POSTERS

Comparing Naive and Simple Exponential Smoothing Methods for Menswear Products Sales Forecasting

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Abstract

This study investigates the effectiveness of Naive Forecasting (NF) and Simple Exponential Smoothing (SES) in sales forecasting for menswear products. Using three years of monthly sales data from 17 products categorized into tops, bottoms, and accessories, the research evaluates forecast accuracy through the mean absolute error (MAE). SES with a smoothing factor of 0.7 consistently delivers the most accurate forecasts across all categories, outperforming NF. The findings highlight the importance of selecting suitable models and parameters to improve sales forecasting in the dynamic fashion industry.

Introduction

Sales forecasting in the fashion industry is challenging due to rapid market changes and diverse consumer demands. Accurate forecasting is essential for inventory management, particularly in addressing overstocking and stockouts. Menswear, characterized by a stable market and quality-conscious consumers, serves as an ideal case for evaluating forecasting methods. This study compares NF, a simple historical data-based method, with SES, which uses smoothing factors to adapt to trends and fluctuations. The aim is to identify the more effective method for enhancing forecast accuracy in the menswear sector.

Figure 1. Menswear.   **Figure 2.** Menswear

Methods and Materials

The research employs three years of monthly sales data from an international casual menswear brand, categorized into 17 product types within tops, bottoms, and accessories. NF forecasts are based on previous period data, with three variations: NF+0%, NF+5%, and NF+10%. SES applies nine smoothing factors (α=0.1 to α=0.9) to prioritize recent data. MAE is used as the performance metric, with lower values indicating higher accuracy.

Results

SES with a smoothing factor of 0.7 achieved the lowest MAE (152) across all 17 products. For category-specific analysis, SES-0.7 performed best for tops (MAE=239) and bottoms (MAE=124), while NF+0% and SES-0.6 to SES-0.9 provided comparable results for accessories (MAE=68). The results demonstrate SES's superior adaptability in dynamic categories and NF's suitability for stable ones.

Discussion

SES outperforms NF overall, particularly in dynamic categories like tops and bottoms. Its ability to prioritize recent data enhances adaptability to market changes, making it a robust forecasting tool. However, accessories showed minimal differences between SES and NF due to stable demand. NF remains a useful benchmark but lacks the sophistication needed for complex scenarios. The findings underline the need for category-specific approaches and optimal parameter selection in forecasting.

Conclusions

This study confirms SES as a more effective forecasting method than NF, especially for dynamic product categories. By improving accuracy, SES supports better inventory management, reducing overstocking and stockouts. Future research should expand datasets to include diverse regions and brands and explore advanced models, such as machine learning, to further enhance forecasting accuracy and applicability across the fashion industry.

Table 1. Three product hierarchy and 17 product categories.

Product Hierarchy	Product categories	Categories	Products categories
TOP	Dress shirts	Accessories	Belts
	Outerwear		Headwear
	Long-sleeved polo shirt		Handbag
	Short-sleeved polo shirt		Small leather goods
	Long-sleeved sport shirt		socks
	Short-sleeve sport shirt		Tie
	Sweater		
Bottom	Active bottom		
	Pants		
	Shorts		
	Swimwear		

Table 2. The forecasting performance of NF and ES methods based on the MAE value

Methods\Categories	Average all 17 products	TOP	Bottom	Accessories
Naive Forecasting				
NF+0%	168	278	125	68
NF+5%	175	291	126	71
NF+10%	183	305	131	75
Simple Exponential Smoothing				
ES-0.9	161	263	127	68
ES-0.8	155	248	124	68
ES-0.7	152	239	124	68
ES-0.6	155	244	128	68
ES-0.5	162	256	134	71
ES-0.4	170	269	137	72
ES-0.3	163	259	141	69
ES-0.2	180	287	143	73
ES-0.1	194	315	159	71

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References

• Chen, I.-F., & Lu, C.-J. (2021). Demand forecasting for multichannel fashion retailers by integrating clustering and machine learning algorithms. Processes, 9(9), 1578. https://doi.org/10.3390/pr9091578
• McKinsey & Company, & The Business of Fashion. (2024). The state of fashion 2025: Challenges at every turn. https://www.mckinsey.com/industries/retail/our-insights/state-of-fashion-2025
• Xinhuanet. (2024, June 28). New consumer observation: Quality first, how to make steady progress in business casual menswear. Xinhuanet. https://www.xinhuanet.com

Retail as Community: How London's Luxury Department Stores Foster Cultural Connections for Chinese Gen Z Sojourners

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Abstract

This research examines how Chinese Generation Z sojourners (aged 21-26) experience London's luxury servicescapes during their temporary residence (1-8 years). Through qualitative analysis of nine participants' narratives, the study reveals three key dimensions of loyalty formation: cultural resonance through integrated storytelling and ethical practices, non-intrusive yet personalised service interactions, and the evolution from transactional to experiential consumption patterns. The study uses narrative inquiry to demonstrate how culturally adaptive spaces foster emotional connections and loyalty through bilingual service, sustainability practices, and immersive retail experiences. Findings show sojourners shift from online to offline shopping, developing deeper brand relationships through quality-focused purchasing and meaningful in-store engagement. By linking cultural narratives to luxury consumption, the research illuminates how thoughtfully designed retail environments can nurture community connections, transforming how Chinese sojourners engage with and remain loyal to luxury brands in UK contexts.

