AJVAH
e-ISSN: 2735-1165
DOI: https://doi.org/10.53797/ajvah.v7i1.5.2026

# Maroccan Architectural Traces in Fashion: A Dress-up Fashion Design Based on Traditional Aesthetic Structures

**Faza, Rahmanita[1] & Irma, Russanti[2*]**

[1]Universitas Negeri Surabaya,
Department of Applied Science Fashion Design, Faculty of Vocational, 60231, INDONESIA

[2] Universitas Negeri Surabaya,
Department of Applied Science Fashion Design, Faculty of Vocational, 60231, INDONESIA

*Corresponding Author: irmarussanti@unesa.ac.id

Received 29 May 2026; Accepted 02 June 2026; Available online 10 June 2026

**Abstract:** This research explores the integration of Moroccan architectural aesthetics into dress-up fashion design and the potential use of the Scratch platform as a design and education tool. Contemporary fashion design paradigms emphasise cultural identity and sustainability, yet dress-up fashion design in Indonesia still shows homogeneity. We identify a gap in the exploration of non-Western architectural aesthetics and propose an innovative approach that incorporates Moroccan visual heritage. Research objectives include developing a process for applying art architecture to fashion design, identifying natural materials for patterns, and analysing the aesthetics and uniqueness of the resulting designs, including implementation through Scratch. Using the ADDIE methodology and qualitative data collection through interviews, document analysis, and observations from experts and practitioners, we found that Moroccan architectural elements such as geometric patterns, curvilinear shapes, and ornamental details are highly relevant. Scratch proved effective as an intuitive digital prototyping tool, facilitating interactive visualisation and rapid design iteration. This research shows that the integration of Moroccan architectural aesthetics, supported by Scratch, not only enriches creative expression but also offers an efficient and interactive design method in fashion design practice and education.

**Keywords:** Fashion design, moroccan architectural, scratch, aesthetic, design homogeneity

## 1. Introduction

The paradigm of contemporary fashion design continues to evolve, shifting from seasonal trends alone to an emphasis on identity, sustainability, and cultural narratives (Bertola & Colombi, 2024). Designers are increasingly exploring cultural heritage as an endless source of inspiration, integrating traditional elements into modern creations. In Indonesia, the fashion design landscape is dominated by a blend of dynamic urban styles and adaptations of global trends (Marpaung & Sudrajat, 2024). However, amid this flurry of innovation, there is often a tendency to follow popular design trends, resulting in visual homogeneity in dress-up collections intended for special occasions or fashion shows. Current designs tend to adopt familiar silhouettes and ornaments, without delving deeply into the rich aesthetic diversity of architecture (Mutinga, 2024).

The research problem stems from the need to enrich the dress-up fashion design repertoire in Indonesia through a more innovative approach rooted in specific cultural heritage. Although Indonesian designers have demonstrated skill in blending local elements, there remains a gap in the in-depth exploration of the specific architectural aesthetics of non-Western cultures, particularly those with visual and philosophical richness comparable to Morocco (Lu, 2010). Current scientific debates on the international stage, such as in France, the United States, Turkey, Germany, and Russia, actively discuss the importance of cross-cultural dialogue in fashion design (Hisyam & Pamungkas, 2016).

Researchers in these countries, for example, highlight how architectural heritage, traditional textile techniques, or colour philosophy can be translated into contemporary design language. In France, discussions often centre on the acculturation of non-Western aesthetics in haute couture; in the United States, the focus shifts to cultural representation and inclusivity; while in Turkey, Germany, and Russia, explorations of Ottoman heritage, Bauhaus, or constructivism often serve as starting points for fashion innovation. This research aims to bridge this gap by offering a specific case

*Corresponding author: irmarussanti@unesa.ac.id

study on how Moroccan architectural aesthetics and natural materials can be systematically integrated into the design of dress-up clothing, contributing to the global discourse on culturally rooted and sustainable fashion.

Additionally, this research explores the potential of the Scratch platform as an innovative tool in the design development process. The integration of Scratch into the realm of fashion design, particularly in the context of Moroccan architecture-inspired dress-up clothing design, opens new dimensions for design representation and interaction. As an intuitive visual programming environment, Scratch enables designers to visualise (Maharani et al., 2020) Moroccan architectural elements, such as zellij (mosaic tiles), mashrabiya (carved wooden screens), or distinctive arches, into digital forms that can be manipulated. The use of Scratch facilitates quick experimentation with combinations of patterns, colours, and structures, and enables the creation of interactive prototypes of clothing concepts (Akbar et al., 2023). This means designers can 'dress' virtual avatars with Moroccan architecture-inspired designs and see how these elements interact visually, even before the physical production process. The Scratch application enables dynamic visualisation of the designed clothing, providing instant feedback on draping, proportions, and the interaction of design elements with the virtual body. This approach supports an iterative and exploratory design process, where errors and corrections can be made efficiently in a digital environment, minimising material and time waste.

