

EFFECTIVENESS OF ONLINE/ HYBRID FASHION EDUCATION: AN APPROACH TO ANALYZE SKILL TRANSMISSION THROUGH VIRTUAL PLATFORMS

AUTHORS

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ABSTRACT

In a rapidly evolving world, the fashion industry faces unprecedented challenges and opportunities. The emergence of the COVID-19 pandemic has forced the education system to engage in online and hybrid education learning. This paradigm shift in the pedagogical medium has prompted us to consider the efficiency of these virtual learning platforms for imparting skill-based education, blurring the boundaries between traditional and virtual learning environments. The quality education is a fundamental component of the United Nation's Sustainable Development 2030 agenda. In view of the same, this research paper delves into the Effectiveness of Online/Hybrid Fashion Education, exploring the multifaceted dynamics of skill transmission through virtual platforms.

Fashion Towards Post-Humanism, as the overarching theme, provides a thought-provoking context for our study, emphasizing the need to adapt to the changing landscapes of human interaction with technology. The sub-theme, Beyond Isolation to Trans, extends this discourse to the realm of fashion education, highlighting the importance of transcending traditional boundaries and embracing innovative pedagogical methods. This paper employs a comprehensive approach to analyze the effectiveness of these virtual platforms and online classroom teaching for Fashion Design Education. Where there are, many skill-based or practice-based courses for Range Development that include Pattern Making, Draping, Illustrations, Surface Development, Garment Construction & Finishing etc. These courses were taught through online learning mediums during the COVID pandemic due to the restrictions imposed by the government. Hence the study first, analyzed the popular virtual learning platforms that enable skill transmission, evaluating their impact on the learning process. Secondly, it investigated how effectively students were able to grasp the knowledge and implement it in the practical world. In turn fostering collaboration, creativity, and critical thinking among Fashion students.

The study utilizes a quantitative approach where the questionnaire was used as a tool for data collection. The sample size consisted of 137 respondents who were students of Fashion Design from Fashion Institutes across India. These respondents undertook skill-based Fashion Design courses through virtual platforms during the COVID-19 pandemic. The snowball purposive sampling technique was used for data collection. The questionnaire consisted

of questions pertaining to the preferences and experiences of students about skill-based design learning through online platforms. Where students or respondents rated their experiences on a Likert scale regarding challenges and ease of understanding of subjects like range development, pattern making, draping, garment construction etc. The parameters for analysis were derived through comprehensive secondary research. The data collected was tabulated and analyzed through statistical research tools SPSS and the hypothesis was tested using Pearson's chi-square test. The findings indicate that online education generally functions as a responsive model to the emergent demands of the learner, considering the integration and adoption of technical competencies. The research will pave the way for the integration of virtual learning platforms and classroom teaching in Fashion Design education post-pandemic. That will be valuable not only to educators and students but also to industry stakeholders seeking to adapt to the ever-changing demands of the fashion world in the era of post-humanism.

1. INTRODUCTION

The growth of online and hybrid modes of teaching in higher education has been a revolutionary occurrence, notably amplified by the worldwide COVID-19 pandemic. Prior to the pandemic, the field of online education was already experiencing significant growth due to technological advancements and an increasing need for adaptable learning alternatives. Nevertheless, the pandemic acted as a catalyst, expediting the development and widespread acceptance of these teaching methods

The advent of the pandemic in 2019 compelled educational institutions across the globe to swiftly adjust to the unparalleled difficulties presented by lockdowns and social distancing measures. As per UNESCO, 2020 reports educational institutions were compelled to disrupt the educational experience of 89% of students, reaching more than 1.5 billion students of all ages across 188 countries. The impracticality of traditional face-to-face teaching prompted a rapid transition to virtual platforms ensuring uninterrupted education during periods of emergency. The popularity of online compelled institutions to allocate resources towards enhancing technological infrastructure and enhancing the availability of online resources. This transition not only made it easier to have smooth learning experiences but also established the basis for the long-term viability and expansion of online education. E-learning is a new learning method combining network technology, multimedia, pedagogy, and andragogy. It shortens learning time, saves costs, and eliminates classroom interaction. Internet-enabled learning, also known as e-learning, is a result of information and communication technology development (Mengfei Tian et al. 2023).

