

Practical Learning in Fashion *Design* Distance Learning and Professional Training of Graduates

  **Gabriel Coutinho Calvi**

University of Anhembi Morumbi (UAM), Sao Paulo, SP, Brazil

gabrielcalvi@hotmail.com

  **Cibelle Akemi Vallim**

University of Anhembi Morumbi (UAM), Sao Paulo, SP, Brazil

cibellevallim@gmail.com

  **Ana Mae Barbosa**

University of Anhembi Morumbi (UAM), Sao Paulo, SP, Brazil

anamaebarbosa@gmail.com

Abstract: The research evaluates the relationship between the practical disciplines of fashion design course at a private higher education institution (HEI) located in Paraná and compares it with the perceptions of graduates about their formation for the job market in the region. The qualitative data come from semi-structured and individual interviews with eight graduates who work in the area. As a result, we understand that the practice occurs based on evaluation tools explored in the course.

Keywords: Fashion Teaching; Distance Education; Job Market.

Aprendizagem Prática em *Design* de Moda EaD e a Formação Profissional do Egresso

Resumo: A pesquisa avalia a relação entre as disciplinas práticas de desenho e modelagem, em um curso de *design* de moda EaD em uma Instituição de Ensino Superior (IES) privada, localizada no Paraná, confrontando com as percepções dos egressos sobre sua formação para o mercado de trabalho

da região. Os dados qualitativos são de entrevistas semiestruturadas e individuais, com oito egressos que atuam na área. Como resultado, temos a compreensão que a prática acontece a partir dos instrumentos avaliativos explorados no curso.

Palavras-chave: Ensino de Moda; Educação a Distância; Mercado de Trabalho

El aprendizaje práctico en el curso a distancia de design de moda y la formación profesional de los graduados

Resumen: La investigación evalúa la relación entre las disciplinas prácticas de dibujo y modelado en un curso a distancia de design de moda en una institución de enseñanza superior (IES) privada de Paraná, y la compara con la percepción de los graduados sobre su formación para el mercado laboral de la región. Los datos cualitativos provienen de entrevistas individuales semiestruturadas con ocho graduados que trabajan en el sector. Como resultado, se observa que la práctica se lleva a cabo a través de los instrumentos de evaluación explorados en el curso.

Palabras clave: Enseñanza de la moda; Educación a distancia; Mercado de Trabajo.

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1 INTRODUCTION

Distance Education (EaD, as it is called in Brazil) is a teaching modality that has grown significantly in the last decade, as indicated by the EaD Census 2022, thanks to the advent of Information and Communication Technologies (ICT) (ABED, 2022). Characteristic factors of this development are the more affordable prices compared to presential courses, the ease of adapting EaD to different realities, and the flexibility of study schedules and activities.

The increased demand for distance education in design courses, specifically fashion design, confirms the need for studies on the issues surrounding teaching in this area. Therefore, this research seeks to understand whether graduates of fashion design courses can grasp the practical content that is worked on in the EaD modality through video classes, live classes, textbooks, and activities provided.

The Course of Design Technology (CST), whether it is presential or EaD, is characterized as interdisciplinary, because the subjects are covered and linked to different areas of knowledge and activity, to train a pluralist professional, understanding the production cycle that exists in the fashion market, which goes from conception to the final product and/or service in the market. Thus, throughout the student's path, the stimulus of creativity, knowledge of materials used in the textile field, manual skills, interpretation and conception of images and colors, as well as the authorial language through creations are developed (Maximiliano; Tomasulo, 2013).

In Fashion design teaching, all curricular components available in presential teaching are also worked on in the distance education modality, with the adaptation of resources, practices, and assessment methods to the Virtual Learning Environment (VLE), providing support and tools so that, based on the content explained by the teachers, the student can develop. Sanches et al. (2016, p. 127, translated by us) present that “to assist fashion design students in the construction of design reasoning, it is essential to outline which elements and procedures usually characterize the project”.

Design courses must constantly strive to offer curricular components that encourage students to express themselves without losing their identity characteristics, constantly evaluating the students' learning in practical disciplines and their consonance with what has been recorded in the Course Pedagogical Project (PPC), a document that must respect the National Curricular Guidelines (DCNs) and ensure that the curricular components explore professional practice.

The organization of the article is presented in the introductory text. Section 2 presents a brief

discussion of distance education and the curricular structure of the CST in Fashion Design Distance Education, which includes theoretical, practical, and theoretical-practical disciplines. The choice to present the course structure is due to the qualitative research focus and also to the lack of authors specifically studying the topic since the first course in this modality in Brazil was created in 2016, in which the authors of this research participated in the elaboration and offering, being the first to study the topic that can be consulted in the researches: Calvi and Kim (2017), Calvi (2018), Vallim et al. (2019), Calvi et al. (2020), Calvi, Oliveira and Franchini (2021), among other published researches on the topic.

Section 3 presents the methodology, using a case study that analyzes the EaD Fashion Design course at a private higher education institution (HEI) in Paraná. The methodological approach is qualitative research, using semi-structured interviews as data collection, involving eight former students who are interviewed about the provision of practical curriculum components and training for the fashion market in the Paraná region. Section 4 presents the results and discussion gathered from the individual interviews with the graduates. The content analysis methodology proposed by Bardin (2011) is used to process the data, which categorizes the terms that are frequent in the graduates' responses and provides support for understanding the relationship between the curricular components of the Fashion Design Distance Learning course and preparation. The article ends with final considerations.

2 CST IN EaD FASHION DESIGN

When discussing distance education, it should not be understood as another way of teaching and learning. It must be understood as a modality in which teaching and learning are facilitated by technology, capable of connecting teacher-knowledge-student and reducing barriers for learning to take place (Lenzi, 2014).

In this sense, the teaching of fashion design in distance education is facilitated by ICT, with the same commitment and quality objectives that the Ministry of Education (MEC) requires for presential courses. The National Catalogue of Higher Education Courses in Technology (CNCST), published by the MEC in 2016, organizes higher education courses in thematic axes. In this case, the design course is located in the axis called Cultural Production and Design, which presents the following aspects:



The technological axis of CULTURAL PRODUCTION AND DESIGN includes technologies related to representations, languages, codes, and product designs, mobilized in an articulated manner to the different communicative proposals applied. It includes the creation, development, production, editing, dissemination, preservation, and management of cultural and material assets, ideas, and entertainment applied to multimedia, artistic objects, radio, television, cinema, theater, studios, publishing, video, photography, advertising and industrial product design (Brasil, 2016, p. 98, emphasis in the document, translated by us).