The primary objective of this research is to focus on the development and comprehensive analysis of culturally inspired fashion design. First, we specifically developed a process for applying architectural aesthetics to fashion design. This means that we not only identified motifs, but also translated the structure, proportions, and spatial philosophy of Moroccan architecture into fashion elements. Create a systematic framework that enables designers to integrate visual and structural elements of architecture, such as zellij patterns, curved shapes, or mashrabiya details, into the silhouettes, draping, and ornamentation of formal wear.

Second, identify natural materials that can serve as effective mediums for implementing the design patterns derived from the interpretation of architecture. This involves exploring natural fibres, natural dyes, and sustainable textile processing techniques. Seek materials that not only effectively represent Moroccan architectural patterns and textures but also support environmentally responsible fashion practices. This identification ensures the sustainability of the design process and the exploration of innovative textures that add a tactile dimension to the collection.

Finally, analyse the aesthetic outcomes and uniqueness of the designs resulting from the use of these patterns and materials. This analysis includes a visual evaluation of the harmony, balance, and originality of the designs produced. Furthermore, specifically explore the implementation of design concepts through the Scratch platform. Assess how Scratch facilitates interactive visualisation and rapid iteration in the design process. This means we examine how designers can create virtual prototypes, experiment with combinations of architectural elements on digital figures, and receive instant visual feedback. This approach not only adds a new dimension to the representation of culturally-based fashion design but also demonstrates Scratch's potential as an efficient educational and prototyping tool within the field of fashion design.

Through this approach, we hope to present a new framework for creating dress-up clothing that is not only aesthetic but also carries a rich cultural narrative that can be visualised innovatively.

## 2. Methodology

Adopted the ADDIE (Analysis, Design, Development, Implementation, Evaluation) approach as the methodological framework for this research (Saeidnia et al., 2022). This approach facilitates systematic and iterative development, which is highly relevant for the design and implementation of innovative concepts such as the integration of Moroccan architectural aesthetics into fashion, as well as the use of digital platforms such as Scratch. Although ADDIE is often used in instructional design, its structured and outcome-focused principles make it ideal for research involving the development of prototypes or new processes.

### 2.1 Analysis

The analysis stage focuses on gaining a deep understanding of the needs, characteristics of the target audience, and the context of the problem (Krueger, 2014). Identified gaps in dress-up fashion design in Indonesia related to the lack of exploration of specific architectural aesthetics. Also analysed the characteristics of Moroccan architecture relevant to fashion design inspiration and assessed the potential of Scratch as a development tool.

#### 2.1.1 Data Collection Instruments

Use in-depth interviews as the primary instrument at this stage to collect qualitative data (Eppich et al., 2019). These interviews aim to explore the perspectives, experiences, and implicit knowledge of the participants. Developed a semi-structured interview guide to allow flexibility in exploring topics while ensuring coverage of key research areas.

