

The Use of Fashion Design Applications as A Medium for Artistic Creation Virtually in The Fashion and Textile Design Department

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ABSTRACT

The world is currently entering the era of Society 5.0, where digitalization is advancing rapidly across various fields, and technological evolution is accelerating. Information, communication, interaction, sharing, and knowledge could now be accessed simply by holding a smartphone screen. Design creation also benefits from the available of smart technology. Based on a previous survey, nearly 60% of students in the fashion design department are not yet familiar with fashion design applications and rarely use them. The research method used in this study is qualitative research, involving descriptive data in the form of written and spoken language. Qualitative research is descriptive in nature and typically employs an inductive approach, emphasizing the process and meaning from the subject's perspective. The analysis applied is descriptive analysis, utilizing several methods such as interviews, literature reviews, and references from magazines, articles, studies, and books related to digital art. The purpose of this article is to discuss the role of technology, particularly the use of applications in the field of fashion design. Furthermore, this article explores several popular and commonly used applications in fashion design, such as *Tailornova*, *Pattern Design Software*, and *CLO 3D*. Finally, the article discusses online design businesses through applications like *DressX*, which could be accessed via smartphones. The conclusion of this article is that fashion design applications are one of the tools that could be utilized to design clothing in the fashion industry. These tools could influence creative and innovative design outcomes and the continuous development of digital design technology. It is hoped that this article encourages all Fashion and Textile Design students at university to leverage current technological advancements for academic and personal purposes.

Keywords: Applications, Digital, Fashion Design

INTRODUCTION

The Society 5.0 era is characterized by rapid advancements in technology and digitalization. There are no longer limitations in terms of distance, space, and time. Society 5.0 represents a progressive industrial revolution, where technology and the internet function to integrate objects, humans, intelligent machines, production lines, and processes to create something new, simple, connected, and efficient [1]. The Industrial Revolution occurred due to the development of hardware, software, and internet connections, where people worldwide have shifted their mindsets and lifestyles from physical (real-world) activities to internet-based (virtual) activities. Life in the Fifth Industrial Revolution aims to save time and foster innovation, create many complex products more simply, increase data volume, facilitate mass production more efficiently, and enhance energy resources [2].

In the past, news dissemination took a long time. However, today it could be accessed quickly through various digital means. Previously, communication was limited to sending letters, whereas now, people could connect via email, phone, or even video calls anytime and anywhere. It is also possible to interact with anyone worldwide through social media platforms such as Instagram, Twitter, Facebook, and others. Technological developments have enabled merchants to transact without face-to-face meetings through e-commerce platforms. Teaching and learning activities have become commonplace in academia. Today, education could be conducted without the need for physical classrooms or direct interaction between teachers and students, utilizing e-learning or online platforms [3]. The use of technology on PCs or computers is commonly employed as a tool for creating artworks. Design applications created

on computers or other electronic devices are referred to as digital art. This aligns with the idea that digital art is an art and design form that explores computers as tools and produces design works as results [4]. Beyond creating art and design works, technology could also be used for creating other art forms, such as videography. With the wide variety of design applications available, tasks related to illustration, videography, and animation have become easier. Some of the most popular design software applications include *Tailornova*, *Pattern Design Software*, and *CLO 3D*. These applications make it easier, faster, and more cost-effective to create designs.

The growing popularity and demand for digital art are evident. Research indicates that the number of jobs for digital artists continues to increase over time without decline. Most high-paying artist jobs are in the digital art field [5]. As digital art becomes more popular and developed, its variety also expands, including 2D painting, 3D painting & sculpting, data moshing, pixel art, algorithmic art, fractal art, still imagery, CGI art, vector painting, raster painting, photo bashing, photo painting, digital collage, integrated art, mixed media, and digital photography [6]. Based on these points, this article discusses the role of technology in the creation of design works. It also explains the applications studied by students in the Fashion and Textile Design Department at Petra Christian University, Surabaya for creating design works, including *Tailornova*, *Pattern Design Software*, and *CLO 3D*. The following discussion provides insights into design business opportunities through various e-commerce applications. By utilizing technological advancements for creativity, students could sell their designs and generate additional income through websites accessible via smartphones, one of which is *DressX*.