The definition of the axis in which the Fashion Design course is inserted allows the University to organize the curricular matrix of the courses, taking into account the guidelines for intellectual development based on the theoretical and practical components offered to the students. In this context, learning gains depth by being based on approaches that stimulate the development of the creative process, in a way that considers not only technical skills but also stimuli to creativity and interpretation. The organization of the disciplines and the structure of the course must focus on the autonomy of the professional practice that future designers will have to develop their activities. In addition, the CNCST establishes a minimum workload of 1600 hours that fashion design courses must include.

The curricular organization of design courses, according to the CNCST, should include general knowledge such as: reading and writing technical texts; logical and aesthetic reasoning; science and technology; communication and information technologies; and technical standards. Concerning higher education in fashion design, the professional profile of students who complete the degree is expected to be the ability to:

Create and develop products for the fashion industry. Analyze and apply aesthetic, symbolic, ergonomic, sociocultural and production factors. Conduct fashion research. Plan, manage and articulate fashion collections with manufacturing processes, raw materials and technical and sustainable feasibility. Develop prototypes, models, sketches, technical sheets and portfolios using sophisticated graphic expression techniques. Evaluate and give technical opinions in their area of training (Brasil, 2016, p. 100, translated by us).

Taking into account these concepts set out in the CNCST for design courses, the curricular content presented should be structured based on the provision of: a) basic content; b) specific content; and c) theoretical-practical content, with HEIs being allowed to use this basic structure to develop other components that meet these requirements. Therefore, to present the structure of the EaD Fashion Design CST at the HEI in this case study, we can say that the guidelines support the way the course works, as well as the methodology, distribution, and delivery of subjects to students. The course lasts two years and is divided into eight modules with two subjects and a duration of 10 weeks. Figure 1 shows this arrangement.



Figure 1 – Modular structure of CST in Fashion Design



Source: Prepared by the authors (2024) based on the CST PPC in fashion design.

By analyzing Figure 1, it is possible to understand how the disciplines are taught in the distance fashion course. The two disciplines that make up the module last five weeks each; they are composed of five conceptual classes that deal directly with the content covered in the course material, are asynchronous, and can be accessed by the student at any time. Unlike the conceptual classes, the live classes are synchronous and last fifty minutes each. These classes provide a more in-depth look at the content covered in the course material and are also a time for students to ask questions.

In terms of activities, the course provides objective questions, essay questions, and a practical exercise that can be submitted at the end of the fourth week of the course. The practical activity usually deals with a professional performance problem situation that the student must solve, recording each step until its completion. The Practical Activity represents 35% of the total points to be earned during the course. This percentage is intended to encourage students to develop the practice due to its relevance in the training process.

The EaD Fashion Design is also presented as shown in Chart 1.

Chart 1 – Graduate profile and objectives of the CST in EaD Fashion Design course

Main Objective of the Course	The general objective of the higher education course in fashion design technology is to train a professional with theoretical, practical and scientific research foundations in the area of fashion knowledge, meeting the trends, demands and needs of the local, regional and national fashion industry, analyzing aesthetic, symbolic, ergonomic and productive factors.
Specific Course Objectives	I. To establish curricular content around the structuring cores and axes of the higher education course in fashion design technology, aiming to articulate them with each other, covering



	<p>theories and practices as constitutive elements of the systematizing axis of the CST in question.</p> <p>II. To enable the understanding of the historical and epistemological nature of scientific knowledge in fashion design, aiming at the critical analysis of different theories, techniques and practices.</p> <p>III. To Ensure the acquisition of theoretical and practical scientific knowledge from areas related to fashion design to support a broad and in-depth understanding of phenomena related to the sciences that are part of the course.</p> <p>IV. To develop scientific understanding of the phenomena that constitute the field of fashion design as an applied science, as well as developments in the various research interfaces in the specificity of the fashion designer.</p> <p>V. To ensure mastery of the processes that involve the production of theoretical and practical knowledge of the specificity of fashion design, aiming to develop the technical capacity of the course's procedures, strategies, methods and techniques.</p> <p>VI. To enable academics to understand the technical, aesthetic and historical aspects of design and fashion.</p> <p>VII. To develop the ability to create, plan and execute collections and industrial production, in addition to managing the fashion business.</p> <p>VIII. To train a professional capable of planning and managing the product development department to put marketing plans into practice, together with the creative, industrial, communication and commercial departments.</p> <p>IX. To train academics to assess market trends and company conditions to develop new products and monitor them on the market from creation, industrialization and commercialization.</p>
<p>Graduate Profile</p>	<p>The professional profile of students graduating from the Fashion Design Technology course will have as a central axis of their training the ability to combine technical, scientific, critical, and creative knowledge with the needs of the fashion industry, in order to transform knowledge into trends and innovative products. In addition, the academic training seeks to integrate theoretical training with social practices, both from a technical point of view and from the point of view of the ethical and social responsibility of fashion professionals. The graduate of the Fashion Design Technology course will be a professional of strategic importance and will be able to carry out activities in different areas of the fashion industry, such as: a) product development; b) consulting; c) research; d) modeling; e) fashion illustration; f) product management.</p>

Source: Prepared by the authors (2024) based on the CST PPC in fashion design.

When analyzing the general and specific objectives together with the graduate profile, it is possible to recognize that one of the most frequent conditions is the convergence between theoretical and practical knowledge, explored throughout the course by the curricular components. Chart 1 contributes to the understanding of the interview responses and the categories and terms that will emerge from the interpretation of the data presented in the Results and Discussion section. In the methodology topic of this research, we present the distribution of disciplines in the course modules and their classification into theoretical, practical and theoretical-practical.



3 METHODOLOGY

Research, according to Santos (2005, p. 171, translated by us), is "[...] the process, the form, the manner, the paths followed to arrive at answers to a question about a problem, a fact, obeying principles, norms and techniques". As for its nature, research is applied, and it focuses on the study of a problem related to scientific knowledge or its applicability. Its approach is qualitative in nature since it consists of the study of an object to interpret it to understand its meaning (Alyrio, 2009).