### 2.2 Design

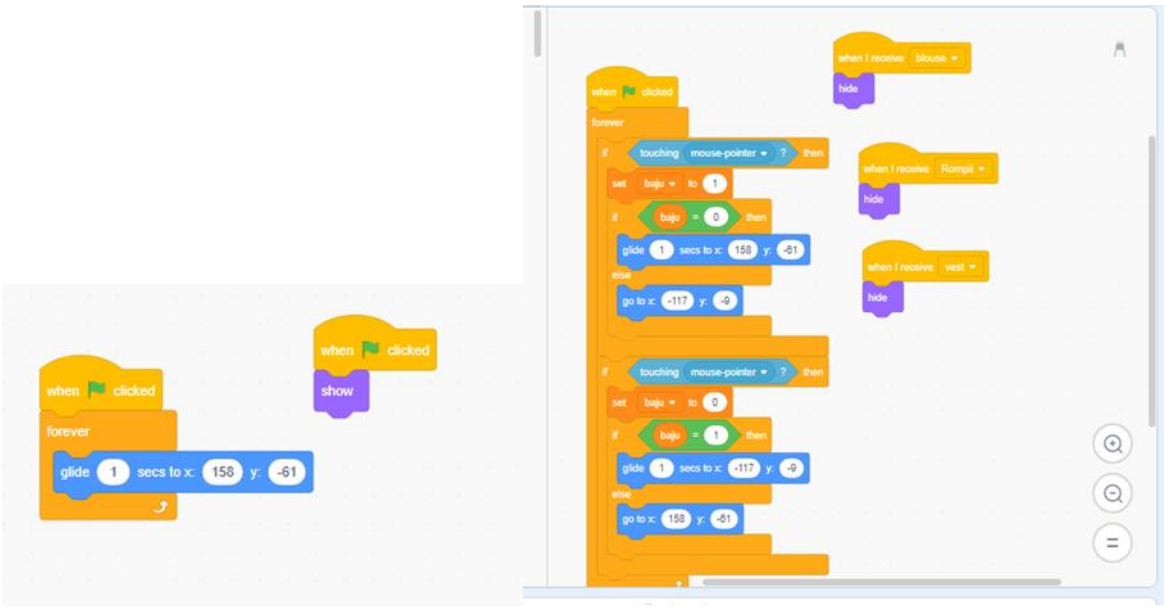
Based on the findings from the analysis stage, the design stage focuses on concept formulation, determining learning or development objectives, and designing implementation strategies (Dick et al., 1985). We formulated basic concepts for designing dress-up clothing based on Moroccan architecture and determined specifications for the Scratch application

that would visualise these concepts. We also selected natural materials that could potentially support the implementation of the patterns. The process of designing a dress-up game based on Moroccan architectural aesthetics using Scratch involves two main phases.

Phase (a) shows the user interface of the dress-up game prototype, where a female model avatar is displayed on the left side of the screen. On the right side, there are various Moroccan-inspired clothing options (jackets, tops, and pants) arranged in red-framed boxes, ready to be selected and applied to the avatar. The canvas background, resembling denim texture, provides visual contrast for the clothing options.

Phase (b) (shown by the Scratch code snippet) illustrates the programming logic behind the game's interactivity. The colourful Scratch visual code blocks demonstrate how each clothing item (jacket, top, trousers) is programmed to respond to user interactions. This code includes functions such as 'when green flag clicked' (to start the game), 'forever' (continuously), "glide" (to move smoothly), 'go to x y' (to move to specific coordinates), and the condition 'touching mouse-pointer?' This demonstrates how clothing items can move or change position on the screen, as well as how they can appear or disappear (e.g., using 'show' or 'hide' blocks) based on user interaction, enabling a dynamic and modular dress-up experience.

(a)




(b)