METHOD

The research method used in this article is a qualitative research method. Bogdan and Tylor briefly define qualitative research as a method that produces descriptive data in the form of written or spoken words [7]. Qualitative research is descriptive in nature and tends to use an inductive approach, which emphasizes the process and meaning from the subject's perspective [8]. The analysis applied is descriptive analysis using several methods such as interviews and literature reviews or reference sources from journals, articles, research findings, and books relevant to digital art. The interviews conducted in this research followed a pre-designed interview guide. The target respondents for these interviews were 100 students from the Fashion and Textile Design Department at Petra Christian University, Surabaya. Their collected responses formed the basis of data related to the usage of digital application platforms that support their design work. The digital tools identified were then supported with a literature review to provide broader insights into these digital platforms. Additionally, this article discusses the use of fashion design applications for creating designs. It also explores platforms used for buying and selling designs through *DressX*.

RESULT AND DISCUSSION

The Role of Technology in Fashion Design

The development of information and communication technology has advanced rapidly, including in the use of fashion design applications on PCs/computers. Today, PCs/computers have evolved into more sophisticated and intelligent devices. They now feature advanced tools supporting design creation, even enabling digital pattern making, with continuous developments underway.

The App Store is one platform where users could download various software applications. It offers thousands of mobile applications for productivity, including design, games, document creation, and social media applications. Creating designs has become easier and more accessible, as it could now be done anytime and anywhere using applications on PCs/computers. Artworks that could be created using computers include logos, posters, drawings, illustrations, photos, videography, animations, and many more. Smartphone applications that support the creation of art and design include *Inkscape*, *Valentina*, *Clip Studio*, *Drawing Pad*, *CLO 3D*, *Pattern Design Software*, *Tailornova*, and many others. These applications have undeniably become a widely used medium for creators and artists worldwide to produce art and design. Digital artists, whether beginners or experienced professionals, could easily find applications that suit their expertise and create a comfortable environment for hours of artistic creativity [9].

Based on interviews conducted with 100 students from the Fashion and Textile Design Department at Petra Christian University, it was revealed that the students are aware of digital transformation. This transformation could impact fashion design itself. In the fashion industry, design is no longer limited to simple forms. With digital transformation, complex segmented designs have become more achievable. In terms of design presentation, digital transformation

offers alternative outputs, not only in 2D but also in 3D and even 4D formats. The following image summarizes the digital platforms used during the learning process by the respondents:

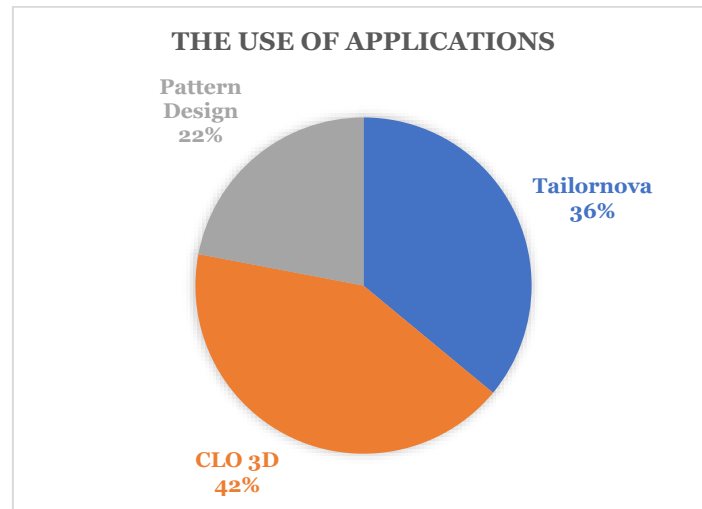


Figure 1: The Number of Fashion Design Applications Users

The results show that 22% of users utilize the Pattern Design application, 36% use the Tailornova application, and 42% use the CLO 3D application. The variation in application usage among students is due to the rapid development of technology, which has brought about changes to the design production process. Designs could now be created using various media, applications, or digital technologies that are accessible for free or paid, depending on the specifications of the students' smartphones. Both beginner and experienced students could easily find user-friendly applications that match their skill levels and provide an enjoyable experience.