Keywords: Servicescapes, luxury retail, Chinese Generation Z, sojourner experience, cultural identity

Introduction

The luxury retail industry has undergone significant transformation, with servicescapes playing a pivotal role in shaping consumer experiences (Bitner, 1992). Servicescapes in luxury retail transcend functionality to create curated environments that convey prestige, evoke sensory engagement, and foster loyalty (Rosenbaum and Massiah, 2011).

Chinese Generation Z, known for digital fluency and cultural adaptability, approaches luxury as a means of self-expression, prioritising authenticity and meaningful experiences (Qiu and Zhao, 2019). For Chinese Gen Z sojourners—temporary residents in cities like London—shopping in iconic department stores such as Harrods and Selfridges bridges their cultural heritage and host country norms (Berry, 1997). However, little research examines how culturally relevant servicescapes influence their engagement and loyalty.

This study explores how culturally resonant retail environments shape sojourner consumption patterns and foster meaningful connections. It will contribute to forming futures in luxury retail through innovative approaches to cultural adaptation and ethical practice. The findings will advance a theoretical understanding of Chinese Gen Z consumer behaviour and practical strategies for engaging Chinese Gen Z sojourner segments.

Methods and Materials

Interpretivism captures subjective meanings and cultural nuances (Creswell and Poth, 2018). See Figure 1 for the Purposive Sampling Strategy (Saunders et al., 2023).

- Approach: Inductive
- Choice: Narrative Inquiry
- Method: Semi-structured interviews
- Time-bound: Cross-Sectional
- Data Analysis: Two-cycle coding (In vivo and thematic analysis)
- Duration: 30-45 minutes per interview

ID	Age	Length of Stay	Shopping Frequency	Monthly Budget (£)	Preferred Store
P1	21	1	Weekly	500	Selfridges
P2	25	1	Weekly	500	Selfridges
P3	23	5	Monthly	10K-20K	Harrods
P4	26	8	Weekly	Unlimited	Harrods
P5	23	1	Monthly	500	Selfridges
P6	25	1	Weekly	1000	Selfridges
P7	26	1	Weekly	2500	Selfridges
P8	24	3	Monthly	1000	Selfridges
P9	26	1	Monthly	1000	Selfridges

Figure 1: Purposive Sampling Strategy

Results

The findings reveal how cultural adaptations, social interactions, and the sojourner experience shape the engagement and loyalty of Chinese Generation Z in London's luxury servicescapes. See Figure 2.

Cultural and Symbolic Adaptations:

- Integration of cultural elements (Lunar New Year decorations)
- Ethical considerations (avoiding exotic animal materials)
- Bilingual service availability
- WeChat Pay integration

Social Interactions:
- Non-intrusive service approach
- Personalised VIP experiences
- Pop-up events and creative installations
- Cultural storytelling through staff interactions

Sojourner Experience and Loyalty:
- Shift from online to experiential offline shopping
- Focus on quality over quantity
- Enhanced sustainability awareness
- Long-term brand relationship development

Notable Quotes:
- "Liberty's architecture feels warm and nostalgic" (P6)
- "Staff in London are more respectful" (P7)
- "Having staff who speak Mandarin creates trust and comfort" (P1)

These findings illustrate how luxury servicescapes foster cross-cultural engagement, emotional resonance, and loyalty among sojourners.
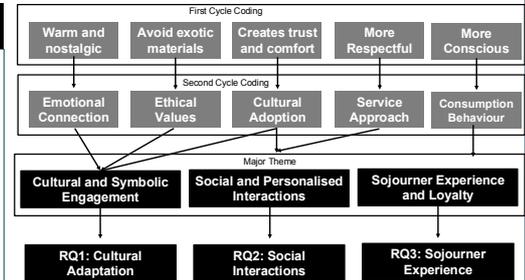

Figure 2: Thematic Analysis Development

Discussion

1.Cultural Integration and Ethics
- Culturally adaptive elements create meaningful connections through storytelling and bilingual service (Berry, 1997)
- Sustainable practices and ethical sourcing align with Gen Z values (Kapferer and Valette-Florence, 2021)
- Cultural elements act as bridges rather than surface adaptations (Rosenbaum and Massiah, 2011)

2.Service and Experience
- Preference for non-intrusive yet accessible assistance challenges traditional luxury service models
- Value emerges through co-created experiences (Vargo and Lusch, 2008)
- VIP services and creative installations strengthen emotional connections (Hollebeek, 2011)

3.Sojourner Identity and Loyalty
- Temporary residency enhances brand connections through intentional purchasing.
- Quality-focused consumption builds deeper relationships
- Meaningful retail experiences transform temporary status into lasting loyalty (Morgan and Birtwistle, 2019)

Conclusions

Theoretical Impact:
- Advances servicescape theory by integrating cultural, ethical, and experiential elements
- Demonstrates how servicescapes can transcend traditional retail functions
- Shows the importance of balancing cultural authenticity with contemporary values

Practical Applications:
- Guides luxury retailers in creating culturally resonant environments
- Emphasises the importance of ethical practices and non-intrusive service
- Highlights the value of recognising consumers' dual cultural identities

Key Conclusions:
- London's luxury servicescapes successfully engage Chinese Gen Z through cultural adaptation and ethical alignment.
- Personalised interactions and immersive experiences build trust and loyalty.
- Inclusive retail environments effectively bridge international consumer identities.

