

Batik Inspiration of Shibori Tie-dye Techniques

Lilinieta Talib¹, *Nur Fatin Umar², Zolina Mohamad³

^{1,2,3}College of Creative Arts, Universiti Teknologi MARA, Perak Branch, Seri Iskandar
Campus, Malaysia

neita201@uitm.edu.my¹, *nurfatinumar@uitm.edu.my², zolinamohamad@uitm.edu.my³
*Corresponding author

Received: 7 April 2024; Accepted: 11 August 2024; Published: 1 September 2024

ABSTRACT

This article presents the study of the tie and dye subject in the Fashion Design Program, College of Creative Arts and Design, UiTM Perak, Malaysia, which focuses on how the program's first-year diploma students are experimenting with exploring colours by using related tie-dye Shibori techniques with batik inspiration on fabric which can be incorporated and utilised in many ways for fashion design work. This article addressed the background of tie-dye Shibori techniques within the realm of batik inspirations, expanding the traditional understanding of the ancient Japanese art of tie-dyeing. The study aims to explore the students' experimental level of activities on techniques of tie-dye Shibori by focusing on the types of Shibori outcome techniques and the pre-and post-activity learning experience in the experiment process. The methodology mainly the Action research design involves closed observations by participatory approach, interactive process and reflective practice in which students critically show their actions and outcomes to learn from the process of tie-dye Shibori techniques. Findings of the results indicate the three tie-dye Shibori techniques that students have chosen and each of the techniques highlights the significant uniqueness and challenges in the process. This article concludes by exploring students' skills and understanding, the young fashion designers stage can prove that the subject of tie-dye Shibori has its potential. These can be seen in terms of students' perceptions towards self-appreciation in their work art performance. These various perceptions can significantly impact fashion design student's motivation, job satisfaction, and overall well-being at work after graduating from their studies and in the future sustainable community.

Keywords: Tie-Dye Shibori, tie-dye Shibori techniques



eISSN: 2550-214X © 2024. Published for Idealogy Journal by UiTM Press. This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

1 INTRODUCTION

The Fashion Design Program, College of Creative Arts and Design, UiTM Perak, Malaysia, has introduced tie and dye as an elective subject at the diploma level since 2018. The subject learning objective of this subject is to let students be creative in exploring colours by using related batik techniques on fabric which can be incorporated and utilised in many ways for fashion design work. Batik is a traditional textile art form that involves dyeing fabric using a resist technique. Batik production commonly employs the wax-resist dyeing approach, utilizing hot wax to form designs on textiles (Pereiz, 2023). This process involves applying wax and dye to the material, a well-established method in batik creation. Batik and tie-dye share a connection through their pattern-making techniques, which involve resisting dyeing. Tie-dye is characterized by the application of geometric manipulations to a base material before dyeing it (Guo et al., 2013). Specifically, in batik, a method called batik *jumput* incorporates tie-

dyeing by binding the fabric with strings before dyeing, (Prawoto, 2019). Widiastuti in 2023 describes the tie-dye technique as a distinctive method for crafting patterns on fabric by using ties to obstruct certain areas from coloration.

The subject of tie-dye *Shibori* techniques offers students a unique opportunity to develop their creative abilities by delving into the principles of colour, pattern, and design. These techniques, while fostering artistic expression in textile arts, necessitate meticulous experimental efforts. This study offers insights into the educational journey through the tie-dye *Shibori* techniques, which share similarities with the traditional batik design. Through detailed observation and analysis, the study presents the experimental outcomes achieved by the students. This study involved with 20 second-semester diploma students from the Fashion Design Program, which durations throughout two and a half years. The instructor or the lecturer in charge provided an initial briefing and demonstration to ensure students had the foundational preparation for the course.

The results represented the outcome of the experiment by revealed challenges and responses to the progress of the tie-dye process from all participating students. The final stage of the experiment was completed by the application of tie-dye *Shibori* outcome into the student final assessment fashion design.

2 BACKGROUND OF TIE-DYE *SHIBORI* TECHNIQUES

Tie-dye is a skill that has been commonly practised in many parts of the world. The tie-dye craft is also seen as a decoration of the people and is used extensively in homes and public places to beautify. The creative characteristics of tie-dye influence consumers to crave them if they are well-finished. Taste and respect for tie-dye as well as the acceptable norms and traditions reflect the type of tie-dye that is produced (Ghartey et. al., 2022).