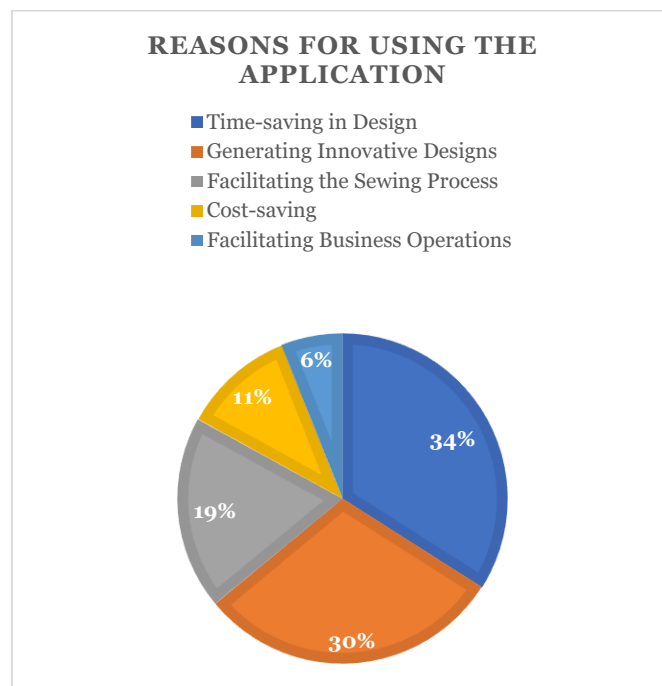


Figure 2: The Reasons of Using Fashion Design Applications

There are five main reasons why students use design applications: 34% cite timesaving in designing, 30% point to producing innovative designs, 19% find it simplifies the sewing process, 11% mention cost-saving, and only 6% use fashion design applications for business purposes. Digital art offers several advantages, such as ease of transport and storage, as well as effortless publication and sharing through various platforms like social media. Additionally, digital art could be reproduced and printed on physical media, such as mugs, fabric, posters, etc. Another advantage of digital art is the ability to correct or revise mistakes during the creation process.

Fashion Design Applications

Applications available on websites make it possible to create various types of art and designs, including photography, videography, illustration, digital painting, animation, and more. There are numerous applications available on smartphones to support artistic and design activities. However, this article focuses on three applications: **Tailornova**, **Pattern Design Software**, and **CLO 3D**.

Designing with Tailornova

Creating designs quickly and efficiently could be done using software such as **Tailornova**. With its 3D customization features and precise templates, this web-based software is highly accessible at any time. Tailornova enables users to create design sketches, 3D designs, technical drawings, and pattern drafting.

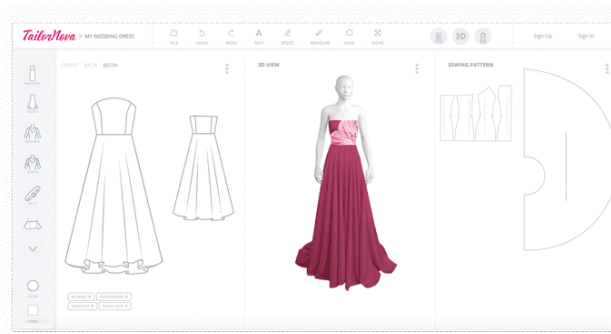


Figure 3: Tailornova Software

Designing with Pattern Design Software

Pattern Design Software is a product developed by EFI Optitex that enables the creation of fashion patterns from head to toe. This software could be used to design, develop, and produce clothing in a cost-effective manner. It also offers an environmentally friendly approach to design.

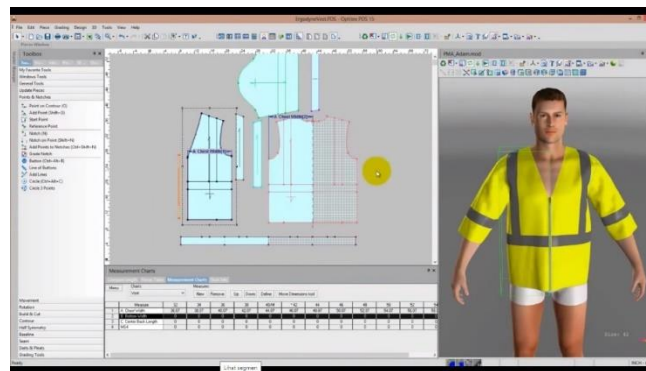


Figure 4: Pattern Design Software

Creating designs with CLO 3D software

One of the software for creating futuristic patterns or how to visualize sketches in 3D so that you could see one of the samples, could use CLO 3D. Starting with the selection of a 3D body avatar or clothing shape that is available in various shapes and sizes. Then imported using your own pattern or drawing it directly in CLO. Next, the selection of the type or fabric and pairing each garment stitch to see everything come together in 3D. Then you could adjust the pattern and perfect the design in real-time.