The pandemic highlighted the significance of educational innovation. Educators had to reassess and revamp their instructional approaches to ensure the achievement of learning goals in virtual settings. Exploring inventive methods to effectively involve students in virtual learning. Incorporating multimedia resources, interactive discussions, and virtual collaboration tools became crucial for successful online teaching. Consequently, new assessment strategies were pursued, collaborative online projects were undertaken, and real-world applications were integrated into the virtual curriculum.

The adaptability of these methods became particularly vital for higher education institutions seeking to accommodate a wide range of student requirements and preferences. Hybrid models, which incorporate both in-person and online elements, have become increasingly popular as a versatile approach to accommodate both. The proliferation of online and hybrid teaching methods in higher education has undergone substantial development, driven by the need for flexibility in response to the worldwide pandemic. This evolution not only showcased the durability of these instructional approaches but also unveiled novel prospects for the future of education by promoting creativity and improving global accessibility.

Fashion programs focus on quality education in product design, international marketing, research and innovation, responding to industry transformation and challenges. Students are encouraged to formulate academic goals and participate in personal development. Current issues in the global fashion and textile industry broaden students' global academic horizons through web-based information platforms and technology-enhanced environments (McGrew, Breakstone, Ortege, Smith, & Wineburg, 2018). Although e-learning and blended learning have already been widely

adopted in fashion design, pattern design, fashion draping, merchandising, and textile engineering classes, they have received little attention in the literature (Charitopoulos et al., 2017; Paulins & Moeller, 2017; Yu, 2018). Hence it becomes imperative to research on the effectiveness of e-learning or hybrid learning in Fashion education where major courses are process based or practical in nature.

2. RESEARCH QUESTION AND HYPOTHESIS

RO1 Which are the most preferred online or virtual learning platforms for Fashion Design education?

RO2 How effectively students are able to grasp the knowledge and understand or implement the learnings of virtual skill based courses (pattern making, draping, garment construction, illustration etc.) of Fashion Design education.

RO3 What are the challenges in skill transmission (fashion design) through virtual platforms.

Based on the above questions Null Hypothesis were formulated

H01 Online and Hybrid education is not an effective mode of skill transmission for Fashion education.

H02 There is no significant relation between learning experience and understanding/ Skill acquisition or implementation of skill based Fashion Design courses (pattern making, draping, garment construction, illustration etc.) via virtual mode.

2.2 Research Objectives

1. Assessing the effectiveness of online/ hybrid fashion education by analyzing the transmission of skills through virtual platforms
2. The study explore how effectively students were able to grasp the knowledge and implement it in practical world.
3. To study the challenges of Fashion Design skill transmission through virtual platforms.

3. MATERIALS & METHODS

The purpose of the study is to explore the effectiveness of the online/ virtual platforms for skill based fashion education. It also highlights the challenges faced while transitioning to the virtual mode during pandemic. Hence, study uses quantitative research approach where questionnaire was framed for data collection from 137 undergraduate students studying Fashion Design course at various centers of NIFT (Delhi, Jodhpur, Bangalore, Kolkata, Bhubaneswar, Mumbai etc.) and other design institutes (FDDI) across India. The samples were selected using snow-ball sampling techniques for purposive sampling. These selected respondents or students undertook the courses during COVID- 19 pandemic via virtual mode due to imposed lockdown. The survey was created using Google forms where total 23 questions were formulated. The questionnaire consisted of the questions pertaining to preferences and experience of students about skill-based fashion design learning through online platforms. Where respondents rated their experiences on Likert scale regarding challenges and ease of understanding of subjects like range development, pattern making, draping, garment construction etc. The parameters for analysis were derived through comprehensive secondary research and analyzed for challenges faced by the students during virtual sessions.

The data collected was tabulated and analyzed through statistical research tools SPSS (29.0, version) hypothesis was tested using Pearson's chi-square test, which is a method used in statistics that calculates the differences between observed and expected values. Cross tabulation was used to analyze variables and p-value was derived for testing null hypothesis for RO1 & RO2. Further for RO3 the analysis will be carried out using descriptive research method of

frequency analysis.

4. RESULTS AND DISCUSSIONS:

The findings are shown as in the form of survey results below, which is categorized based on the objectives of the study.