The research in this article aims to evaluate the relationship between the practical curricular components of drawing and modeling in a distance education fashion design course at a private university in Paraná, comparing them with the perceptions of graduates about their training for the fashion market in the region. In this sense, the research provides support to verify, in practice, this relationship between the curricular components and what happens in the development of the course based on the interviews. In terms of objective, the research is exploratory, using semi-structured interviews and case studies, to develop, clarify, and modify existing concepts related to the topic addressed (Gil, 2008). Thus, the scenario of CST in EaD fashion design is analyzed.

The study analyzes semi-structured interviews with eight CST graduates in EaD fashion design who are already working in the field to understand and analyze the teaching practices adopted. The semi-structured interview, according to Gil (2008), is a procedure that is carried out through a previously prepared questionnaire, and during the interview process, the researcher can insert questions related to the topic being discussed, with the aim of exploring the fact addressed.

Because of this, the interview starts with four questions that focus on the students' learning in the disciplines of Three-Dimensional Modeling, Two-Dimensional Modeling, Human Figure Drawing, Digital Drawing, and Fashion Drawing. The disciplines were chosen because these components have a 100% practical workload, requiring students to have a training routine to perfect the techniques explored in each curricular component. Chart 2 provides an overview of the characterization of the methodology.

Chart 2 – Characterization of the methodology

Method	Classification
Nature of Research	Applied Research
Objective	Exploratory
Approach	Qualitative research

Method	Classification
Procedure	Case Study
Data Collection	semi-structured interview with eight students from the Fashion Design course
Data Analysis	Content Analysis proposed by Laurence Bardin (2011)

Source: Prepared by the authors (2024).

As a case study, we will use a private HEI in Paraná that has been offering the CST in Fashion Design for more than seven years and has students who have graduated from the course. The HEI was chosen for reasons of convenience since some of the authors were affiliated with the HEI. In addition, the institution was the first to offer a Fashion Design course in the EaD modality, was authorized and recognized by the MEC, and its graduates have participated in two editions of the National Student Achievement Examination (ENADE). In order to preserve the confidentiality of the institution and, consequently, of the research subjects, it will be referred to as DM. Chart 3 provides an overview of the institution.

Chart 3 – Description of the research environment

DM Institution
I. Large private higher education institution, with over 30 years of experience in higher education.
II. Offering EaD courses for over 15 years.
III. It has more than 1000 student support centers spread throughout Brazil.
IV. Offering the EaD fashion design course since 2016.
V. The CST in fashion design is divided into nine-week modules, containing four modules per year.
VI. It offers four live classes per module subject, in addition to recorded classes and teaching materials.
VII. Each subject has a workload of 100 hours, totaling sixteen subjects.

Source: Prepared by the authors (2024).

The course subjects are indicated in Chart 4, divided into the theoretical, theoretical-practical and practical categories, with the research focus on exclusively practical curricular components.

Chart 4 – Distribution of Curricular Components

Practical Components	Three-dimensional modeling	100 h
	Two-dimensional modeling	100 h
	Human Figure Drawing	100 h
	Digital Drawing	100 h
	Fashion Design	100 h
Theoretical Components	Marketing Fundamentals	100 h
	History of Art and Design	100 h
	Ergonomics	100 h
	Manufacturing Technology	100 h
	Event Management	100 h
	Creative Process	100 h

Theoretical-practical components	Theory and Fundamentals of Design	100 h
	Project Methodology in Design	100 h
	Product Design	100 h
	Design Management	100 h
	Textile Materials	100 h

Source: Prepared by the authors (2024) based on the CST PPC in fashion design.

To carry out the semi-structured interview, a script containing four questions was prepared, as shown in Chart 5.

Chart 5 – Semi-structured interview script

Question 1	In your opinion, is there practical experience in the subjects of the EaD fashion design course? If so, how does this practice occur? If not, why doesn't it happen?
Question 2	Thinking about the modeling disciplines, the way they are structured and presented to the student, how do you observe the practice? Let's start the answers with the discipline of Three-Dimensional Modeling and, later, Two-Dimensional Modeling. - How does it happen? - What did you learn from the subject?
Question 3	Thinking about the drawing disciplines, the way they are structured and presented to the student, how do you observe the practice? Let's start the answers with the human figure drawing discipline, moving on to digital drawing and, finally, approaching fashion drawing. - How does it happen? - What did you learn from the subject?
Question 4	In your opinion, is the way in which practical subjects are offered to students applicable in the job market and in your professional performance?

Source: Prepared by the authors (2024).

Based on the questions presented in Chart 5, the categories created for data analysis according to Bardin's methodology (2011) are:

I. The first question that addresses the observance of practice in the disciplines of the Fashion Design course, we created the category: Occurrence of practice in the course.

II. The second question that addresses practical learning in modeling disciplines, we developed the category: Practice and learning in Modeling disciplines.

III. The third question that addresses practical learning in drawing subjects, we created the category: Practice and learning in Drawing subjects.

IV. The fourth question, which addresses the relationship between practical activities and their relevance for working in the job market, we developed the category: Applicability of practical disciplines in the market.

The semi-structured interview was applied to 8 (eight) students and Chart 6 presents their profile.

Chart 6 – Profile of the students interviewed

Student 1	Graduate	The student had not worked in the field before starting the course. After the course, she/he began working in fashion production.
Student 2	Graduate	The student had not worked in the field before starting the course. After the course, she/he began working as a designer in a large company in Santa Catarina.
Student 3	Graduate	The student had not worked in the field before starting the course. After the course, she/he opened his own studio and now provides services to brands.
Student 4	Graduate	The student had not worked in the field before starting the course. After the course, she/he began producing pieces for sale.
Student 5	Graduate	The student had not worked in the field before starting the course. After the course, she/he began producing pieces for sale.
Student 6	Graduate	The student had not worked in the field before starting the course. After the course, she/he began working with visual merchandising.
Student 7	Graduate	The student had not worked in the field before starting the course. After the course, she/he began working as a style assistant.
Student 8	Graduate	The student had not worked in the field before starting the course. After the course, she/he continued working as a clothing salesperson.

Source: Prepared by the authors (2024).