Tie-dye is also a term used to describe several dyeing techniques and the resulting dyed products of these processes. The process of tie-dye typically consists of folding, twisting, pleating, or crumpling fabric or a garment before binding it with string or rubber bands, followed by the application of dye or dyes (Guo et al. (2013). The manipulations of the fabric before the application of dye are called resists, as they partially or completely prevent ('resist') the applied dye from colouring the fabric. More sophisticated tie-dye may involve additional steps, including an initial application of dye before the resist, multiple sequential dyeing and resist steps, and the use of other types of resists (stitching, stencils) and discharge (Barasa et. al.,2020).

In addition, tie-dye is a method of bonding the fabric together to avoid the absorption of dye to a specific area Ladna, (2019). Ladna added stitching to the techniques used to prevent the absorption of dye to a particular area. Jodivan (2020) on the other hand adds that the quality of the string should be strong as strings are tied in various ways before immersing it in the dye bath. He again reiterated that the colour is absorbed in all except the tied areas thus revealing a patterned result which is seen by untying the dyed material.

From hippies influenced in the '70s to the '90s, tie-dye came back to the global market in the world. According to Kaupke (2022) influential designers like Stella McCartney, MSGM and Gucci are giving tie-dye go products and fast-retailers like Zara, Pull & Bear, and Asos are jumping on the psychedelic bandwagon.

Lucy Pickford (2020) describes *Shibori* as an ancient Japanese art of tie-dyeing, renowned for its signature blue colour. This technique stands out due to its innovative methods of manipulating textiles, which go beyond mere dyeing to produce intricate patterns. The name '*Shibori*' translates to actions such as squeezing or pressing, reflecting the process of binding the fabric to create designs that resist dye in specific sections (Behera,2017). Modern tie-dye involves similar techniques to *Shibori*, such as folding and twisting fabric, but it also includes new techniques, such as crumpling and using rubber bands to create distinctive patterns. Tie-dye continues to be a favoured trend in contemporary fashion, as evidenced by its frequent inclusion in designer lines and its widespread appeal as an enjoyable crafting pursuit for individuals across various age groups (Meng, 2023).

In the modern era, the art of tie-dye has become a widespread and easily accessible technique for personalizing apparel and fabrics. It stands as an emblem of individuality and artistic flair, particularly with the advent of economical dyes that have popularized transforming clothes into vibrant, psychedelic works of art (Bristi, 2018). Furthermore, various educational and community programs have embraced tie-dye, offering workshops and courses to foster artistic talents and vocational skills (Widihastuti, 2023; Yanti, 2023). Tie-dye also serves as a practical tool in education, where it is incorporated into chemistry curricula to demonstrate scientific principles such as polymerization (Bopegedera, 2017).

3 METHODOLOGY

This study is based on the qualitative paradigm study, this is because the nature of the study required the researchers to rely entirely upon closed observation of the process. The Action research design was adopted for the study. This was used because it is a methodology that typically involves a collaborative approach where researchers work closely with participants. The goal is to engage those affected by the problem in the research process to ensure that the solutions are relevant and effective. It's particularly prevalent in fields like education, social work, and community development. This study applies a purposive sampling technique as this method involves selecting participants based on specific criteria relevant to the research objectives. This study applies the Pre- and Post-Activity Analysis as a systematic approach used to evaluate the outcomes of tie-dye activities on students of fashion design. This method involves a thorough examination of changes in student knowledge before and after their participation in tie-dye activities. The process begins with the collection of baseline data, which provides a snapshot of the student's knowledge before the activity (Nipriansyah et. al., 2021). This initial step is crucial as it establishes a reference point against which post-activity outcomes can be compared. The final step involves a detailed analysis of the extensive observation data to determine the extent and nature of any changes. Following the activity, observations and documentation of the student's knowledge and perceptions are conducted to capture the immediate effects of the activity.

4 STUDENTS APPLICATION OF SHIBORI TIE-DYE (BATIK) TECHNIQUES

In 2018, the Fashion Department at the College of Creative Art and Design, UiTM Perak, incorporated the tie-dye technique into its curriculum as an elective course for diploma students. This addition offered students the opportunity to explore this vibrant textile art form, enriching their educational experience and skill set in the realm of fashion design. The syllabus required each student to do hands-on learning with the tie-dye *Shibori* techniques. This is to ensure that students understand the application of the fundamental knowledge and

understanding of tie and dye. Six Shibori techniques have been taught in the syllabus, such as *Kanoko Shibori*, *Kumo Shibori*, *Itajime Shibori*, *Arashi Shibori* and *Nui Shibori* (Nernere, 2012).