4.1 Effectiveness of Virtual/ hybrid Fashion education:

This section of the survey respondent's/ students were asked to evaluate how effective are the e-learning techniques and platforms for skill based courses of Fashion Design. The survey resulted in collection of 137 responses which were collated and tabulated for further statistical analysis using SPSS as a tool. The responses are categorized based on the research questions, many of the students felt comfortable in transitioning from face to face mode of teaching to Virtual or hybrid mediums. When enquired about most preferred virtual platform used for fashion education, about 37.23% of the respondents use YouTube, followed by online live interactive meetings via zoom, google meet or any other such platform for classroom teaching and learning. The least preferred platform was Master classes hosted on different platforms. These master classes were less engaging and motivating for the students.

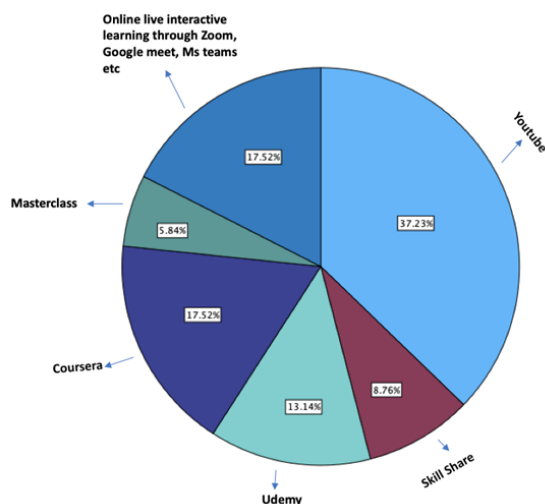


Figure 1. Most preferred Design Education platform for Virtual learning

The students were asked to mark their experience of using these virtual learning platforms with reference to Fashion design education on Likert scale (excellent to very poor). The results revealed that about 39.04% of students have rated their experience as Good and 30% students have rated their experience as Average, whereas just 6.1% of students have rated their experience of virtual design education as Excellent mode of skill knowledge transmission. The descriptive analysis of effectiveness of the virtual e-learning platforms revealed that a P- Value <0.001 hence the null hypothesis "HO1" was rejected emphasizing that mode of virtual learning is significantly effective in transmission of Fashion design education. Which was contrary to the perception that skill based subjects are difficult to learn through online mode due to lack of hands on experience and interaction. The similar results were obtained in the study conducted on women's clothing practice course (UNNES Fashion Design Education Study Program) also resulted in indicating that the hybrid learning model is an effective learning model (Roudlotus Sholikhah, 2023).

4.2 Skill acquisition through virtual learning:

This section of the study analyses that how effectively students are able to grasp the knowledge, understand or implement the learnings of virtual skill based courses (pattern making, draping, garment construction, illustration etc.)

of Fashion Design education. All the responses were collected on Likert scale for each skill based course which are assumed to be core areas of Fashion design education. The statistical analysis revealed that for each course such as Pattern Making, Draping, Garment construction and Range development or Fashion Illustration and representation the P- value was <0.001, hence rejecting the Null hypothesis HO2 stating there is a significant association between virtual learning experience and skill acquisition and implementation of skill based design courses. Which further states that students were able to grasp the knowledge transmitted through the virtual platform and were able to understand and implement it. This association was further strengthened by Cramer’s V symmetric measure as for all the courses the Cramer’s value was greater than 0.3 as shown in the Table 1.

	Pattern Making			Draping			Garment Construction			Range Development/ Fashion Illustration and Representation		
Statistical Test	Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	113.603 ^a	16	<.001 ^c	55.325 ^a	16	<.001 ^c	87.400 ^a	16	<.001 ^c	64.123 ^a	16	<.001 ^c
Likelihood Ratio	95.205 ^c	16	<.001 ^c	59.517 ^c	16	<.001 ^c	82.477 ^c	16	<.001 ^c	57.112 ^c	16	<.001 ^c
Cramer's V (Symmetric Measure)	.455 ^c		<.001 ^c	.318 ^c		<.001 ^c	.399 ^c		<.001 ^c	.342 ^c		<.001 ^c
N of Valid Cases	137			137			137			137		

