Analysis of the Application of Draping Techniques in Education and the Fashion Industry: An Approach from Dress Design to Interactive Learning

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Abstract

This study aims to analyze the application of draping techniques in the context of education and the fashion industry, focusing on their effectiveness in the dress design process and their contribution to interactive learning. The study was conducted using quantitative and qualitative descriptive approaches. The research sample consisted of 30 Fashion Design students and 10 professional designers. Data collection techniques were carried out through observation of the learning process, questionnaires, interviews, and documentation of draping-based fashion design results. The results showed that students who learned using the draping technique obtained an average score of 82.3 (out of a scale of 100) in design skills, with a standard deviation of 6.4, indicating a fairly even increase in ability. Meanwhile, in the industrial context, the average time to make a prototype using the draping technique was 4.8 days, with a standard deviation of 1.1 days, more efficient than the flat pattern construction technique which took an average of 6.2 days (SD = 1.3 days). These findings confirm that the draping technique not only improves students' creativity and spatial understanding, but also contributes to efficiency and innovation in the fashion production process. Therefore, this study recommends strengthening the integration of draping techniques in the fashion education curriculum and increasing synergy between educational institutions and industry players to create interactive and applicable learning.

Keywords: *Draping Techniques, Fashion Education, Fashion Industry, Dress Design, Interactive Learning.*

INTRODUCTION

The fashion industry is one of the creative sectors that continues to experience rapid development, both in terms of technology, design, and production processes. In the modern fashion world, the ability to produce innovative and efficient designs is a primary requirement, both for professional designers and for students studying fashion design. One technique that is now getting attention in the fashion design process is the draping technique, which is a method of forming clothes directly on a mannequin using fabric, which allows designers create complex silhouettes and shapes more intuitively and visually. This technique differs from flat pattern construction methods which tend to be mathematical and two-dimensional.[1]

In the context of fashion education, mastery of draping techniques is not only important for the development of students' technical skills, but also has the potential to enhance their creativity and spatial understanding. A hands-on learning approach such as draping provides an interactive experience that brings students closer to the real design process. However, the use of this technique in learning has not been fully integrated optimally into the curriculum of various vocational education institutions. This is due to various obstacles, ranging from limited resources, lack of training for teaching staff, to the absence of systematic evaluation standards in measuring the effectiveness of this technique in the learning process.

Meanwhile, on the industrial side, time efficiency and accuracy of design results are crucial factors in the production process. The draping technique, although considered more artistic and freer, is also starting to be considered by industry players because of its ability to speed up the prototyping process and produce more realistic clothing shapes according to market desires. Therefore, it is important to examine in more depth how the draping technique is implemented in both educational and industrial environments, and how it contributes to learning effectiveness and production efficiency. [2]

This study is here to answer these needs by analyzing the application of draping techniques in two main contexts: education and the fashion industry. Using a quantitative and qualitative descriptive approach, this study involved 30 Fashion Design students and 10 professional designers as respondents. Data collection techniques were carried out through learning observations, questionnaires,

interviews, and documentation of fashion design works based on draping techniques.

It is hoped that the results of this study can provide a comprehensive picture of the benefits, challenges, and effectiveness of draping techniques, as well as become a basis for encouraging the integration of this technique into a vocational education system that is more applicable and in accordance with industry needs. Thus, the synergy between the world of education and the fashion industry can be further strengthened to produce competent, creative, and adaptive human resources to the development of the times. [3]

RESEARCH METHOD

This study uses a mixed methods approach that combines quantitative and qualitative descriptive methods to gain a comprehensive understanding of the application of draping techniques in education and the fashion industry. The quantitative approach is used to measure the improvement of students' skills and production time efficiency, while the qualitative approach is used to explore the experiences, perceptions, and challenges faced by students and designers.