**Figure 1: Prototype design**

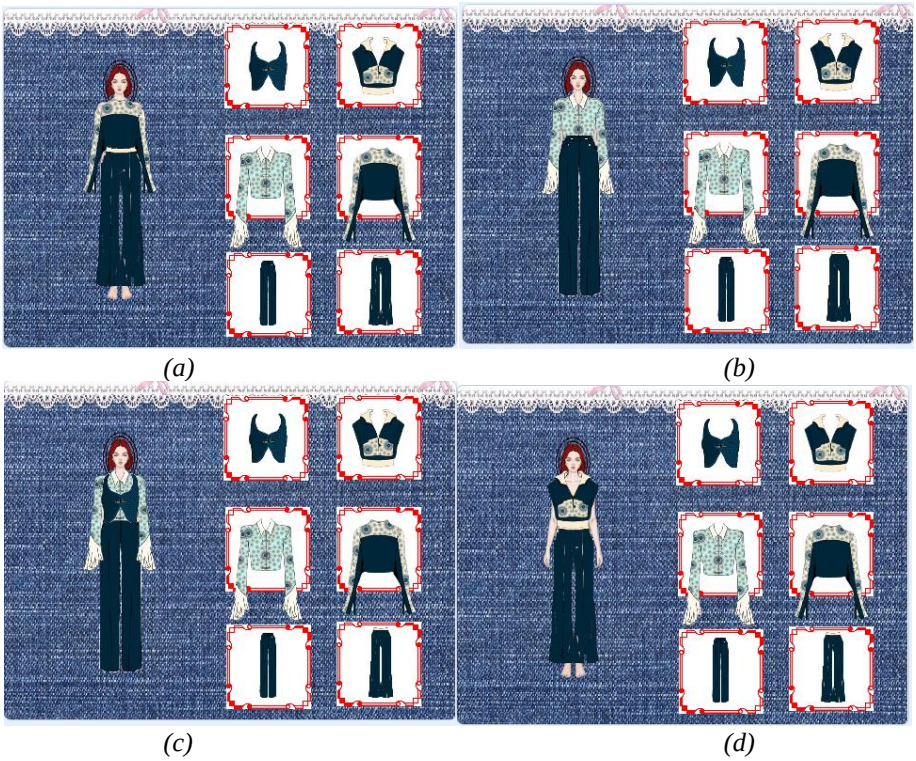
## 2.3 Development

During the development stage, we develop a prototype of the clothing design based on the formulated concept, applying Moroccan architectural elements to the silhouette and details (Munir et al., 2026). We also develop an interactive

programme or simulation in Scratch that allows users to ‘try on’ or manipulate architectural design elements on a virtual dress-up figure. This stage is iterative, allowing for design improvements based on initial feedback.

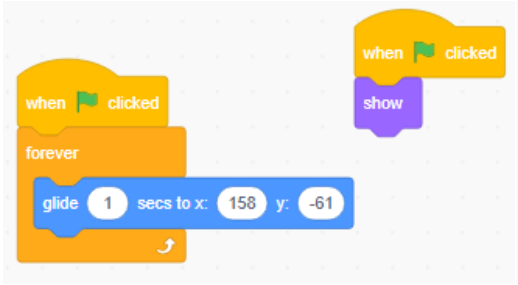
The development phase of the virtual dress-up application is illustrated through a series of interface variations that demonstrate the interactive styling process. Figure 2 (a) represents the initial baseline layout of the user interface, where the female avatar model stands positioned on the left side of the screen adjacent to the primary item selection menu on the right. Figures 2(b), 2(c), and 2(d) visually demonstrate the dynamic customization capabilities and structural flexibility of the system during user interactions. As specific Moroccan-inspired garment assets such as the structured vest, blouses, and coordinating trousers are selected and activated by the user, the interface seamlessly renders the targeted combinations onto the avatar's silhouette, confirming the successful alignment, layering, and scaling of the modular clothing assets within the virtual trial environment.

The underlying computational logic and visual scripting architecture that govern the interactivity of individual garment pieces are comprehensively detailed in the Scratch block configurations from Figure 2(e) through 2(n). The initialization scripts for the jacket asset, shown in Figures 2(e) and 2(f), define its default spatial coordinates upon activation and control its visibility state when interacting with user inputs. Similarly, Figures 2(g) and 2(h) manage the structural initialization and responsive motion mechanics for the blouse asset, ensuring smooth translation across the canvas. The coding infrastructure for the trousers is delineated in Figures 2(i) and 2(j), which incorporates advanced conditional statements to dynamically modify asset dimensions and scale factors during placement. Finally, Figures 2(k), 2(l), 2(m), and 2(n) specify the tracking parameters, localized constraints, and modular show-and-hide behaviors for the supplementary apparel items, ensuring uniform responsiveness and interactive stability across the entire design matrix.