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References

Berry, J.W. (1997) 'Immigration, acculturation, and adaptation', Applied Psychology: An International Review, 46(1), pp. 5–34.
Bitner, M.J. (1992) 'Servicescapes: the impact of physical surroundings on customers and employees', Journal of Marketing, 56(2), pp. 57–71.
Creswell, J.W. and Poth, C.N. (2018) Qualitative inquiry and research design: choosing among five approaches. 4th edn. Thousand Oaks, CA: SAGE Publications.
Harrods (n.d.) Plan your visit. Available at: https://www.harrods.com/en-gb/c/plan-your-visit (Accessed: 26 November 2024).
Hollebeek, L.D. (2011) 'Exploring customer brand engagement: definition and themes', Journal of Strategic Marketing, 19(7), pp. 555–573.
Kapferer, J.N. and Valette-Florence, P. (2021) 'Which consumers are most likely to adopt a guochao (national trend) luxury orientation? The segmentation of Chinese luxury consumers', Journal of Business Research, 132, pp. 301–313.
Qiu, Y. and Zhao, W. (2019) 'Understanding Chinese Generation Z consumers' luxury consumption', Journal of Global Fashion Marketing, 10(1), pp. 60–72.
Rosenbaum, M.S. and Massiah, C. (2011) 'An expanded servicescape perspective', Journal of Service Management, 22(4), pp. 471–490.
Saldana, J. (2016) The coding manual for qualitative researchers. 3rd edn. London: SAGE Publications.
Saunders, M., Lewis, P. and Thornhill, A. (2023) Research methods for business students. 9th edn. Harlow: Pearson Education.
Vargo, S.L. and Lusch, R.F. (2008) 'Service-dominant logic: continuing the evolution', Journal of the Academy of Marketing Science, 36(1), pp. 1–10.

30 by 30 Initiative: Corals in Memory

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Abstract

Keywords: Sustainability, Traditional handicraft, Coral, Farm-based food waste, 30 by 30

This study and art creation focus on capturing the vivid scenes of corals in memory. With the increasing awareness fostered by the 30x30 Initiative, there is a renewed emphasis on traditional craftsmanship and technological design. However, as ocean pollution intensifies and environmental ecosystems deteriorate, marine debris continues to accumulate. Through the collection of discarded cans, nets, and farm-based food waste such as corn husks along the coast of Taiwan, these sustainable and recyclable materials have been repurposed to extend their lifespans, thereby reducing environmental impact. The study proposes research directions and methodologies to further explore the upcycling of discarded materials, the development of green sustainable products and sustainable consumption practices.

Utilization of corn waste

corn distiller's grains Biotechnology organic fertilizer Application	SiC Refractory Corn nanocellulose Sound-absorbing and thermal insulation materials	SiC Refractory Corn nanocellulose Sound-absorbing and thermal insulation materials	Biotechnology organic fertilizer application
Corn	Corn stalks	Corn cob	Corn leaves
33.9%	41.7%	17.1%	7.3%

carbohydrate   Corn peptides

starch Hemicellulose lignin cellulose polyphenols Arabinogalactan Silicon

Introduction

Focusing on the theme of "memory," this project explores the beauty and fragility of coral ecology while emphasizing the interconnectedness between humans and the marine environment.The materials used include recycled marine debris (e.g., fishing nets and aluminum cans) and natural waste (e.g., corn husks and chaff), which are repurposed into sculptures or fiber art.A large installation will mimic a coral reef, utilizing luminescent materials to simulate the bioluminescence of corals, thereby creating an immersive experience.The project promotes sustainable craftsmanship through interdisciplinary design. Coastal coral scenes will be reconstructed using collected waste to illustrate the impact of pollution on coral ecosystems.Future design initiatives will incorporate culturally creative products inspired by coral conservation and sustainable consumption, along with engaging stories to raise environmental awareness.

Research purposes

Increase opportunities for waste reuse:Identify and promote innovative ways to reuse all types of waste, especially waste from the sea and agriculture. Explore the potential of agricultural waste such as corn leaves as a sustainable resource for artistic and functional applications.Educate the public on the importance of coral ecosystems and the need to protect them through community engagement and artistic expression.Promote a deeper understanding of ocean conservation issues and highlight the interconnections between human activities and ocean health.Research strategies aim to minimize the generation of agricultural waste and thereby promote permaculture practices.Champion alternatives to single-use materials and encourage the adoption of reusable and sustainable options in everyday life.

