\\_do\\_Co-design\\_Collaborative\\_Design\\_Critical\\_Success\\_Factor\\_for\\_Co-design\\_Fontana\\_Isabela\\_Mantovani%University\\_Unity](https://www.academia.edu/9203614/Design_Colaborativo_Fatores_Cr%C3%ADticos_para_o_Sucesso_do_Co-design_Collaborative_Design_Critical_Success_Factor_for_Co-design_Fontana_Isabela_Mantovani%University_Unity) Accessed on: Oct 25, 2019.

GIACCARDI, Elisa. "Metadesign as an Emergent Design Culture". In .: **Leonardo**, [S.l .: s. n.], v. 38, n.2, August. 2005. Available at: [https://www.researchgate.net/publication/249562528\\_Metadesign\\_as\\_an\\_Emergent\\_Design\\_Culture](https://www.researchgate.net/publication/249562528_Metadesign_as_an_Emergent_Design_Culture). Accessed on: 10 dez. 2019.

IERVOLINO, Fernanda. 3d technology as a didactic resource for learning the flat modeling of clothing. In .: **National meeting of fashion researchers**. [S.l .: s. n.], 2015. p 05-06. Available at: <http://www.feevale.br/Comum/midias/cd4c3a08-00cf-4b-73-8979-b5334873a92e/A%20TECNOLOGIA%203D%20COMO%20RECURSO%20DID%C3%81TICO%20PARA%20A%20APRENDIZAGEM%20DARENDIZAGEM%20DARENDIZAGEM%20DARENDIZAGEM%20DA%20MODELING%20PLAN%20DO%20WEAR%20C3%81RIO.pdf>. Accessed on: 11 Dec. 2019.

IMBERNÓN, F. **Ongoing teacher training**. São Paulo: Cortez, 2009. 119 p.

IMBERNÓN, F. **Ongoing teacher training**. Porto Alegre: Artmed, 2011. 127 p.

IMBERNÓN, F. **Quality of teaching and teacher training**. São Paulo: Cortez, 2016. 229 p.

LIMA, Márcio Soares; SILVA, Lucilene Rodrigues da; UCHÔA, Jandaina Maria Barbosa; NORONHA, Raquel Gomes. The modeling behind the molds: classroom experiences. In .: **Teaching**. [S.l .: s. n.], v. 3, n. 1, p.113 - 122, Oct / May 2019. Available at: <http://www.revistas.udesc.br/index.php/Ensinarmode/article/view/14476/9741>. Accessed on: 11 Dec. 2019.

LUNA, Sergio Vasconcelos de. **Research planning: an introduction.** São Paulo: EDUC, 1997.

MENEZES, Marizilda dos Santos; SPAINE, Patrícia Aparecida de Almeida. **Flat Industrial Modeling of Clothing: guidelines for the clothing industry and teaching-learning.** PROJÉTICA, LONDRINA, v. 1, n. 1, p. 82–100, ten. 2010. Available at: <http://www.uel.br/revistas/uel/index.php/projetica/article/view/7737/6858>. Accessed on: 11 Dec. 2019.

NUNES, R de C; ROCHA, Maria Alice Vasconcelos. The teaching of clothing modeling from the perspective of Information Design. In .: **Achiote electronic fashion magazine.** [S.l. : s. n.], v.6. n. 2, p 12-17, ten. 2018. Available at: <http://www.fumec.br/revistas/achiote/article/view/6632/3396>. Accessed on: December 18th. 2019.

OBREGON, Rosane de Fatima Antunes. **Design research perspectives: studies based on the Systematic Literature Review.** Erechim: Deviant, 2017.

KAMPA, Erick Renan. **Collaborative design processes in the development of digital games.** Curitiba: [s. n.], 2018. 110 f.

LEWIN K. **Action research and minority problems.** J Soc Issues. [S.l. : s. n.], v. 2, n. 34, 1946. p. 6.

SANTOS, Marcio Eugen Klingenschmid Lopes dos. **Evaluation parameters of virtual learning objects.** Sao Paulo; SP: [y.n], 2013.

SILVA, Edna Lúcia da. **Research methodology and dissertation preparation.** 4. ed. rev. current. Florianópolis: UFSC, 2005.

SILVA, Edna Maria dos Santos; FRANCE, Sônia; Female doctor. **Modplan: teaching and learning of flat modeling through a technological resource.** [S.l. : s. n.], 2018. Available at: <http://www.coloquiomoda.com.br/anais/Coloquio>. Accessed on: 07 Nov. 2019

SPINUZZI, Clay. The Methodology of Participatory Design. **Technical** communication. [S.l.: s. n.], v. 52, n. 2, maio 2005. Disponível em: [https://www.researchgate.net/publication/233564945\\_The\\_Methodology\\_of\\_Participatory\\_Design](https://www.researchgate.net/publication/233564945_The_Methodology_of_Participatory_Design). Acesso em: 07 out. 2019.

TRANFIELD,D.;DENYER, D.; SMART,P. 'Towards a methodology for developing evidence-informed management knowledge by means of systematic review'. **British Journal of Management.** [S.l.: s. n.], v. 14, n. 207, 2003. Disponível em: <https://www.cebma.org/wp-content/uploads/Tranfield-et-al-Towards-a-Methodology-for-Developing-Evidence-Informed-Management.pdf>