The interviews took place between April and May 2023 via the Google Meet platform, given the platform's recording capability. At the beginning of each interview, the consent form containing the research objective and the purpose of the information was read to the participants and, after reading, the participants' knowledge and consent was recorded. Lasting between 20 and 30 minutes, the interviews were transcribed so that the data could be tabulated using Bardin's (2011) technique for analyzing qualitative data. In this way, the students' responses to each of the questions will be presented and interpreted to identify possible terms for the categories.

4 RESULTS AND DISCUSSION

The first question aims to discover the presence or absence of practical activities in the CST in EaD fashion design, in general. This means that in this first moment the question asks about all disciplines, whether theoretical, practical or theoretical-practical. The question was as follows: "In your opinion, does practical activity occur in the disciplines of the EaD Fashion Design course? If so, how does this practice occur? If not, why does it not occur?" The answers are shown in Chart 7:

Chart 7 – Occurrence of practices in CST disciplines in EaD Fashion Design*

Student 1	In practice, college often does not provide the necessary support. And I understand that this is due to several factors. First, there are several centers in Brazil, and the centers do not have the structure to offer the practice that we need during the course. So, often, the practice is done by ourselves , and we have to look beyond what the college offers. Even so, college provides the basis for someone’s knowledge . And you can follow your own path and enter the field.
Student 2	Yes, it happens quite a lot , through the activities of MAPA , because they provide experience as if we had it in the job market , performing that function. It encourages us to put into practice what we learn in class.
Student 3	Yes, definitely . If we have the goal, because it depends a lot on the person who is studying there, if they really want to. Because when I started, a lot of people said, but it will all be virtual with what you will do, we will put it into practice, it will work. Doing everything that is explained there is no mistake, right?! So, look, it will definitely work, yes, but you have to be committed .
Student 4	Yes, practical classes are included in theoretical subjects. They provide information such as historical and social contextualization at a global and regional level, historically locating the designer's professional life and its main characteristics in the products offered. In practical subjects, they help in the choice of materials, textures and colors.
Student 5	Yes, the practice is carried out by the learning MAPS. The MAPA provides information that allows us to develop products and collections, in practice. The MAP helped me in the practice of creating products.
Student 6	Practical disciplines occur in such a way that activities are proposed to students, right? So, we have a problem to be solved, we have a problem situation and in this problem situation, we have to take the materials that we have at our disposal [...]
Student 7	So, it really depends on the student, right? So, we end up with the practice in creating the activity itself, the discipline in MAPA. We have to practice , there's no way to run, because the whole process needs to be photographed, the whole process needs to be recorded so we can include it in the slides, to prove that we really did that. So, there is practice, indeed .
Student 8	In the EaD fashion course, there is a lot of practical experience during the subjects , you know?! We do these MAPA activities that are really cool . It's like learning in practice, applying everything we learn in the theoretical classes. And the contextualized activities are also very useful , because we see how it works in the real world of fashion.

* The answers were adapted and translated by us.

Source: Prepared by the authors (2024).

The responses presented in Chart 7 were organized into a subcategory called “occurrence of practice”. In this way, the students’ responses make it possible to outline an overview of the practices in the EaD fashion design course. Next, Chart 8 presents the terms extracted from the category presented.

Chart 8 – Terms in the category “occurrence of practice in the course”

CATEGORY	TERMS
Occurrence of practice in the course	<ul style="list-style-type: none"> ● Presence of practice ● MAP Activity ● Contextualized activities

Source: Prepared by the authors (2024).

When analyzing the terms established from the students' responses, it is clear that they recognize the presence of practice in the disciplines through the activity Learning Assessment and Practice Material (MAPA), being aware that the activities are contextualized through problem situations that insert them into professional practice. In this sense, the study proposed by Calvi (2018, p. 5) on the effectiveness of MAPA states that "well-executed practice awakens and sharpens in students skills and competencies that are specific to each discipline. Therefore, everyday situations and elements that stimulate practical skills in combination with the learned theory are questioned".

Comparing the specific objectives in Chart 1 with the terms in Chart 8, it is clear that objectives I and III have been met, which deal with the articulation and deepening of curricular content with theory and practice, ensuring that students acquire this knowledge.

The next question asks students about the practice of modeling disciplines. The question was as follows: "When you think about the modeling disciplines, the way they are structured and presented to students, how do you observe the practice? We will start the answers with the Three-Dimensional Modeling subject and later address Two-Dimensional modeling. 1) How does it happen? 2) What have you learned from this discipline? The answers obtained can be analyzed in Chart 9.

Chart 9 – Practice in the disciplines of Three-Dimensional and Two-Dimensional Modeling**

Three-dimensional modeling	
Student 1	<p>(1) I was able to follow the Three-Dimensional Modeling course because I had already taken a course outside of my undergraduate course on flat modeling, and that gave me an initial understanding. It is a very complex subject, what we learn in college is the basics, but the problem is that there is nobody around to correct us when we are doing it, you know? I think it would have been very useful to have some presential meetings in this subject to receive feedback at the time, that would make it easier.</p> <p>(2) In Two-Dimensional Modeling, it's like a cake recipe, you know? We follow the measurements and make the molds on paper. In Three-Dimensional Modeling, however, things are different! We create the pieces directly on the body and assemble the clothes. This freedom of interpretation is cool, but it can also be confusing if we're doing it right.</p>
Student 2	<p>(1) Exactly! In Three-Dimensional Modeling, this is also how I learn. I follow the teacher and attend the classes, but at the same time, I am already putting hands-on and practicing together. This subject is really quite complex, but practice is what helps me better assimilate the concepts and understand how everything works in practice. I can't deny that it was a challenge.</p> <p>(2) [...] So, we learned how to create models and then, based on them, to make other interpretations, such as dresses and blouses. It's quite complex, but I tried hard to follow the technical instructions correctly. At first, I found it difficult, you have to practice a lot to get good at it!</p>
Student 3	<p>(1) It was wonderful to be able to visualize everything I was learning and apply it [knowledge] directly to my mannequin". [...] I liked Three-Dimensional Modeling, learning and putting into practice everything I was seeing. I was doing it on my mannequin, so it was great to put into practice. And today, it's my career, right? That's what I do.</p> <p>(2) Yes, I think it's more difficult to interpret the models. Because many people still can't do it, that's why I said that I only learned how to interpret models after Three-Dimensional Modeling. [...]</p>