4.1 The Process of Tie-Dye Experiment

The experiment took place in a fully equip workshop allocated in the campus of UiTM Perak. The process begins by exploring the various monochromatic colour schemes as an option to be used rather than using the traditional blue colour for the *shibori* technique. The material fabrics used are pure cotton from calico fabric and viscose rayon, and the batik colour uses synthetic dye, “resistance dye batik” colours monochrome such as pink, blue, red, green, black and yellow used for the samples.

Then the student needs to prepare tools such as A4 size fabric, Remazol dye, rubber bands, industrial gloves, a basin and a strainer. Next, the instructor in charge will give a demonstration of Folding Techniques, Binding Techniques and Stitches Techniques in one sequence. To produce a quality design, the resulting motive tie and dye will be worked out in the appropriacies of Shibori techniques and colour combination with emphasis on elements of balance and assertion. After putting in some dyes, the fabric must dry either in direct sunshine or at room temperature. To finishing the batik tie dye, silicate is used for permanenting the colour into the product or fabric. The process of completion of the Tie-dye experiment will take about an hour duration however the process of drying took within 24 hours. The expected results for each student experiment will be the production of a Tie-dye *Shibori* pattern and students will be given options to apply them to a shirt design or any fashion product such as a bag, trousers, skirt or hat.

The student results of the *Shibori* experiment on A4 size fabric are shown in Figures 1, 2 and 3. The final fashion product design on tie-dye shibori application techniques are shown in Figures 4, 5, 6, 7, and 8.



Figure 1 *Nui shibori*
Sources: Author (2023)
Copyright Consent:
Permissible to Publish

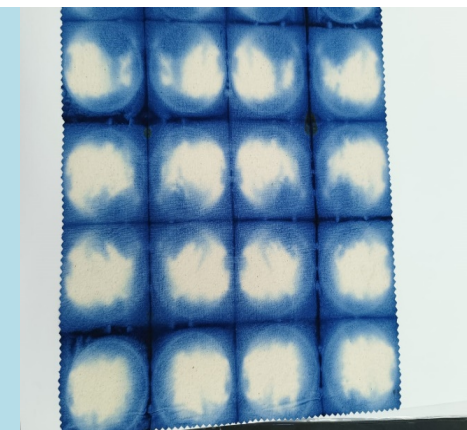


Figure 2 *Itajime Shibori*
Sources: Author (2023)
Copyright Consent: Permissible to
Publish



Figure 3 *Kumo shibori*
Sources: Author (2023)
Copyright Consent:
Permissible to Publish



Figure 4 *Spiral shibori* on shirt and *stripe shibori* on trousers
Sources: Author (2023)
Copyright Consent:
Permissible to Publish



Figure 5 *Itajime shibori* on pario
Sources: Author (2023)
Copyright Consent:
Permissible to Publish



Figure 6 *Nemaki shibori* on a bag
Sources: Author (2023)
Copyright Consent:
Permissible to Publish



Figure 7 *Stripe shibori* on shirt
Sources: Author (2023)
Copyright Consent:
Permissible to Publish



Figure 8 *Nui Shibori* on jacket
Sources: Author (2023)
Copyright Consent:
Permissible to Publish



Figure 9 *Itajime shibori* on blouse and skirt.
Sources: Author (2023)
Copyright Consent:
Permissible to Publish

5 EXPERIMENT RESULTS AND EXPLANATION OF SHIBORI TECHNIQUES

The process began with the collection of baseline data, which provided the level of the student's knowledge before the tie-dye *Shibori* experiment activities. After the completion of the experiments, a reference point against which post-activity outcomes from the students can be compared. This final step involves a detailed analysis of the extensive observation data to determine the extent and nature of any changes.

In capturing the immediate effects of the activity, this study revealed challenges to the progress of the tie-dye process time-consuming. The results of this observation on the experiment have shown the accomplishment of students' participation in producing three types

of *Shibori* tie-dye design. From the analysis of the observation, students took part and successfully produced the Tie-dye *Shibori* patterns within the duration time given which was 24 hours. There were some difficulties during the experiment, however, the instructor managed to guide the struggle of all students and reached the understanding on basic application of the fundamental knowledge of tie and dye techniques.