Research materials - corn leaves, discarded fishing nets and paper mulberry fibers

Abandoned fishing nets | Clean fishing nets | Collect paper mulberry bark | Beating the bark of paper mulberry tree | Soaked mulberry fiber | perform staining | first dyeing | secondary dyeing

discarded corn leaves | dried corn leaves | Dismantling fibers | Perform staining-1 | Perform staining-2 | Perform staining-3 | Perform staining-4 | Perform staining-5

Perform staining-6 | Perform staining-7 | Perform staining-8 | Perform staining-9 | Perform staining-10 | Perform staining-11 | Perform staining-12 | Perform staining-13

Research methods

Action observation method:
The observation technology system is used to record the number of discarded corn leaves collected in each collection cycle, providing quantitative information on agricultural waste.

Historical document analysis:
Explore and integrate insights from historical documents to understand past practices and experiences related to waste reuse and coral conservation.

Material collection:
Using bottles and cans collected during beach cleans as the main material for an art project highlighting the issue of marine debris.
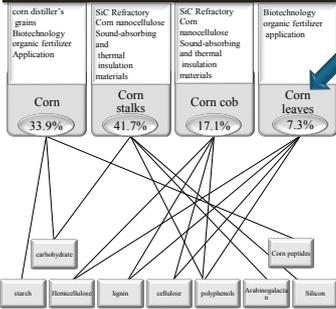
Plant dyeing technology:
Apply vegetable dyeing methods to corn leaves and try various dyeing auxiliaries to enhance the richness and diversity of patterns.

Braiding and knotting techniques:
Traditional weaving and knotting techniques are used to assemble and secure materials, creating intricate and sustainable artworks.

Conclusions

This study uses marine debris and agricultural waste (especially corn leaves) as basic materials for artistic creation, emphasizing the potential of waste as a resource. During the course of our research, we gained insights into the life cycle of food waste and the key role that personal habits and social perceptions play in waste generation. By making simple changes to consumption patterns and waste management practices, we can significantly reduce waste generation and therefore its impact on the environment.
This study highlights the power of art as a medium for environmental advocacy. Through creative expression we are able to engage the public and deepen their understanding of ecological issues, particularly those related to marine and agricultural waste. Art installations not only serve as visual representations of the issues we face, but also serve as catalysts for dialogue and reflection on sustainable practices. By building bridges between art and environmental science, this research aims to inspire collective action towards a more sustainable future.
The findings highlight the importance of interdisciplinary collaboration to address environmental challenges and the potential of the arts to drive changes in public attitudes and behaviors around waste and conservation issues.

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References

- Chen Jiaqi. Xu Jianguo. (2021), develop new handmade paper products - using Taiwan's local fibers as materials. Forestry Research News 62-65
- Cai Xiucheng. (2009). Research and creation of bark production in eastern Taiwan. Dongda University Art Industry Research Institute
- Zang Zhenhua. (2012). Re-discussing the origin and spread of Austronesian languages. 87-119
- Chen Shimei. (2021). Preliminary exploration of "heart" education—Research on Taiwan's native fiber plant handicraft teaching. Department of Art and Design, College of Humanities and Arts, National Taipei University of Education
- Zhang Jiajin. (2020), looking for friends. Closely woven baby - fiber art, composite media, emotional design, craft cradle creation. Department of Industrial Design, National Kaohsiung Normal University
- Qiu Jingting. (2019). Intangible and tangible - the co-construction of image and fiber creation. National Tainan University of the Arts Institute of Applied Arts
- Liu Jiongxi. (2000). Investigation and research on traditional useful plants of the Darumak tribe of the Rukai ethnic group in Beinan Township, Taitung County: 29-60
- Wang Wenke. Wang Zhihong. (2010). Journal of Education of Changhua Normal University, Issue 17, Pages 29-50
- Zhang Zhishan. Cai Xijun. Zheng Huimei. Uma Fuba Raf. Zhang Yaru. Hou Fangda. Tang Huihua. Zhao Xiuying. (2014). The origin and rebirth of bark cloth - Aboriginal literature. Aboriginal Council Issue 15: 3 - 50
- Ling Manli. (1960). Journal of the Institute of Ethnology, Academia Sinica, (9),
- Ling Chunsheng. (1963), he invented bark cloth printing for pottery and paper printing. Institute of Ethnology, Academia Sinica
- Zhang Fengji. (2000). Research on plant fiber weaving in Taiwan. Taichung County: Taichung County Cultural Center

Within Nature: Developing a Circular Fashion Collection

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Introduction

- Many garments contain plastic fibers that outlast their wearers and take over 200 years to biodegrade.
- **The study's purpose is to develop a circular-design solution to defer clothing from landfills.**
- Explored natural dyes and pigments to create vibrant colors, replacing toxic dyes in everyday garments. Used cotton thread and explored various biodegradable closures like laser cut wood and tie closures.
- It creates a **new way of thinking, using, and disposing of clothing thus overall creating a new fashion system that prioritizes planetary well-being.**

Methodology

1. Natural Dyeing
- Researched natural dyes like Madder and Logwood to achieve a spectrum of colors.
- **Discovered precise combinations of fabric, dye extract, and water to create vibrant shades of red and purple.**

2. Block Printing
- Developed 3D printed templates to mimic traditional block printing techniques.
- Created multi-colored prints that are hand-stamped **allowing for further customer connection to the garment.**

3. Garment Burial to Test Biodegradability
- **Conducted 10 trials of swatches and garments buried in different environments** including indoor pots and outdoors.
- Observed the rate of biodegradability each month.