<p>Student 4</p>	<p>(1) In the case of three-dimensional, it was really cool to see that we can model and interpret the model on the body and see how the fabric falls, and also how we can add volume. It's really interesting, but I found it really difficult.</p> <p>(2) I learned to use the three-dimensional modeling technique that I had not yet practiced until then, I did not adapt very well to the technique, but I believe that it is a question of needing to study more about the subject.</p>
<p>Student 5</p>	<p>(1) In college, I had the chance to study Three-Dimensional Modeling. It's super important, you know? This subject is essential for creating patterns that fit the body perfectly. We build clothing patterns in a very specific way, thinking about the pattern so that everything fits nicely. It's amazing to see how this makes a difference in the construction of the pattern!</p> <p>(2) I learned three-dimensional modeling, because it is a technique that allows me to visualize the garment directly on the body. In this discipline, I can express my creativity in an authentic way, because when I place the fabric and pins, I create something new.</p>
<p>Student 6</p>	<p>(1) Yes, there was a modeling activity that was to do the <i>moulage</i> , to create a piece of clothing and I didn't have a mannequin, right?! And I didn't have anyone at my disposal to do the <i>moulage</i> on the person. So, I did it on myself. And I managed to do the activity, I took it and followed the step by step of the activity's instructions, right? You have to model according to the model's body, you have to let the fabric flow on the model itself, and then you do all that stuff with the pins and everything else.</p> <p>(2) I mainly learned about modeling issues regarding fabric drape, because when I started, I started from scratch in fashion, from scratch in sewing, and I'm learning sewing on my own. I learned modeling during the course, so, fabric drape, certain fabrics are suitable for a certain project you want to do, some fabrics are suitable and others are not.</p>
<p>Student 7</p>	<p>(1) Of course! In the Three-Dimensional Modeling discipline, the content is very difficult. We need to follow the step-by-step instructions to understand how to create the pieces on the body. You need to practice a lot!</p> <p>(2) So, with persistence and by attending classes several times, I learned how to mark the mannequin and build bases for blouses and dresses. I had more difficulty with sleeves and pants. As for interpreting models, I managed to create some ruffles and volume effects, but I found the planning part, after removing the fabric from the mannequin, very complicated.</p>
<p>Student 8</p>	<p>(1) I have to admit that the Three-Dimensional Modeling course left me a little insecure. The content is complicated, but I followed the technical guidelines. You need to practice to assimilate it better, but I believe that with dedication it is possible to understand all of this. It is challenging, but I am persisting.</p> <p>(2) In this class, I was able to build the molds following the instructions . However, the part of planning, removing the fabric from the body and transferring it to paper, it is difficult to know where to start, I would need more classes in this part.</p>
<p>Two-dimensional modeling</p>	
<p>Student 1</p>	<p>(1) I believe that the modeling discipline is the most important discipline for anyone who wants to pursue a career in the fashion industry. I was able to take the discipline without any difficulty because I took a course outside of my undergraduate course in flat modeling, but I saw during my undergraduate course that other colleagues had difficulty understanding it. So, I think this case illustrates well that you have to look for courses beyond what is offered in your curriculum and that this causes a lack of practice [...].</p> <p>(2) You can assemble clothes in a simple way , as long as you pay attention, if you dedicate yourself, you can do all the steps of a modeling process correctly .</p>
<p>Student 2</p>	<p>(1) So, these are very complex subjects to learn, and it's something I only learn in practice. So, in order to learn, I would listen to the teacher and watch the lessons, I would do them together, because I can't watch first and try later.</p> <p>(2) I did it. Today, I don't do modeling, I'm not in the modeling field, so if I need something, I pick up the book, go there and do it. But, at the time, I was able to learn well, I was able to do it without the help of the book. It's training, both this subject and the subject of drawing.</p>





Student 3	<p>(1) I liked the Two-Dimensional Modeling because I already sew and everything is easier. [...] In practice, I followed the step-by-step activities and did them without any problems, but that was because I already sew, my friends had more difficulty.</p> <p>(2) Yes, I think it's more difficult to interpret the models. Because many people still can't do it, that's why I said that I only learned how to interpret models after Three-Dimensional Modeling. [...]</p>
Student 4	<p>(1) Modeling is responsible for the construction of clothing patterns. It occurs in several methods: two-dimensional modeling, computerized modeling, three-dimensional modeling.</p> <p>(2) I learned Three-Dimensional Modeling, which I had not practiced until then. I did not adapt very well to the technique, but I believe it is a matter of a more in-depth study on the subject. I get along very well with Two-Dimensional Modeling.</p>
Student 5	<p>(1) [...] I had the opportunity to explore the discipline of Two-Dimensional Modeling, which allows us to build clothing patterns. I understood that modeling can occur through different methods.</p> <p>(2) I learned Two-Dimensional Modeling because it allows me to visualize the body's shapes more accurately. This discipline is important because it allows me to create different pieces.</p>
Student 6	<p>(1) Yes, there was an activity that was to model a piece and create another model on top of it, I managed to do the activity, I took it and followed the step by step of the activity command, right?! It worked and I believe that this was the most beautiful activity I did in the course.</p> <p>(2) I really like the activities, so much so that every time I finish, I talk about the story and I have a lot of fun doing it, you know? [...] I stay with the practical aspect, right? When there are these practical activities, you feel part of the process, of the course itself [...]. In the two-dimensional modeling, I mainly learned about tracing , which I didn't know about, you know, what you can do to plan an outfit , you know?</p>
Student 7	<p>(1) I confess that it was a challenge for me. The content is complex, but I tried hard to follow the instructions properly. At first, I found it difficult, but with a lot of practice you can gradually improve. Practice is essential for learning.</p> <p>(2) With a lot of persistence and by watching the classes several times, I learned how to build molds step by step in the Two-Dimensional Modeling class. I was also able to interpret some basic models, such as pants and blouses. But I still think it would be cool to have more practical classes or even face-to-face meetings to go deeper.</p>
Student 8	<p>(1) I have to admit that the Two-Dimensional Modeling course left me a little insecure. The content is complicated, but I followed the technical guidelines. You need to practice to assimilate it better, but I believe that with dedication it is possible to understand all of this. It is challenging, but I am persisting.</p> <p>(2) Absolutely! The two-dimensional modeling course taught me a lot! I dedicated myself a lot and attended the classes several times, which allowed me to learn how to build molds step by step. However, I confess that I found it a bit complicated to handle the rulers and mix them with the techniques. I had to take an additional course to improve these skills.</p>

** The answers were adapted and translated by us

Source: Prepared by the authors (2024).