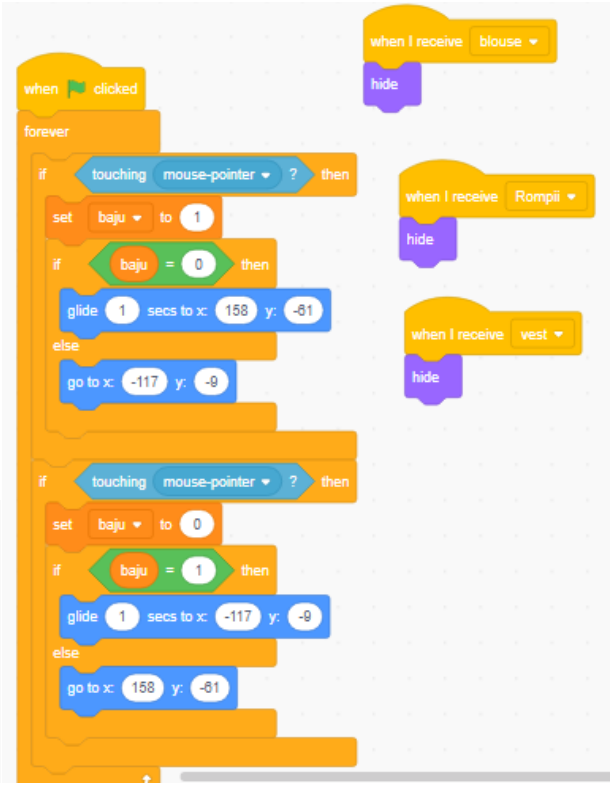


*(a)* *(b)*

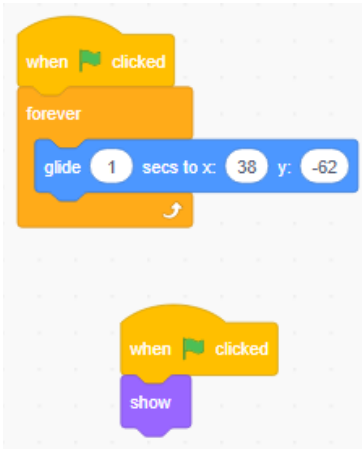
*(c)* *(d)*


when clicked
forever
glide 1 secs to x: 158 y: -61
when clicked
show

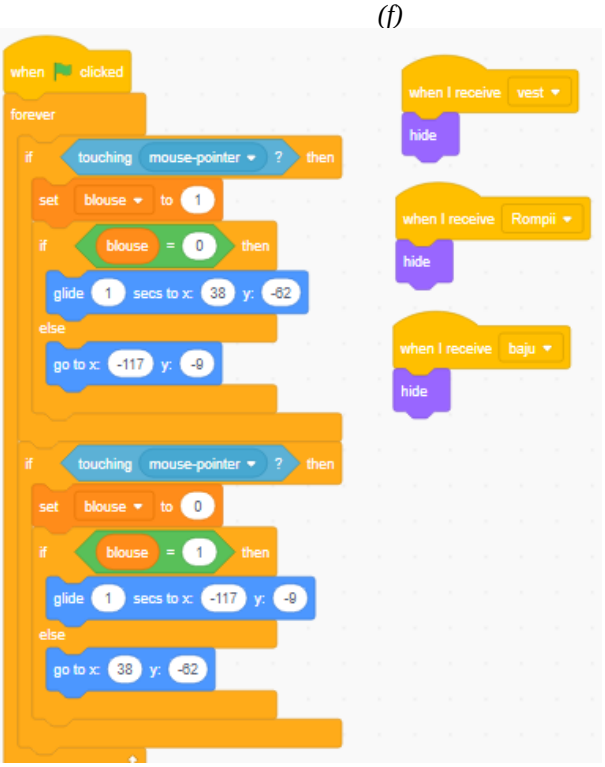
*(e)*


when clicked
forever
if touching mouse-pointer ? then
set baju to 1
if baju = 0 then
glide 1 secs to x: 158 y: -61
else
go to x: -117 y: -9
if touching mouse-pointer ? then
set baju to 0
if baju = 1 then
glide 1 secs to x: -117 y: -9
else
go to x: 158 y: -61
when I receive blouse
hide
when I receive Rompii
hide
when I receive vest
hide