Table 1. Chi- Square Test for Learning Experience and Skill Acquisition/ Understanding through Virtual transmission of core subjects of Fashion Design Course

The respondents (8.76%) who were able to grasp the knowledge of pattern making and considered it as “very easy” were also able to implement the knowledge and understanding. But variation observed when students level of understanding ranged from “easy” to “very difficult” some of the students were able to implement the understanding, some of the respondents (8.76%) revealed that they slightly understood the concept but were able to implement whereas few respondents (5.84 %) shared that they slightly understood the concept through virtual medium and were only able to implement limited knowledge. The 5.48% students did not understand the concept at all and were unable to implement it as per Figure No. 2. The level of satisfaction and engagement derived from acquired skills and competencies is related to the quality of learning outcomes. The increased satisfaction and engagement in the learning process provided by blended learning activities resulted in better course outcomes. This is consistent with the findings of López-Pérez et al (2013).

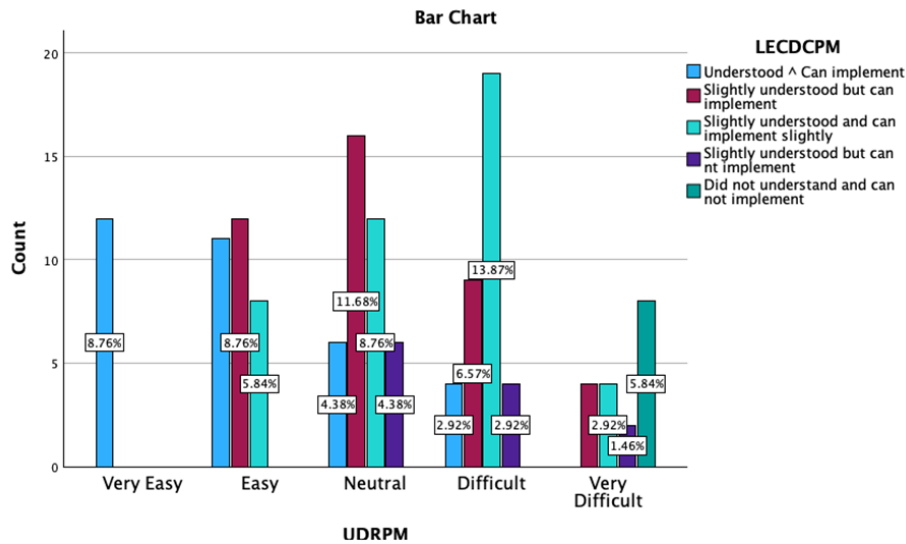


Figure No. 2 Virtual learning experience and level of understanding of skill based Pattern Making
*Note: LECDPCM: Learning experience with chosen design course of Pattern Making, through virtual platform
UDRPM: Level of Understanding of skill based Design course learned through virtual mediums.

4.3 Challenges of skill transmission through virtual platforms for Fashion Education

The sudden shift to virtual skill transmission was not anticipated during pandemic. The disruption in the learning platform where face to face learning was now delivered through online mode which required an elaborated plan for learning materials to be recorded or delivered online or electronically communicated. The impact of this sudden transition was analyzed after literature review, where various parameters were identified and adopted for analyzing the impact of effective learning. One of such study conducted by Emad Mushtaha et al. 2023 identified the parameters such as Flexibility, interactivity, motivation etc. The pilot study was conducted on sample of 15 students and further parameters were derived relevant to virtual/ hybrid fashion education. Based on the parameters obtained from the pilot study a questionnaire was framed and shared with the same respondents (n=137) for analyzing the challenges of virtual learning.