When verifying the students' responses in Chart 9, content analysis is used to extract the terms from the practice and learning category in the modeling disciplines, which are divided into the subcategories observed in Chart 10.



Chart 10 – Terms in the category “practice and learning in Modeling subjects”

SUBCATEGORY	TERMS
Perceptions of practice	<ul style="list-style-type: none"> ● Content complexity ● Follow technical commands ● Exercise
Learning outcomes	<ul style="list-style-type: none"> ● Model interpretation ● Mold construction

Source: Prepared by the authors (2024).

The content analysis allows us to extract the subcategories shown in Chart 10. As far as the perception of the practice is concerned, the terms found in the interviews allow us to understand that the students consider the contents of the modeling disciplines to be very complex. This indication is due to the technical commands that the practical subjects require for the construction of molds and the development of parts in a three-dimensional or two-dimensional way. Despite the complexity, students recognize that practice is essential to learning the content of the discipline. In addition, Vallim et al. (2019, p. 8, translated by us), regarding the learning of modeling, state that

The assessment of EaD Fashion Design tends to explore students' skills and competencies that are not different from those worked on in the classroom. However, students need to have discipline and objectivity to allow their creative potential to shine through in the practical activities that are developed.

Based on the learning outcomes, the respondents indicate that, with the modeling subjects, it was possible to learn the techniques of mold making and model interpretation. Thus, when considering the subcategories, it can be said a priori that the practical disciplines meet the objectives of the professional graduation profile foreseen in the CNC ST (Brasil, 2016), since, according to the guidelines, fashion design professionals must develop prototypes and models.

Comparing the specific objectives in Chart 1 with the terms in Chart 10, we observe the compliance with objectives V and VI, which aim to enable students to understand the technical and aesthetic aspects of fashion design, ensuring the mastery of the procedures and strategies proposed by the course.

The next question in the semi-structured interview asks about the drawing courses that have a completely practical workload within the CST in Fashion Design. The students were asked: "Thinking about the drawing courses, the way they are structured and presented to the students, how do you observe the practice? We will start the answers with the Human Figure Drawing course, move on to



Digital Drawing, and finally address Fashion Drawing". (1) How does it happen? (2) What have you learnt from the course? "The responses collected from the interviews are shown in Chart 11.

Chart 11 – Practice in the subjects of Human Figure Drawing, Digital Drawing and Fashion Drawing***

Human Figure Drawing	
Student 1	<p>(1) I believe that drawing classes are better structured. In the drawing classes I took, the teachers were excellent. I understood everything and was able to put into practice what was presented in the textbook. So, the drawing classes were very satisfactory.</p> <p>(2) I learned how to put together a sketch, I learned how to put together the base of the sketch, I learned how to draw clothes, I learned everything that was proposed during the course.</p>
Student 2	<p>(1) So, as I told you, they are training-type subjects, so, in fact, it happens. A practice that requires a little more than modeling, because modeling is a standard. There you learn, you do. Drawing, on the other hand, is not something freer. I did the drawings with the teacher next to me doing the class. So, this requires more practice and more attention.</p> <p>(2) I made the drawings with the teacher next door doing the class and I learned techniques for representing the human figure, including proportion, anatomy and perspective, so this requires a lot of training and commitment, greater practice and greater attention, but I learned how to draw the body with the measured heads and also how to place clothes on the body of the sketch drawing.</p>
Student 3	<p>(1) [...] I still have difficulty making drawings. Until today I was practicing, because, like, how am I going to learn by making a sketch? I have to keep these markings, right? I know it's training and everything, but, like, I found the classes too short for us to have this notion of how to make drawings.</p> <p>(2) Yes, I did it. You can put together the whole sketch, but it's like this. I wanted to, like, how am I going to develop it up here? Another thought, in practice, you know?! Because in class, we learn all of this.</p>
Student 4	<p>(1) I see it as an important element in which the designer sketches, designs and communicates his ideas to be produced. It happens in the product planning phase.</p> <p>(2) I learned how to create the basis of the sketch based on the canons of the human figure, with the marking of the heights of the head, up to the drawing of the face and the styling of the pieces with the different fabric drapes.</p>
Student 5	<p>(3) I feel that the classes are too short to really develop this drawing skill. In short, these subjects need a lot of training, requiring more practice and dedication.</p> <p>(4) I learned, but these issues of these "little divisions" of the characters' heads, the more technical part... The teacher taught a "little mold" that you make out of paper and you can articulate the little doll as you wish, then you start to make the character in other positions.</p>
Student 6	<p>(1) I, who had already drawn before, found it a little more difficult to follow all these rules when drawing. I like to draw in a more free and creative way, so, at first, it was a challenge to adapt to the specific modeling techniques. However, I realized that for those who didn't know anything about drawing, these rules are a way to help the student learn and find better guidance.</p> <p>(2) I, who had already drawn before, found it a little more difficult to follow all these rules for drawing. I like to draw in a more free and creative way, so at first it was a challenge to adapt to the specific techniques. However, I realized that for those who didn't know anything about drawing, these rules are a way to help the student learn and find better guidance.</p>
Student 7	<p>(1) Yes, there is practice, as we are encouraged to practice in the MAPA activities. The teachers give us specific exercises so that we can improve our technique and develop our drawing style. With</p>