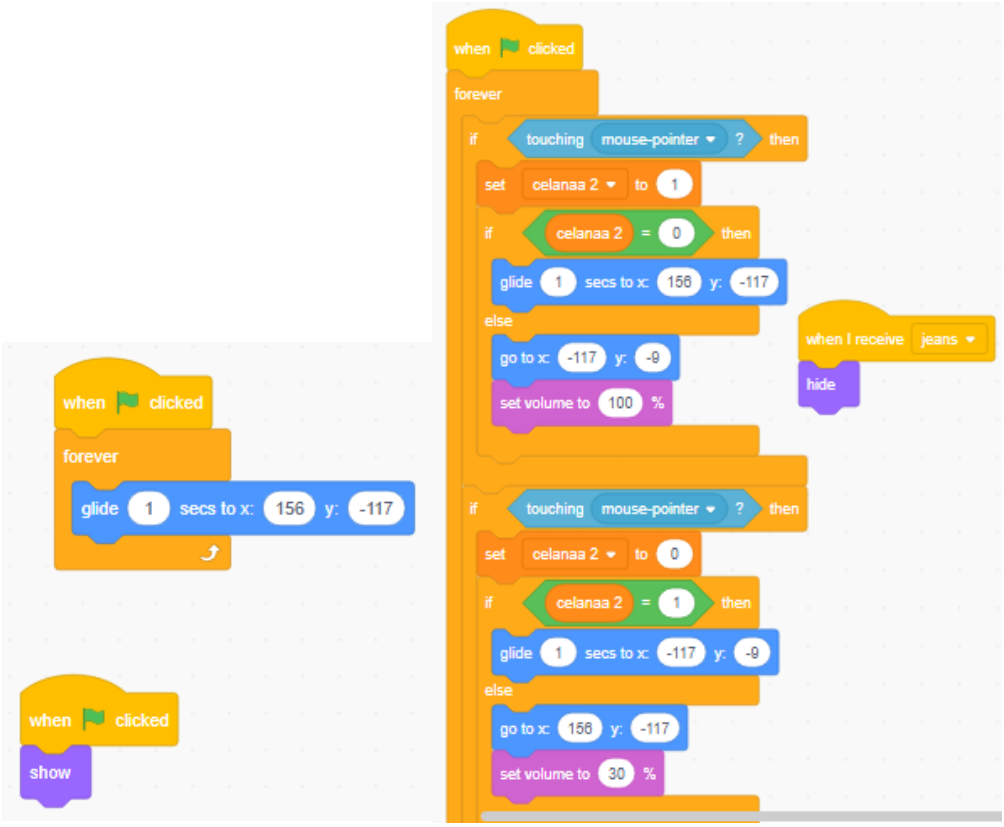
*(f)*


when clicked
forever
glide 1 secs to x: 38 y: -62
when clicked
show

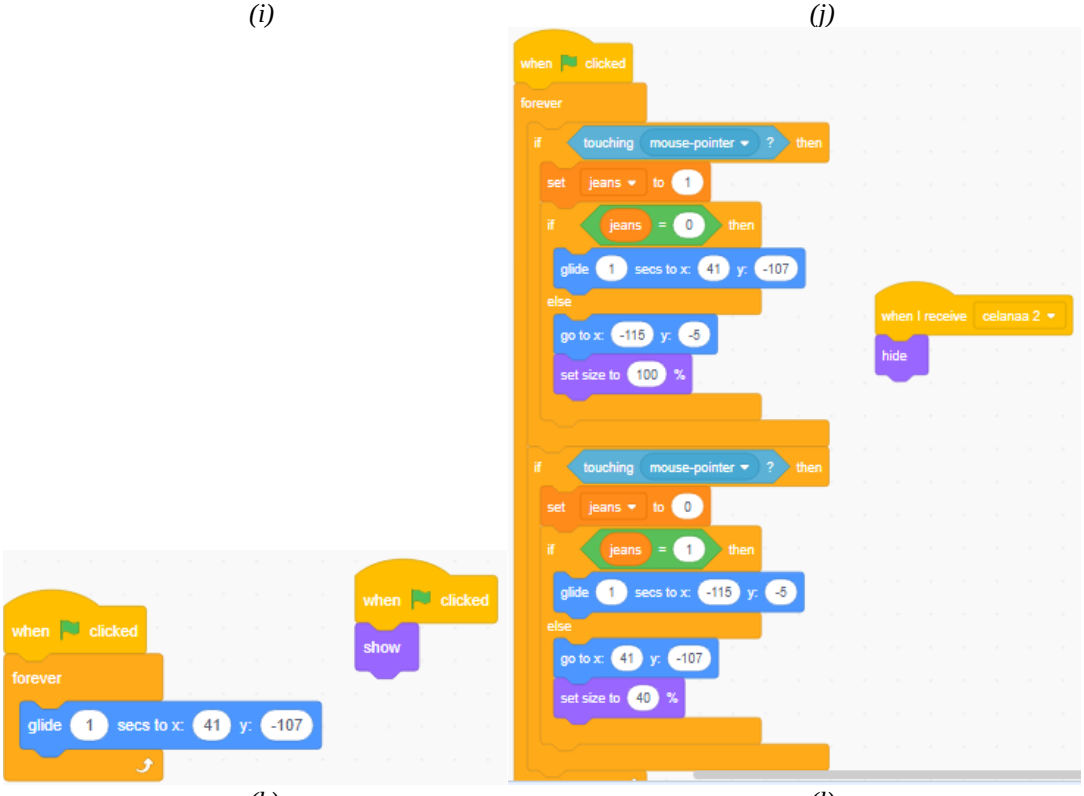
*(g)*


when clicked
forever
if touching mouse-pointer ? then
set blouse to 1
if blouse = 0 then
glide 1 secs to x: 38 y: -62
else
go to x: -117 y: -9
if touching mouse-pointer ? then
set blouse to 0
if blouse = 1 then
glide 1 secs to x: -117 y: -9
else
go to x: 38 y: -62
when I receive vest
hide
when I receive Rompii
hide
when I receive baju
hide