Biodegradable Wooden Filament

2 Months Later

2 Months Later   5 Months Later

Results

- **A vibrant, biodegradable fashion collection can be successfully created from thread to closure.**
- Natural dye combinations provide rich, long-lasting colors that are safe to bury into the environment.
- The 3D blocks are biodegradable and the paint is plastic-free, plant-based, and safe to biodegrade into the environment.
- Concluded 80%-100% of the swatches and garments decomposed over 3-4 months. **The tested soil nutrients had no significant amount of change** afterwards.

Conclusion

- **This research advocates for a shift in consumer mindset and consciousness to keep clothing out of landfills.**
- Biodegradable fashion doesn't end all sustainability issues. Garments are still being created in a world where clothing is over-produced.
- Further research is needed to study whether this solution would encourage slower consumer consumption.
- This collection creates a new relationship with clothing, helping to create a new fashion system that prioritizes planetary well-being.

Survey

Contact

This survey is for continuous research on consumer behavior and the response to a biodegradable fashion collection.

Practical Cases of Digital Transformation

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Introduction

In 2015, the United Nations proposed the "2030 Sustainable Development Goals" (SDGs). As one of the world's largest consumer goods markets, the fashion industry faces significant challenges related to resource consumption and environmental pollution. However, technological advancements and growing consumer awareness of sustainability have driven the emergence of digital fashion as a solution. Digital technology not only reduces resource waste but also contributes to environmental protection.

As the department chair, we have promoted digital transformation in fashion education post-pandemic through data integration and collaboration with industry resources. This paper explores the application and showcase of 3D digital fashion technologies in curricula, using the Department of Fashion Design at Shih Chien University as a case study. It discusses how traditional fashion design transitions into digital formats and integrates with the metaverse to achieve sustainability and innovation in the future of fashion.

Methods

This study adopts a mixed-method approach, combining qualitative and quantitative research. It analyzes the collaboration processes between students and the industry, focusing on interdisciplinary integration, group discussions, and learning outcomes. Case studies are employed to examine digital fashion practices and online showcases within the teaching environment.

The research subjects are fourth-year university students, with the course lasting 15 weeks, combining in-person lectures and group-based independent learning. The focus is on exploring how digital technologies and AI enhance students' interdisciplinary abilities and practical achievements.

Table 1. Research Methodology Flowchart (Created by the Author)
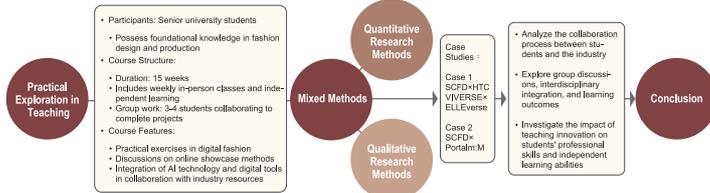
Case Studies

Case 1

In 2023, Shih Chien University collaborated with ELLE's digital platform ELLEverse and HTC VIVERSE to produce a hybrid fashion show, transforming physical designs into 3D digital presentations. The designs were also sold on a metaverse NFT platform. This partnership among companies, schools, and students highlighted the commercial potential of virtual fashion.

Figure 1. 3D digital fashion production   Figure 2. Digital virtual runway show   Figure 3. NFT sales

Case 2

In 2024, the university partnered with MAKALOT's digital brand Portalm:M to integrate AI technology with digital fashion design. The theme centered on a "digital fitting room," enhancing creative efficiency and reducing resource waste. Students' creations were exhibited at London Fashion Week, demonstrating the outcomes of academia-industry collaboration.

Figure 4.   Figure 5.   Figure 6 .   Figure 7 . Portal:M x SCFD x MAKALOT
Digital exhibition posters and event photos   collaboration announcement

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SPECIAL THANKS /
Portal:M   VIVERSE
SHIHCHIEN DEPARTMENT OF FASHION DESIGN

Prêt-à-Porter Figure 8. Student digital works presentation (16 sets)


Avant-Garde Figure 9. Student digital works presentation (8 sets)

Results

From 2023 to 2024, during the two consecutive years of public presentations and promotion of the digital fashion course, we observed that students showed a strong interest in digital fashion projects. According to first-phase course selection data, over half of the students have chosen the upcoming digital virtual fashion course scheduled for 2025 as their top priority. This indicates that students have a high willingness to learn about the future development of digital fashion, and emerging technologies are indeed capturing the attention of the younger generation.

Under the themes of reducing waste and focusing on sustainability, the digital fashion course is designed not only to include core teaching of CLO3D computer technology but also to integrate new trends in presentation and performance. It emphasizes the effective use of AI for interdisciplinary integration, enabling students to continue learning and growing at the intersection of virtual and traditional fashion industries. At the same time, data shows that the era of digital transformation is gradually advancing.