	<p>practice and by following [the guidelines], you will improve your drawing and gain confidence to create. I believe that practice is essential, but by following the instructions, it is possible; you need to practice.</p> <p>(2) With practice and by following [the guidelines], you will improve your drawing and gain confidence to create. I believe that practice is essential, but by following the instructions, it is possible; but we had to draw female, male, and children's drawings and also draw clothes with the correct fit when we change the position of the feet and arms.</p>
Student 8	<p>(1) So, practice is essential; it really happens. Drawing has rules up to a certain point, then it becomes freer and requires more attention to add volume, play with shading and proportions. So, it depends a lot on the eye, which makes it difficult for those who are not so skilled.</p> <p>(2) I learned to perceive the volumes of fabrics and effects to add volume, play with shading and proportions, but you need to practice, because some people are more talented at the business than others, the thing is to practice.</p>
Digital Drawing	
Student 1	<p>(1) I thought the discipline was well structured, but like any practice, you have to train!</p> <p>(2) I learned how to draw a blouse, pants and dress on a digital body, it's not easy for those who don't have computer skills, but following the step by step book and following the classes, you can learn, you have to practice to get good!</p>
Student 2	<p>(1) I liked how the teacher taught the subject and in digital you can learn well and just pause!</p> <p>(2) In the live classes, I just watched, because it's impossible to do it at the same time as the teacher. I would leave it to try to do it later, as soon as I could follow and understand, but I learned some technical drawings of clothing items.</p>
Student 3	<p>(1) I thought the teacher could have gone slower and made it harder for someone who doesn't know how to use a computer to learn the tools.</p> <p>(2) I had a lot of difficulty, as it is difficult to learn digitally from a distance, but that is because I do not have the aptitude for it, and my age does not help, with a lot of sacrifice, I learned how to draw the skirt.</p>
Student 4	<p>(1) The subject is well organized and the way the teacher presented it I found it easy to do!</p> <p>(2) The teacher taught me how to draw technical drawings of clothes and also something cool: he taught me how to make bartacks, buttons and stuff like that, you know?! You can learn by following the classes and the book very carefully, but it's not easy.</p>
Student 5	<p>(1) I thought the classes were good, but I didn't adapt to this method.</p> <p>(2) I've always liked drawing manually, but this digital drawing is not for me. I couldn't adapt, I passed the subject, but if I have to do it again, I can't. It's not the method's fault, it's mine. I have a block in my head for this type of subject.</p>
Student 6	<p>(1) [...] I gave myself the chance to learn and I was surprised with the live classes, book and recorded ones, I did well!</p> <p>(2) I actually did pretty well. I thought I wouldn't like it, but I was surprised. I even learned how to make some prints in Corel, how to make rapports and insert them into the piece. I even liked those flat designs. I really liked them!</p>
Student 7	<p>(1) I thought that watching the classes and following the steps would be easy to do!</p> <p>(2) For me, it was great because I really like everything that is digital. So, after this class, I even picked up some collections to develop here in my city. In class, I learned how to draw the basic pieces, but then I practiced and improved .</p>
Student 8	<p>(1) The class is very well structured, if you watch it while pausing it you can do it, you have to practice like any other practice!</p> <p>(2) The teacher taught several technical clothing items and then how to modify them. The part of</p>





	creating the base works, but the hardest part is modifying. I think there could be more classes on this subject.
Fashion Design	
Student 1	(1) The subject is well structured and the teacher is great, when we get here we have already learned a lot in other subjects and that helps us do well here! (2) It was cool because everything I learned in the creative process class I was able to apply here, so, here in Fashion Design, I learned to design clothes thinking about the creative process , that was cool, but the classes are short and could be longer .
Student 2	(1) So, as I told you, they are training-type subject , so it really happens. A practice that requires a little more than modeling, because modeling is a pattern. There, you learn, you do. Drawing, on the other hand, is not something freer. I did the drawings with the teacher next to me doing the class. So, this requires more practice and more attention . (2) Here I learned to draw the pieces using a more flat technical drawing that is apparently used a lot in the industry.
Student 3	(1) This subject is well organized, but it requires you to train to perfect it! (2) Here, we learned more about technical drawing and also accessories and shoes. But I'll tell you, if there were more classes, it would be better to learn!
Student 4	(1) With live classes, books and the possibility of doing it, now getting good at drawing just requires a lot of practice! (2) I learned how to style the pieces thinking about the fabrics and how they will look on the body, always thinking about the target audience for whom I am designing the product and whether they would actually use what I developed.
Student 5	(1) That thing about putting measurements in to draw is very complicated, as I already drew I found the way the teacher explained it more difficult. (2) As I said, here I also found it very full of rules, but I liked inserting the accessories in the drawing, as I draw anime was great, because we always put it on complete with hats, shoes and gloves and everything, so that helped me a lot!
Student 6	(1) I already drew, so the shape is structured and more complicated for those who already draw. (2) Here, I learned more about thinking about the product considering someone who will buy it , rather than any new technique. Since I've been drawing for a long time, that's what I learned.
Student 7	(1) [...] I liked the way the subject was taught, but I repeated these classes I don't know how many times to be able to do it , I tried really hard! (2) Yes, there is practice, as we are encouraged to practice in MAPA activities. The teachers give us specific exercises so that we can improve our technique and develop our drawing style. With practice and by following the guidelines, you will improve your drawing and gain confidence to create. I believe that practice is essential, but following the commands, it is possible; it is necessary to train .
Student 8	(1) The teacher was great and dynamic and the classes were well structured. (2) Design has a rule, but we had a directed freedom that allowed us to develop a dress, thinking about a woman aged 30 to 35, for a summer collection with the theme Buenos Aires. So, here it was more than just drawing; it was a process of thinking in a directed way, and that made all the difference.

*** The answers were adapted and translated by us

Source: Prepared by the authors (2024).

When analyzing Chart 11, students' perceptions regarding practical drawing subjects emerge,



that is, Human Figure Drawing, Digital Drawing and Fashion Drawing. These responses were analyzed according to Bardin's content analysis (2011) and considering the practical and learning category in drawing subjects, dividing them into two subcategories that can be seen in Chart 12.

Chart 12 – Terms of the category “Practice and learning in Drawing subjects”

Subcategory	Terms
Perceptions of Practice (Figure Drawing, Fashion Drawing and Digital Drawing)	<ul style="list-style-type: none"> ● Exercise ● Follow technical commands
Learning outcomes (Human Figure Drawing)	<ul style="list-style-type: none"> ● Technical sketch drawing ● Drawing of clothing items
Learning outcomes (Human Figure Drawing)	<ul style="list-style-type: none"> ● Designing clothing items based on the target audience ● Accessory design
Learning outcomes (Digital Drawing)	<ul style="list-style-type: none"> ● Technical drawing of clothing items ● Detail and finish design

Source: Prepared by the authors (2024).

As a result of the analysis of the interviews about the practical drawing disciplines, two categories were found, which are observed in Chart 12. Regarding the perceptions of the practices, as in the modeling disciplines, the students recognize that it is necessary to follow the technical commands, being necessary to practice the procedures to improve the skills in the disciplines. Regarding the skills of fashion design, Gragnato (2008, p. 8, translated by us) argues that "this design aims to demonstrate the effect that the fashion product will have before its manufacture. The lines, together with the coloring technique, must reproduce the materials and finishes of the product in a way that is convincing and therefore very close to reality".