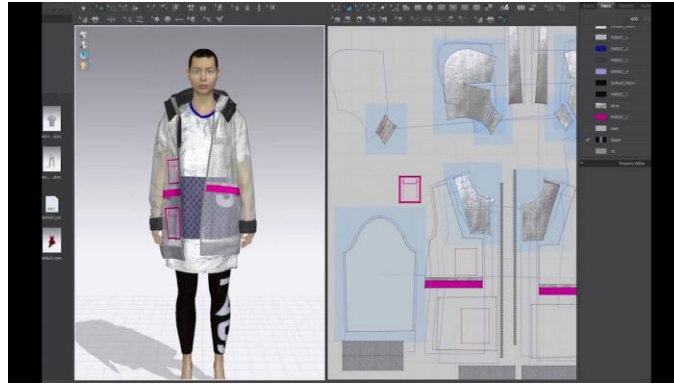


Figure 5: CLO 3D Software

Business in Website Design

The current digital transformation has enabled students and designers to buy and sell designs through digital trading platforms and marketplaces. The design marketplace allows consumers, students, and designers to meet and engage in trade from almost any location worldwide, without the need to visit physical stores. Through marketplaces, businesses could display and sell products without having to build their own system. Sellers only require a platform to showcase complete information about the products they offer [10]. Advances in technology have made it possible to perform various activities such as selling products quickly and easily and earning profits with just a smartphone. There are numerous alternative websites for students and designers to promote their work, including Instagram, Facebook, and e-commerce platforms such as Shopee, Lazada, Tokopedia, Zalora, DressX, among many others. This article will focus on one marketplace, DressX. This platform offers ease and a variety of products that students and designers could use to create and sell their design works, which could be utilized virtually [11].

DressX is a website featuring advanced camera modification applications that enable digital fashion shopping. The application was launched to allow customers to try on and purchase 3D digital clothing directly from designers. Based in Los Angeles, this digital fashion startup has introduced an app that enables customers to easily try on 3D digital clothing and purchase it directly from the designers.

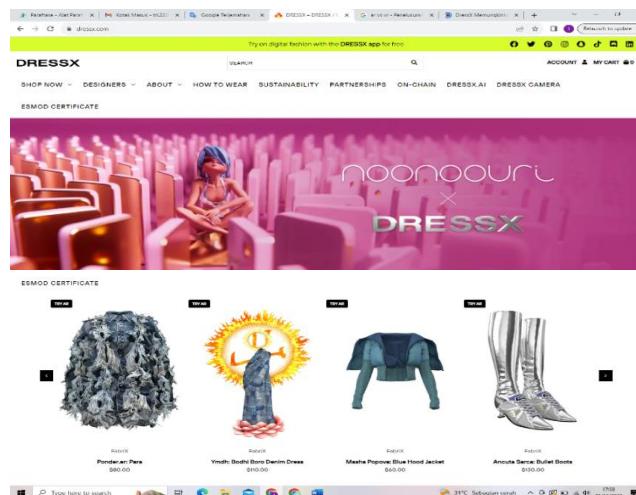


Figure 6: DressX Website

Based in Los Angeles, this digital fashion startup has introduced an app that enables customers to easily try on 3D digital clothing and purchase it directly from the designers. DressX was launched in August 2020 and claims to be the largest digital clothing retail platform, offering more than 1,000 products from 100 designers, including renowned designers such as Patrick McDowell, Gary James McQueen, and Pascal Masu. DressX also offers unique items like galaxy-themed T-shirts and blazers inspired by SpaceX and NASA. The app, available in beta on the App Store, allows buyers to try AR (augmented reality) products in real-time for free using their smartphone cameras.

CONCLUSION

The rapid development of information and communication technology has been mirrored by advancements in software for PCs/computers. Technological progress in PC/computer systems could be leveraged as a tool or medium for creating logo designs, illustrations, comics, digital paintings, and animations. The designs produced are not only visually appealing but also offer additional income opportunities for their creators. Both novice and professional students could utilize various digital platform applications free of charge to create designs. Among them, 22% of individuals use Pattern Design applications, 36% use Tailornova, and 42% use CLO 3D applications. These applications provide ease of use, benefits, and a comprehensive array of features to support the design creation process.