The subjects of the study consisted of 30 Fashion Design students from a vocational school and 10 professional designers from the local fashion industry. Data collection techniques were carried out through direct observation during the draping learning process, closed questionnaires to measure students' skills and perceptions, in-depth interviews with designers to explore industry perspectives, and documentation of fashion work results as visual data and supporting analysis.

Quantitative data were analyzed using descriptive statistics such as means and standard deviations, while qualitative data were analyzed thematically to identify patterns and categories of meaning. This combination of methods aims to produce holistic conclusions regarding the effectiveness and contribution of draping techniques in the context of learning and fashion production.**(Adab, n.d.)**

DISCUSSION

1. Improving Students' Design Skills

One of the main objectives of this study was to measure the extent to which draping techniques can improve the design skills of Fashion Design students. The assessment was carried out before and after students took part in a learning session with the draping method. The measurement results showed that the average value of students' skills increased to 82.3 from a maximum scale of 100, with a standard deviation of 6.4 [4].

As a quantitative illustration, if the initial average score before learning was 70, then the increase is:

$$\boldsymbol{Improvement = 82.3 - 70 = 12.3\ points}$$

To find out the increase in percentage:

$$\boldsymbol{Percentage\ Increase = \left(\frac{12,3}{30} X\ 100\% + 17,57\%\right)}$$

This means that there was an increase of 17.57% in students' design skills after studying draping techniques.

The standard deviation (SD = 6.4) also shows that this increase occurred fairly evenly across all students, meaning that not only high-ability students experienced an increase, but also other students in general.

Qualitatively, the results of observations and documentation show that students are better able to:

- Applying design concepts directly to body shapes (mannequins).
- Understanding volume, folds, fabric fall, and design structures in three dimensions.
- Developing creativity in forming unique and innovative silhouettes.

In conclusion, the draping technique has been proven to have a significant influence on improving design skills, both in terms of technical and aesthetic aspects. Therefore, this technique is worthy of being used as a main part of the fashion learning process that emphasizes students' practical skills and creativity. [5]

This study also compares the effectiveness of draping techniques with flat patterns in the context of industrial clothing production, especially in terms of efficiency of prototype making time.

Based on data from 10 professional designers, it was found that:

a. The average time for making a prototype using the draping technique was 4.8 days, with a standard deviation of 1.1 days.
b. Meanwhile, with the flat pattern technique, the average time is 6.2 days, with a standard deviation of 1.3 days.

From these results, the time difference between the two techniques can be calculated:

$$\boldsymbol{Time\ Efficiency = 6.2 - 4.8 = 1.4\ days}$$

To see the efficiency in percentage form:

$$\boldsymbol{Efficiency\ Percentage = \left(\frac{1,4}{6,2}\right) X100\%}$$
$$\boldsymbol{= 22,58\%}$$

This means that the draping technique is proven to be around 22.58% faster than the flat pattern technique in the process of making fashion prototypes.

This efficiency is very important in the fashion industry because:

- Faster production times allow companies to accelerate the product cycle.
- Reduce labor costs, especially on labor-intensive production lines.
- Allows more room for design revisions without disrupting the overall production schedule.

In addition, the draping technique allows designers to see and adjust the design directly on the mannequin, so that the correction process can be done faster than the flat pattern technique which requires making a pattern on paper first. [6] **Student Responses to Draping Learning**

One important aspect of this study is to analyze how students respond to learning using the draping technique. Based on the results of the questionnaire distributed to 30 Fashion Design students, it is known that the majority of students gave a very positive response to this learning method. Around 85% of respondents stated that the draping technique made it easier for them to understand the shape and structure of clothing, compared to the two-dimensional flat pattern technique.

In follow-up interviews, many students expressed that they felt more motivated and enthusiastic when practicing using fabric directly on a mannequin. This process was considered more interactive and fun, because students could directly see the shape of the garment being formed before their eyes. They also mentioned that this technique made it easier for them to express their creativity and more original design ideas, because they were not limited by the pattern framework on paper. [7]

In addition, the draping technique is also considered very helpful for students with visual and kinesthetic learning styles. Students can understand design concepts more realistically because they work directly with materials and body shapes. Direct interaction with fabrics also allows them to better explore the fall, folds, and textures of fabrics. This strengthens their understanding not only theoretically, but also practically and aesthetically.