Regarding the learning outcomes of the drawing disciplines, the students recognized that they were able to produce the technical drawing of the sketch and the design of the garments. Again, these learning outcomes are in line with the objectives set out in the CNC (Brasil, 2016), which indicates that the skill of the fashion design professional is the elaboration of sketches using differentiated graphic expression techniques.

Comparing the specific objectives in Table 1 with the terms in Chart 12, it is clear that objectives IV, V, VI, and VII have been met, which deal with the development of the different interfaces of the fashion designer, ensuring the mastery of the processes that involve the production

of theoretical-practical knowledge and aiming at the technical capacity of the procedures, strategies, methods, and techniques of the course in the development of fashion products and collections.

The last question of the semi-structured interview focused on the applicability of the subjects in the job market. The question was as follows: "Do you think that how the practical subjects are offered to the students has applicability in the job market and your professional performance?". The answers are shown in Chart 13.

Chart 13 – Applicability of practical subjects in the job market reality****

Student 1	Yes, they give you knowledge , you don't enter the market without knowing how to do it, you can relate [the content] to something current in the market. You don't enter the market completely raw . You can apply it, you can have a critical sense of where you will use it in your day to day life.
Student 2	Yes, because as I said, if I go into the development area, into product collection, I need to get references from somewhere . I need to have a repertoire, which is what I get in Art History, which I get, like, in other disciplines, where we create this repertoire in the creative process . [...] Look, we can bring these references when displaying the product, you can have an idea... You can think about how things work, also those who work with product creation.
Student 3	Yes, of course. I use it a lot, not only in my area, but also right now. I have a store that is opening now, doing the initial modeling, pilot pieces, everything. I got this idea from college , right? Because I wouldn't have any idea if I had only taken the modeling course, for example, as a pattern maker. Like the Textile Materials course, I loved it, and to this day I study a lot of books about fabrics, because I find it very interesting. It's an area like this that I like and I explain to my clients how they can choose the fabrics, the fit they will get, because college gave me this possibility.
Student 4	Yes, it can be applied to my professional activities, such as professional training to create and sell my pieces . In addition to designing my own collections, I can also plan marketing strategies to promote sales.
Student 5	Absolutely! The practical subjects we take in the course have a direct application in the job market and in our professional careers. They give us the opportunity to develop practical and technical skills that are super important in the fashion industry. Another cool thing is that we work on real projects in the fashion industry. This gives us a more realistic view of the demands and expectations of the job market and prepares us for the challenges of everyday life.
Student 6	Yes, the subjects are aligned with the job market. As someone who developed collections for small companies, I was able to use everything I learned in the creative process and product development, and I was able to guide the pattern maker and the pilot. I was also able to choose fabrics with suitable drapes for the pieces. The course activities put me, in a way, in touch with the market reality that I have experienced several times and I was able to develop my work .
Student 7	You can get a sense of what the market expects, because the course makes you develop activities as if you were employed in a clothing factory, having to meet goals and challenges. Developing collections with a focus on sustainability or using fabrics that you already have at home is an example of this. It's as if in the industry you had to use old fabrics in the new collection, you know?! So, the course takes you to a job market reality , preparing you for the situations you will face in practice.
Student 8	I believe that, like any course, it gives me direction and guidance on how I can work. It is important to pursue the specific area within fashion that I want to work in. I always have to seek to deepen my knowledge to complement my knowledge. And without a doubt, the course activities and the way it is taught [the content] bring reality even closer, as several professors have already worked in the fashion industry and have this practical experience to share. This helps me have a more realistic view of the job market .

**** The answers were adapted and translated by us.

Source: Prepared by the authors (2024).

The answers presented in Chart 13 were obtained in interviews with EaD fashion design students. By using the content analysis technique, it was possible to extract terms related to the applicability of practical disciplines in the market. Chart 14 explains these terms.

Chart 14 – Terms in the category “applicability of practical disciplines in the job market”

CATEGORY	TERMS
Practical Disciplines X Market Applicability	<ul style="list-style-type: none"> ● Market application ● Professional training ● Notions of market reality

Source: Prepared by the authors (2023).

The presentation of the terms in Chart 13 makes it possible to understand that, for students, the disciplines have practical application because they qualify them professionally, providing real notions of the job market based on the practices proposed by the assessment instruments throughout the course. Regarding this relationship between the graduate and the job market, Calvi, Oliveira and Franchini (2021, p. 43) advise that:

For professionals with a degree in fashion design, it is necessary to have a very good understanding of the subjects during their training, since it will be up to this professional to structure technical texts, whether to describe a fashion collection or to present a project to the client, working in harmony with the technological elements and technical standards relevant to the field of activity, in addition to the need to satisfy the aesthetic demands related to the act of designing in a logical and objective manner (translated by us).

Therefore, it is possible to say that the terms present in Chart 13 converge with the guidelines of the CNCST (Brasil, 2016), when they indicate that fashion designers have the profile of evaluating and giving technical opinions in their field of training. Thus, comparing the specific objectives presented in Table 1 with the terms present in Chart 14, it is possible to observe the compliance with Objectives VII, VIII and IX, which speak of the graduate's ability to plan and manage product development at the creative, industrial and commercial levels, in addition to fashion business management.

5 FINAL CONSIDERATIONS

The study was guided by the purpose of evaluating the relationship between the practical curricular components of drawing and modeling in a distance education design course at a private higher education institution located in Paraná, comparing them with the perceptions of graduates about their training for the job market in the region. Based on this premise, we can say that higher education in EaD fashion design requires a balance between theory and practice, something that initially proved to be an obstacle to the modality. However, with the advancement of ICT, new approaches have emerged to overcome this limitation.

Regarding the specific objectives of the course, they were observed and validated by the students during the interview, who understood the need for practical activities such as drawing, modeling, and creating pieces to carry out professional practice. Therefore, the course takes place thanks to the integration of digital resources and adapted practice, considering territorial boundaries.

In the perception of graduates who work in the fashion market, the practice happens effectively thanks to the structuring of the content and all the support of the pedagogical team, which includes coordination, teachers, and tutors who think from start to finish in the treatment of materials and content that the students will receive.

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