Table 2. First-choice course selection survey, data source: Shih Chien University Department of Fashion Design.
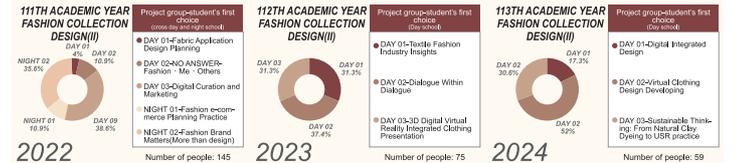
Conclusion

The Department of Fashion Design at Shih Chien University in Taiwan is about to celebrate its 65th anniversary, making it the oldest fashion education program in Taiwan. In addressing the global issue of sustainable development goals (SDGs), we strive to strike a balance between hands-on practices and digital fashion courses. Through collaborations with the industry, we seek solutions together.

Our goal is to leverage digital technology to promote interaction and integration between physical and virtual fashion. By equipping students with these concepts and skills, we aim to prepare them for the workplace, where they can offer more profound and compelling consumer experience proposals. This approach to digital fashion not only contributes to driving the overall fashion industry toward greater sustainability and environmental friendliness but also enhances the employability and competitiveness of our students.

References

1. Huang, Y. J., Shih, S. Y., Huang, C. R. and Ho, J. C. (2021) 'Applying human body size clustering to construct CLO3D virtual garment models: A case study of university football teams in Taiwan', Textile Research Journal, 31(3), pp.45–61. Available at: https://reurl.cc/KdMQO9(Accessed: 5 October 2024).
2. Nobile, T. H., Noris, A., Kalbaska, N. and Cantoni, L. (2021) 'A review of digital fashion research: Before and beyond communication and marketing', International Journal of Fashion Design, Technology and Education, 14(3), pp.293–301. Available at: https://reurl.cc/r3LRKZ (Accessed: 1 December 2024).
3. Sayem, A. S. M. (2022) 'Digital fashion innovations for the real world and metaverse', International Journal of Fashion Design, Technology and Education, 15(2), Article 2. Available at: https://reurl.cc/86qpb4(-Accessed: 8 December 2024).
4. Yan, F. and Zhang, H. (2022) 'The impact of virtual fashion on sustainable fashion development', Western Leather, 2022(24), pp.19-21. Available at: https://reurl.cc/WAD1OZ (Accessed: 18 November 2024).
5. Yang, M. C. (2022) 'The present and future of the fashion industry: Dominance of virtual technology and sustainable circular trends', FINDIT Research Center. Available at: https://reurl.cc/EgGRbv(Accessed: 28 July 2024).

THE ONE SHEET FOLDING ZINE: A CREATIVE ASSESSMENT METHOD

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Abstract

This poster explores the synergetic relationship between pedagogy and visual communication, emphasising an innovative approach to assessment that bridges traditional academic formats and contemporary fashion media. The focus is a One Sheet folding zine as an innovative assessment tool; a compact, utilitarian and visually rich format that blends graphic design and storytelling to create unique publications.

Introduction

The One Sheet zine assessment was developed for Level 5 BA Fashion Promotion students in collaboration with New Balance during the academic year 2023-24. The cohort comprised of 126 students, working on the assessment in small groups.

The students were briefed to produce a printed zine to communicate the narrative 'Made in the UK'. This theme relates to the brand's UK manufactured line and provided an interesting premise to be explored in a publication format. The objective was to avoid overt branding to create a publication that would connect the brand with the target audience more authentically, referencing social agendas to spark audience interest.
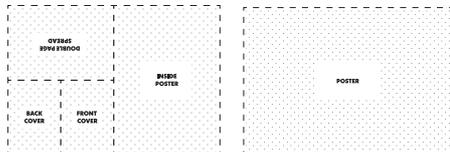

Figure 01. Template for folding zine

Methods and Materials

All students used the same assessment format - a single A2 double sided sheet. A template was given to ensure all groups' final printed zines would be folded in the same sequential manner to communicate an expanding narrative. Using this format, students explored the theme in a self-directed way, using cultural narratives, visual communication techniques and fashion image to construct a folding one-sheet publication. The zines were printed by a local printer on 120gsm uncoated stock; every student received a printed copy at the end of the project. The structured format provided a cost effective outcome to promote inclusivity.

Figure 02. Photo of students prototyping One Sheet zines

Figure 03. Student One Sheet zine folding sequence

Results

Working collaboratively, students demonstrated self-expression and comprehension of brand communication, establishing critical thinking and advancing skills in written and visual content creation. This format gave students equity and agency to collaborate with others and retain individual authorship of content.

In application, it provided a scalable and efficient solution that blends structure with creative freedom, a successful methodology when working with large cohorts of students. The module satisfaction score was high (96%) demonstrating an excellent student experience. Selected students presented their concepts to New Balance who were impressed with the thoughtful narratives and professional exectution.

Discussion

This assessment format provided a link between the classroom and industry practice. Establishing this project with a live brief partner met the values of authentic assessment in seeking to align learning and teaching outcomes with industry expectations (Ashford-Rowe, Herrington and Brown, 2013). Zines have gained increasing prominence as an effective brand strategy tactic; analogue media produced by brands offers a counterpoint to the homogeneity of digital media, providing an effective way to communicate with consumers (Tan, 2023).