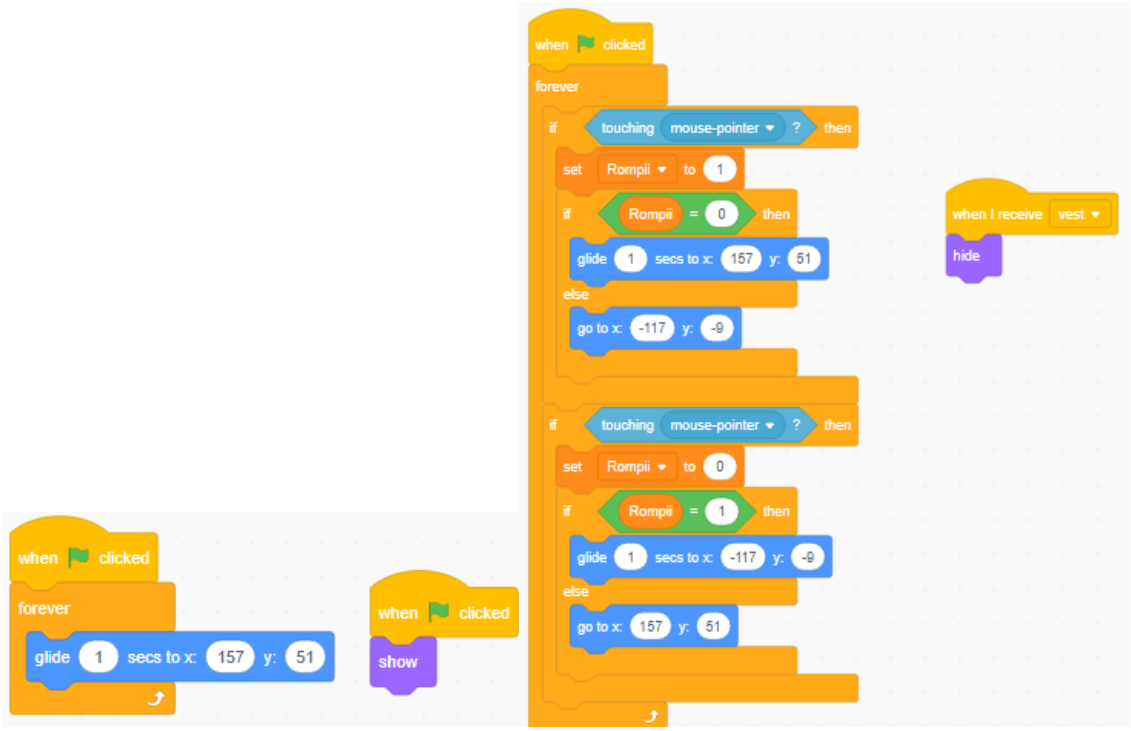
*(h)*


when clicked
forever
glide 1 secs to x: 156 y: -117
when clicked
show
when clicked
forever
if touching mouse-pointer ? then
set celanaa 2 to 1
if celanaa 2 = 0 then
glide 1 secs to x: 156 y: -117
else
go to x: -117 y: -9
set volume to 100 %
when I receive jeans
hide
if touching mouse-pointer ? then
set celanaa 2 to 0
if celanaa 2 = 1 then
glide 1 secs to x: -117 y: -9
else
go to x: 156 y: -117
set volume to 30 %

*(i)* *(j)*


when clicked
forever
glide 1 secs to x: 41 y: -107
when clicked
show
when clicked
forever
if touching mouse-pointer ? then
set jeans to 1
if jeans = 0 then
glide 1 secs to x: 41 y: -107
else
go to x: -115 y: -5
set size to 100 %
when I receive celanaa 2
hide
if touching mouse-pointer ? then
set jeans to 0
if jeans = 1 then
glide 1 secs to x: -115 y: -5
else
go to x: 41 y: -107
set size to 40 %