5.1 Results of Nui *Shibori*

Figure 1 shows the Nui *Shibori*, a traditional Japanese tie-dye technique that involves stitching or gathering fabric before dyeing to create textured and intricate patterns. The term "nui" translates to "stitch" in English, reflecting the sewing aspect of this technique on A4 fabric. The uniqueness of this *Shibori* gives students alternative options for pattern creation design using stitching techniques in the process. The difficulties of this *Shibori* will be depends on the quality of the stitching technique which almost all students found it much challenging to begin with.

5.2 Results of Itajime *Shibori*

Figure 2 shows the Itajime *Shibori*, a traditional Japanese tie-dye technique that involves folding and clamping fabric between wooden or plastic shapes to create geometric patterns. The word "itajime" translates to "board clamp" in English, which refers to the method of securing the fabric with wooden boards or shapes before dyeing. The uniqueness of this *Shibori* gives student a lot of room to be created by repeating patterns they have imaging for the design. By using a special folding technique, pattern of this *Shibori* looks more structure and dominant. The outcome results of this *Shibori* will mainly depend on the fabric folding technique and the neatness of the tying process.

5.3 Results of Kumo *Shibori*

Figure 3 shows the Kumo, also known as "spider web" or "spiderweb" *Shibori*, is a type of tie-dye technique that creates intricate, radial patterns resembling spiderwebs on fabric. This technique involves manipulating the fabric to create tension and binding it with thread or string to resist the dye. The uniqueness of this *Shibori* pattern will depend on the winding tension thread which is much more complex. This is why, a high level of creativity and a consistent level of skills will be the top preferences for an artistic *Shibori* design.

In summary, the analysis of the student's level of understanding and skills was increased by the differences in tie-dye *Shibori* outcome techniques. In addition, the level of work art appreciation has also emerged in the observation by looking at the students' perceptions towards self-appreciation in their work performance. These are self-recognition, positive self-talk, seeking feedback, celebrating small wins, setting personal goals, reflective practices, sharing successes, rewarding oneself, and maintaining a positive attitude. These later various of perceptions can significantly impact student's motivation, job satisfaction, and overall well-being at work after graduating from their studies and in future. The immediate response was students as the participants in this social experiment were excited to produce more different fashion products for their final assessment at the end of the semester.

Even though it was only an elective Diploma in Fashion Design subject in the aspect of tie and dye, this subject gave creative ideas and techniques for fashion students to explore more in advance the *Shibori* potential techniques. The creativity uses different colours to make a variety of colours for meeting the fashion market trend and demand nowadays.

6 CONCLUSION

In conclusion, tie-dye techniques play a significant role in the creation of patterns and designs in all fashion design production. The tie-dye process, characterized by geometric operations and colour blocking, aligns with the resist dyeing method used in batik, contributing to the rich cultural heritage and artistic value of these textile art forms. Having said so, it is a very structured method of producing the end product that can be appreciated by fashion designers and their communities. This study's objective was to achieve an understanding of tie-dye *Shibori (Batik)* techniques that are still proven can be used in the fashion design industry. Exploring students' skills and understanding who are only at the young fashion designers stage can prove that the subject of tie-dye *Shibori* has its potential. These can be seen in terms of students' perceptions towards self-appreciation in their work art performance. These various perceptions can significantly impact fashion design student's motivation, job satisfaction, and overall well-being at work after graduating from their studies and in the future sustainable community.

ACKNOWLEDGEMENT

First and foremost, the researcher is grateful to Allah SWT for being able to finish this study. The researcher would like to thank her fashion students, CAAD1162A batch Mac 2023 appreciate the cooperation given during the tie-dye elective class. Besides, the researcher would like to acknowledge the Department of Fashion Design, College of Creative Arts, Universiti Teknologi MARA (UiTM Perak) for this study.

FUNDING

There are no funding sources.

AUTHOR CONTRIBUTIONS

Lilinieta Talib developed the study and case study, and Nur Fatin Umar and Zolina Mohamad examined the intonation and clarity of the language used in this paper.

CONFLICT OF INTEREST

There are no conflicts of interest.