Therefore, as well as being a valuable assessment format, the zine production also supported students to create an industry aligned output. In an era of digital-first media, there must be consideration of harmonising the creation of virtual and tangible communication outputs. Students considered technical aspects of printed graphic design to ensure the creation of high-quality publications, emphasising the development of professional skills and the concept of finishing.

Conclusions

To be further developed, this assessment format would be valuable to test with colleagues in collaboration between practice and non-practice courses. The one-sheet folding zine has many benefits including fostering creativity, promoting interdisciplinary connections and using visual communication to generate engaging and authentic learning experiences. Furthermore, this concept could be integrated into the curriculum as a formative tool to collate and format work-in-progress content.

Figure 04. Students after presenting their designs to New Balance, and Linkedin posts celebrating their success

REFERENCES

Ashford-Rowe, K., Herrington, J. and Brown, C. (2013) 'Establishing the Critical Elements that Determine Authentic Assessment', Assessment & Evaluation in Higher Education, 39(2), pp. 205–222. Available at: https://doi.org/10.1080/02602938.2013.819566 (Accessed: 7 July 2024).

Tan, E. (2023) Youth Radar: Analogue Marketing. Available at: https://www.wgsn.com/insight/article/6525f313dd2ce724c6dd22f1 (Accessed: 7 July 2024).

Taiwan's Earth Colors to Textiles:
The Application of Sustainable Natural Mineral Dyeing in Clothing.

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Introduction

This study explores the sustainable application of Taiwan's local mineral resources in natural dyeing. Mineral dyeing is a technique that uses natural mineral pigments to color natural fibers. The most common materials are soil and rocks, and the colors of the fabric derive from mineral pigment particles adhered to the fiber surface. The research highlights the unique earthy tones of dyed textiles, combining environmental consciousness and cultural heritage. It underscores the sustainable value and innovative potential of natural dyeing in contemporary fashion.

Methods and Materials

1. **Field Research:** Soil samples were collected from 55 locations across Taiwan. Following the mineral dyeing process, the soil was washed, sieved, and prepared into dyes, producing soil-dyed fabric swatches representing each location.

2. **Experiments:** Wash fastness tests were conducted to evaluate the durability of the dyed fabrics.

   ① **Sample Preparation:** Prepare 21 fabric swatches of the same material and size, pre-treated with soy milk.

   ② **Dyeing Process:** Add 4% adhesive to the dye solution and use mineral dye of the same concentration for all samples. After dyeing, air-dry the samples naturally.

   ③ **Simulated Washing:** Place 20 samples in a laundry bag and wash them in a household washing machine using a standard cycle to simulate home laundering. After each wash, air-dry the samples, remove one swatch for observation, and record the washing count. Repeat washing and drying with the remaining samples.

   ④ **Observation:** Observe and record color changes between the samples after completing all washing cycles.

3. **Garment Creation:** Various natural fibers, including cotton, linen, and silk, were dyed and transformed into garments reflecting Taiwan's landscapes. The dyeing process was entirely natural and free from chemical additives, making it highly environmentally friendly.

Figure 1. Collection Maps and Dye Processing (Created by this study)

Collection
Grind
Water Levigation
Dry and Store

Add a small amount of raw soy milk and water to prepare the dyeing solution for application.

Test Results

The collected soil swatches showcased Taiwan's distinctive land hues, embodying local cultural values and emotional connections. In garment design, the integration of natural elements and dyeing craftsmanship demonstrated aesthetic beauty. The dyed textiles exhibited acceptable wash fastness, laying a solid foundation for sustainable design practices.

Table 1. Color Fastness to Washing Test (Created by this study)

Details of the Experiment
Fabric Material：100% Cotton
Fabric Pre-Treatment Method：Soak in raw soy milk for 30 minutes
Soaking Time：6 minutes
Fabric samples with different washing times

NO WASHING	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)

Table 2. Taiwan Mineral Dyeing Fabric Swatches (Created by this study)

Fabric Material	100% Cotton	Original fabric
Soaking Time	6 minutes	
Concentration	Pigment : Water = 1 : 20 (g)	

Northern Region: N1 N2 N3 N4 N5 N6 N7 N8 N9 N10 N11 N12 N13 N14 N15 N16 N17

Central Region: C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15

Eastern Region: E1 E2 E3 E4 E5 E6 E7 E8 E9 E10 E11 E12 E13 E14 E15 E16

Southern Region: S1 S2 S3 S4 S5 S6 S7

Figure 2. Clothing Design with Mineral Dyes (Created by this study)

Conclusion

Challenges in integrating traditional crafts with modern sustainability include material adaptability. However, this study demonstrates the potential of natural mineral dyeing as a solution for sustainable fashion. It offers innovative approaches to balancing cultural preservation and environmental protection, providing inspiration for the global fashion industry.

Regarding commercial-scale production, South Korea has nearly a decade of experience with mineral dyeing machinery, offering valuable insights. Future applications aim to combine local resources with innovative designs, reinforcing the importance of nature and cultural identity in contemporary textiles.

References

1. Hong Haolun. (2021). Taiwan's primary colors of the earth-the artistic practice and creative application of local natural painting tools. (Ph.D.) Asia University, Taichung City.