There are five primary reasons why students use these design applications: 34% cite timesaving in design creation, 30% highlight the generation of innovative designs, 19% mention the facilitation of the sewing process, 11% appreciate the cost-saving benefits, and only 6% use fashion design applications for business purposes. With the current advancements in technology, it has become possible to do many things, such as selling products quickly and easily, as well as earning profits by simply using available software [12]. Numerous alternative websites are available for students and designers to promote their works, including Instagram, Facebook, and e-commerce platforms such as Shopee, Lazada, Tokopedia, Zalora, DressX, and many others [13]. DressX, a website featuring advanced camera modification applications, allows users to engage in digital fashion shopping. The application was launched to enable customers to try on and purchase 3D digital clothing directly from designers. Launched in August 2020, DressX claims to be the largest digital-only clothing retail platform, offering over 1,000 products from 100 designers. Through the findings presented in this article, it is hoped that students from the Fashion and Textile Design program at Petra Christian University will be equipped with the knowledge and qualifications to harness technological advancements, innovate through their design creations, and utilize design sales as an additional source of income.

REFERENCES

- [1] Schumacher, Andreas., Selim Erol., Wilfried Sihn. 2016. A Maturity Model for Assessing Industry 4.0 Readiness and Maturity of Manufacturing Enterprises. Elsevier B.V. Procedia CIRP 52. pp. 161-166.
- [2] Nasution, Arman Hakim. 2018. Inovasi. Yogyakarta: ANDI.
- [3] Pratama, I Putu Agus Eka. 2015. E-commerce, E-business, Mobile Commerce. Bandung: Informatika Bandung.
- [4] Marcos, A. F., Branco, P. S., & Zagalo, N. T. (2009). The Creation Process in Digital Art. Handbook of Multimedia for Digital Entertainment and Arts. Chapter 27. Page.601-615. New York: Springer Science & Business Media.
- [5] Wang, V., & Wang, D., (2021). The Impact of the Increasing Popularity of Digital Art on the Current Job Market for Artists. Art and Design Review. Vol 9. Page 242-253. 2021.
- [6] Anton, G. (2022). 17 Types of Digital Art to Consider. Architecture lab. <https://www.architecturelab.net/types-of-digital-art/> diakses pada tanggal 30 November 2023.
- [7] Ratna, Nyoman Kuntha. (2016). Metodologi Penelitian Kajian Budaya dan Ilmu-Ilmu Sosial Humaniora Pada Umumnya. Yogyakarta: Pusatka Pelajar
- [8] Fadhli, M, R. (2021). Memahami Desain Metode Penelitian Kualitatif. Humanika. Vol 21. No 1. Page 33-54. <https://doi.org/10.21831/hum.v21i1.38075> diakses pada tanggal 27 November 2023
- [9] Sawyer, McKella. 2019. Best Drawing & Painting Apps for Mobile Artists (iOS + Android). Diakses pada tanggal 20 September 2023 pada halaman <https://conceptartempire.com/best-drawing-painting-apps/>
- [10] Yustiani, R., & Yunanto, R. (2017). Peran Marketplace Sebagai Alternatif Bisnis Di Era Teknologi Informasi. Komputa, Jurnal Ilmiah Komputer dan Informatika. Vol. 6, No. 2, Oktober 2017, ISSN: 2089-9033
- [11] Suryanto, Veni (2019). Marketplace Tees.co.id Membidik Pasar Desain Custom. Diakses pada tanggal 12 September 2023 pada laman <https://peluangusaha.kontan.co.id/news/marketplace-teescoid-membidik-pasar-desain-custom>
- [12] Ante, Lenna. (2021). The non-fungible token (NFT) market and its relationship with Bitcoin and Ethereum. Blockchain Research Lab (BRL) Working Paper Series No. 20. Published: 06 Jun 2021.
- [13] Reyes, Elham Abdullah. (2019). Digital Art for The Promotion of The Creative Aspect in The Plastic Art. Global Journal of Arts, Humanities and Social Sciences. Vol.7. No.1, Page 1-14