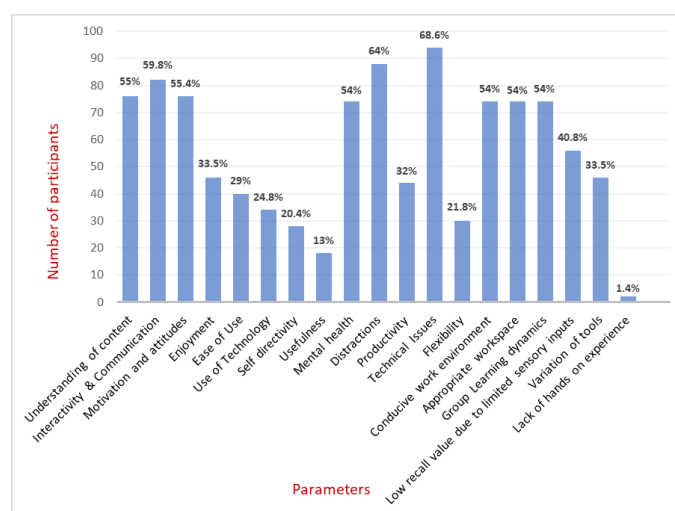


Figure 3. Parameters impacting the Virtual Fashion Education

The survey results as shown in the Figure no. 3 revealed that the most effective parameters which impacted online education consisted of understanding of content, interactivity and communication, enjoyment, ease of use, self-directivity, use of technology, other distractions, group learning dynamics, low recall value etc. Among these parameters, technical issues (68.6%) were one of the top most perceived parameter which affected online skill learning among fashion students. The study conducted among engineering students also revealed the similar results where 79.7% students faced technical issues during online learning which impacted their learning (Emad Mushtaha et al., 2023) during pandemic.

Online education poses threat of isolation with reduced interactivity and communication (59.8%). This resultant breakdown in communication can make learning process ineffective and can also adversely affect the rapport between tutor and student (Mukesh and Shreshtha, 2022). Various studies have highlighted the psychological effect such as fear, worry, or anxiety among students across universities due to the sudden transition during COVID -19. The study conducted by Fabian Muller et al. (2019) emphasized that social distancing during quarantine period resulted in exaggeration of anxiety disorders. The similar results were obtained from the survey where 54% students considered Mental health as one of the challenge which had impacted the online learning process. The fashion students did not consider lack of hands on experience (1.4%) as a threat/ challenge during online learning, but at the same time emphasized that due to unavailability of physical resources, equipment's, tools and machineries students were unable to implement their ideas to the full potential. On the contrary flexibility of time, place and pace was considered important parameter to promote and accept online learning platforms. The survey results also revealed that the hybrid learning models can be effective for skill-based fashion education where concepts can be learned through online platforms and doubts can be cleared with face- to face learning. The hybrid learning model is almost the same as the conventional learning (Roudlotus Sholikhahon et al., 2023). Hence, the potential of blended learning platforms should be explored further for impactful fashion education.

5. CONCLUSION:

The COVID-19 epidemic has significantly expedited the acceptance and advancement of virtual education world-wide. In this research, the effectiveness of online/ hybrid fashion education was analyzed. It further emphasized on knowledge transmission and implementation of skills in the real-world scenario and understanding the challenges faced by the students for virtual learning during pandemic. The study indicates a significant shift of students comfort level towards virtual or hybrid mediums as compared to conventional teaching methods. Where YouTube (37.23%) emerged as the most preferred virtual platform for fashion education followed by online live interactive meetings. While evaluating the virtual learning experience of students the analysis revealed that majority of students rated their experience as Good (39.04%) or Average (30%) and very few considered it as an excellent medium of learning. The statistical analysis rejected the null hypothesis, indicating that virtual learning significantly contributes to transmission of Fashion design education, contrary to the initial perception. The study revealed that there is a significant association between virtual learning experience and skill acquisition in core areas of fashion design education. Despite variation in understanding levels, students were able to grasp and implement knowledge transmitted through virtual platforms. The challenges and opportunities of virtual learning were revealed with the survey results. Where multiple parameters were extracted that were impacting the skill transmission through virtual parameters. Out of these parameters Technical issues were the most perceived challenge affecting online learning among fashion students. Isolation and reduced interactivity highlighted concerns about communication breakdowns and potential impact on mental health of student. Flexibility of time, pace and place was considered crucial for promoting online learning acceptance. Further, hybrid learning models, combining online and face- to -face components were seen as effective for practice-based fashion education. The study emphasizes the capacity of virtual learning platforms in fashion education in the post- humanistic era, emphasizing the difficulties encountered, and suggesting methods to optimize learning outcome in the digital realm. Given the scarcity of research in this area, there is a significant opportunity for further investigation into blended learning platforms for skill transmission for enhanced fashion education.

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