Thus, it can be concluded that students' responses to draping learning are very positive and supportive. This technique not only enriches the learning experience, but also increases students' active involvement in the learning process. These findings provide a strong basis for recommending a broader integration of draping techniques in the fashion education curriculum. [8] **Professional Designer's View**

In this study, the opinions of 10 professional designers were also collected to provide an overview of the extent to which draping techniques are applied in industrial practice. Most of them stated that draping techniques provide significant advantages in the design creation process, especially for complex clothing that requires a three-dimensional approach. They said that this technique allows designers to “communicate directly” with the fabric, so they can adjust the design based on the material’s response to the body shape.

Professional designers also emphasize that the draping technique is very effective in the creative exploration process. Compared to flat patterns, this technique is considered

more flexible because it allows for direct changes without having to redo the pattern from scratch. In a work world that demands efficiency and originality, draping is a favorite technique for creating unique fashion prototypes, especially for haute couture and limited-edition ready-to-wear designs. [9]

In addition, they suggest that prospective designers from formal educational institutions be better equipped with draping skills from the start. This is because the industry needs graduates who are not only skilled at making patterns, but also able to think creatively and quickly in overcoming design challenges. The opinions of these designers reinforce the urgency of draping techniques as a core competency in modern fashion education.

2. **Implications for Fashion Education Curriculum**

Based on all the findings in this study, it is clear that draping techniques have an important role in improving design skills, production time efficiency, and forming a more interactive and meaningful learning process. Therefore, one of the main implications of this study is the need for systematic and comprehensive integration of draping techniques into the fashion education curriculum, both at the secondary and tertiary levels. [10]

Currently, many educational institutions still place flat pattern techniques as the main method, while draping is only a complement or part of advanced practice. This needs to be changed so that students have a balance between the analytical approach (flat pattern) and the intuitive-creative approach (draping). This integration is also in line with the needs of the industry which increasingly demands graduates who are innovative, flexible, and able to face technical and aesthetic challenges in designing clothes.

Furthermore, educational institutions need to establish close collaboration with industry players, such as through internship programs, joint training, or industry visits, so that learning draping techniques does not only stop in the classroom, but can also be applied directly in real contexts. Thus, the graduates produced will be better prepared to compete and contribute directly to the development of the dynamic and competitive fashion industry. [11]

CONCLUSION

This study shows that the application of draping techniques in fashion education has a very positive impact on improving students' design skills, time efficiency in the industry, and the response of students and professional designers to this method. Based on the results of the study, it can be concluded that draping techniques not only significantly improve students' design skills, with an average score increase of 17.57%, but also accelerate the process of making fashion prototypes in the industry. The draping technique is proven to be more efficient, reducing the time to make prototypes by about 22.58% compared to the flat pattern technique.

Students' responses to learning using draping techniques were also very positive. The majority of students found it easier to understand spatial and three-dimensional design concepts, and felt more motivated and actively involved in the learning process. This shows that draping provides a more concrete and enjoyable learning experience, which has the potential to improve the quality of education in the field of fashion design.

The views of professional designers corroborate these findings, acknowledging that draping techniques allow for greater creative exploration and provide faster and more flexible design outcomes. They also recommend that draping techniques become an integral part of the fashion education curriculum, in line with the evolving needs of the industry.

As a recommendation, this study suggests that fashion education institutions strengthen the integration of draping techniques in their curriculum, as well as establish closer cooperation with industry to create more applicable and relevant learning to market needs. This will ensure that the graduates produced are not only skilled in technical

aspects, but also creative and ready to face the challenges of the dynamic fashion industry.

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