REFERENCES

- Barasa, N. and Olal, F. O. (2020). Creative designing of fabric patterns by tie-dyeing with synthetic dyes. *International Journal of Innovative Research and Development*, 9(2). <https://doi.org/10.24940/ijird/2020/v9/i2/feb20059>
- Bristi, U. (2018). The effect of temperature variation on dyeing tie-dye cotton fabrics dyed with reactive dye. *Journal of Textile Science and Technology*, 04(04), 117-128. <https://doi.org/10.4236/jtst.2018.44008>
- Whitehead, B. (2019). *Shibori for textile artists*. Batsford.

- Behera, S. K. and Khandual, A. (2017). Tie-dye textiles in the fashion domain. *International Journal of Engineering Research And*, V6(05). <https://doi.org/10.17577/ijertv6is050356>
- Bopegedera, A. M. R. P. (2017). Tie-dye! an engaging activity to introduce polymers and polymerization to beginning chemistry students. *Journal of Chemical Education*, 94(11), 1725-1732. <https://doi.org/10.1021/acs.jchemed.6b00796>
- Ellis, C., & Boutrup, J. (2019). The art and science of natural dyes: Principles, experiments, and results.
- Ghartey, K. E., Bruce-Amartey, E., & Acquaye, R. (2022). Socio-cultural challenges of small and medium-scale batik and tie-dye industry in Ghana. *Journal of Textile Science and Technology*, 08(03)
- Guo, R., Jiang, S. K., Yuen, C., Ng, M. C. F., & Lan, J. (2013). Metallised textile design through electroless plating and tie-dyeing technique. *Journal of the Textile Institute*, 104(10), 1049-1055. <https://doi.org/10.1080/00405000.2013.773125>
- Jodivan, V. (2020) *The Chemistry of Dyeing*. Artistic Science Journal, 19, 39-44. Schiffer Publishing.
- Kaupke L. L. (2022), April 23) 4 vibrant motifs to transform your wardrobe. <https://www.harpersbazaar.com/fashion/a36051877>
- Ladha, D. (2019, January 19) Dyeing. <https://www.fibre2fashion.com/industry-article/3871/dyeing>
- Renwick, D. (2019) *Participant Recruitment in Qualitative Research: How Many Participants Do I Need for Qualitative Research?* Crux Publications, New York.
- Meng, X., Yang, C., & Zhu, C. (2023). Impact of tie-dye techniques on the durability and aesthetic appeal of textiles. *Fibres & Textiles in Eastern Europe*, 31(5), 43-55. <https://doi.org/10.2478/ftce-2023-0044>
- Nernere, M. S. (2021). Pembuatan dan pemanfaatan kain shibori sebagai produk lanjutan. *Jurnal Atma Inovasia*, 1(2), 174-182. <https://doi.org/10.24002/jai.v1i2.3932>
- Nipriansyah, N., Sasongko, R. N., Kristiawan, M., Susanto, E., & Hasanah, P. F. A. (2021). Increase creativity and imagination children through learning science, technologic, engineering, art and mathematic with loose parts media. *Al-Athfaal: Jurnal Ilmiah Pendidikan Anak Usia Dini*, 4(1), 77-89. <https://doi.org/10.24042/ajipaud.v4i1.8598>
- Pereiz, Z., Pebriyanto, Y., Naulita Turnip, O., Maya Sylvani, M., Karelius, K., Putra Ramdhani, E., ... & Prasetya Toepak, E. (2023). Synthesis of $\text{mil-100}(\text{fe})@ \text{fe}_3\text{o}_4$ from magnetic zircon mining waste modified by ctab for naphthol dye in water removal. *BIO Web of Conferences*, 79, 12005. <https://doi.org/10.1051/bioconf/20237912005>
- Pickford, L. (2020). Shibori: Japan's centuries-old tie-dyeing technique. *Nihon Blog*.
- Prawoto, E. C. (2019). Pembuatan batik jumput teknik ikat desa grogol. *Jurnal Abadimas Adi Buana*, 3(1), 43-47. <https://doi.org/10.36456/abadimas.v3.i1.a1942>.
- Widihastuti, W., Istanti, H. N., Putri, G. E., Dewi, A. V., Fitrihana, N., & Kamis, A. (2023). Project-based collaborative learning for making tie-dye to improve the skills of vocational high school students. *TEKNOBUGA: Jurnal Teknologi Busana Dan Boga*, 11(2), 84-91. <https://doi.org/10.15294/teknobuga.v11i2.43540>
- Velasquez, A. (2019). In fashion, tie-dye is the great democratizer. *Source Journal*.133-147. <https://doi.org/10.4236/jtst.2022.83011>