2. Xu Beijiu. (2015). *Mineral dyeing in Korea*: Huludun Cultural Center, Taichung City Cultural Affairs Bureau.

3. Gregory, P. (1996). Dyes versus pigments: the truth. *Recent Progress in Ink Jet Technologies*, 276-278.

4. Gürses, A., Açıkyıldız, M., Güneş, K., Gürses, M. S., Gürses, A., Açıkyıldız, M., . . . Gürses, M. S. (2016). Dyes and pigments: their structure and properties. *Dyes and pigments*, 13-29.

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Sustentare: The AI Fashion Stylist App for Sustainable Fashion

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Abstract

The integration of Artificial Intelligence (AI) into fashion offers significant potential for promoting sustainability. While consumers are increasingly aware of the environmental impact of their choices, many lack the information needed to adopt sustainable practices. This study explores the role of AI in driving sustainable consumption and proposes Sustentare, an AI-powered sustainable stylist app. The app provides eco-friendly clothing recommendations and educational content, using AI to analyze user-uploaded images and offer tailored suggestions based on fashion trends and sustainability criteria. An initial prototype demonstrates the app's potential, with future research focusing on its impact on consumer behavior and its broader applications in fostering sustainable practices in the fashion industry.

Introduction

The intersection of Artificial Intelligence (AI) and sustainable fashion is gaining prominence as consumers grow increasingly aware of the environmental impact of their choices (Zou & Wong, 2019; Candeloro, 2020). While sustainability is crucial, many struggle to adopt it due to limited knowledge and resources. AI, with its ability to simplify decision-making and enhance processes, presents opportunities to address these challenges and drive positive change (Candeloro, 2020; Schoormann et al., 2023). This study examines the role of AI in fostering sustainable consumption through the development of an AI-powered sustainable stylist mobile app.

Precedents

This study examines two AI-powered stylist mobile apps, Style DNA and Aiuta, to understand current offerings. Both apps focus on personalized fashion recommendations but lack a sustainability emphasis.

Style DNA combines AI with expert styling to provide tailored recommendations based on body shape and color type. It enhances the user experience by offering curated looks, inspiring content, and a digital style expert.

Aiuta uses machine learning and generative AI to help users organize their wardrobes, maximize outfit potential, and ensure purchases align with existing items. It focuses on efficiency and individual expression but does not integrate sustainability into its features.

Initial Experiment

Current AI-powered stylist apps lack a sustainability focus, despite AI's potential for promoting eco-friendly practices in fashion. To address this gap, we developed Sustentare, an AI Sustainable Fashion Stylist app. Sustentare prioritizes sustainability by recommending clothing with eco-friendly certifications and providing personalized alternatives based on users' photos or preferences. Features include:
• AI analysis of clothing items with sustainable recommendations.
• Curated content on eco-friendly materials, ethical production, and sustainable brands.
• Interactive tools for styling and saving outfits.
• Direct links to purchase sustainable items from partnered platforms.

A prototype of the app's user interface demonstrates these features, integrating AI technologies for an enhanced, user-centric experience.

Future Research

This study is in its developmental stage, laying the groundwork for understanding the feasibility of creating an AI-powered sustainable stylist app. While the initial experiment demonstrates potential, future research should focus on:

• Refining data collection and guidelines for assessing clothing aesthetics and sustainability.
• Conducting user trials to gather feedback and improve app functionality.

Two key research questions guide the next steps:

1. What are the potential long-term impacts of an AI-powered sustainable stylist app on consumer behavior in the fashion industry?

2. How can AI enhance consumer awareness and education about sustainability in fashion?
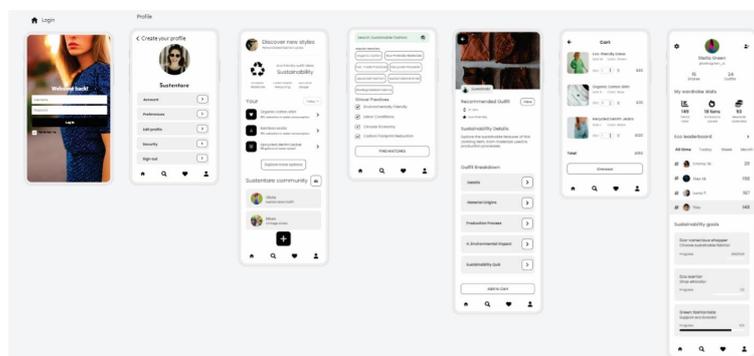
Prototype

Figure 1. Sustentare Prototype

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References

Candeloro, D., 2020. Towards sustainable fashion: the role of artificial intelligence---H&M, Stella McCartney, Farfetch, Moosejaw: A Multiple Case Study. *ZoneModa Journal*, *10*(2), pp.91-105.

Schoormann, T., Strobel, G., Möller, F., Petrik, D. and Zschech, P., 2023. Artificial intelligence for sustainability—a systematic review of information systems literature. *Communications of the Association for Information Systems*, *52*(1), p.8.

Zou, X. and Wong, W., 2019. AI-stylist: an AI-based framework for clothing aesthetic understanding. *Design and Semantics of Form and Movement*, 266.