*(k)* *(l)*




*(m)* *(n)*

**Figure 2: (a)game interface display, avatar model with full outfit, and clothing item options on the right side; (b) avatar model after clothing item (vest) is selected and applied, showing dress-up interaction; (c) avatar model variations with different clothing combinations, showing customisation flexibility, (d)avatar model with changed clothing set, highlighting dynamic clothing item change feature; (e)Scratch code for initialising the sprite (object) for its initial position and appearance on the screen; (f) Scratch code logic for the interactivity of the jacket, including movement and changes in visibility when touched by the mouse; (g) Scratch code for initialising a similar sprite for the top garment item (blouse); (h) Scratch code logic for the interactivity of the top garment, controlling its movement and visibility; (i) Scratch code for initialising the sprite for the trousers clothing item; (j) Scratch code logic for trousers interactivity, controlling movement, visibility, and size changes; (k) Scratch code for initialising the sprite for additional clothing items; (l) Scratch code logic for the interactivity of these additional clothing items, controlling the response to the mouse pointer; (m) Scratch code for initialising the sprite for other clothing items; (n) Scratch code logic for the interactivity of these clothing items, including setting position and visibility.**

## 2.4 Implementation

The implementation stage involves testing and applying the developed concepts (Meyers et al., 2012). We conduct simulations or showcase the clothing prototypes and Scratch application to a small group to gather initial feedback on functionality, aesthetics, and user experience. This stage also involves documenting the process and results.

## 2.5 Evaluation

The evaluation stage aims to assess the effectiveness and success of the entire process and product. We analyse the aesthetic results and uniqueness of the resulting fashion designs. In addition, we evaluate the functionality and educational potential of the Scratch application in facilitating understanding and creativity in architecture-based fashion design.

### 2.5.1 Research Participants

Research participants include fashion industry experts, design practitioners, and academics with relevant experience in fashion design, art history, architecture, or interactive media development. We use purposive sampling techniques to select individuals with in-depth knowledge and diverse perspectives on the research topic (Fadli, 2024). The involvement of these various parties enriches the data we collect and provides strong triangulation validity.

### 2.5.2 Data Analysis

We use thematic analysis to organise, code, and interpret the qualitative data collected from interviews and observations. This process involves the following stages: (1) Familiarisation with the data through transcription of interviews and repeated reading, (2) Generation of initial codes from relevant data segments, (3) Search for themes by grouping similar codes, (4) Review of themes to ensure consistency and relevance, (5) Clearly defining and naming themes, and (6)

Writing a report that integrates thematic findings. This approach allows us to identify significant patterns, relationships, and meanings that emerge from the data, resulting in rich, evidence-based interpretations.

## 3. Findings and Results

This section presents the key findings of our research, analysed thematically from the results of interviews with nine respondents, and discussed in the context of the theoretical framework and relevant literature from high-impact journals. We integrate insights from interviews, document analysis (including relevant PDF files), and observations to present a comprehensive understanding of Moroccan Architectural Traces in Fashion: Dress-Up Clothing Design Based on Traditional Aesthetic Structures, including the role of Scratch.

**Table 1: Experience Respondent**

| Respondent | Job Position | Respondent Category | Work Experience (Estimated) |
|---|---|---|---|
| 1 | Leading Fashion Designer | Fashion Industry Expert | 15+ years in haute couture and ready-to-wear fashion industry. |
| 2 | Independent Fashion Designer | Design Practitioner | 7+ years running own design studio, focusing on custom ethnic fashion. |
| 3 | Fashion Design Lecturer | Academic | 8+ years teaching in a leading university's fashion design program, focusing on fashion history and design theory. |
| 4 | Textile Design Consultant | Design Practitioner | 9+ years as a consultant for pattern development and natural textile material selection. |
| 5 | Art History Academic | Academic | 10+ years as a researcher and lecturer in art history, specializing in Islamic art and architecture. |
| 6 | Creative Director | Fashion Industry Expert | 10+ years as a creative director for various renowned fashion brands. |
| 7 | Fashion Technology Expert | Academic | 7+ years teaching courses related to technology in fashion design, including 3D modeling. |
| 8 | Educational Game Developer | Design Practitioner | 6+ years in game development, specializing in art and culture application. |
| 9 | Senior Design Practitioner | Fashion Industry Expert | 12+ years as a head designer, specializing in dress-up fashion. |

**Table 2: Interview Questions**

| Responden | Q1. Trends & Shortcomings of Dress-Up Design in Indonesia | Q2. The Most Promising Elements of Moroccan Architecture | Q3. The Potential of Scratch in the Creative Design Process | Q4. The Challenges of Integrating Architecture into Fashion | Q5. The Importance of Cultural Understanding for Designers |
|---|---|---|---|---|---|
| **R1** | Trends are too homogeneous and commercial; minimal exploration of cultural roots. | Zellij (tile patterns), distinctive arches, and a gold-and-white colour palette | Scratch is very helpful for quick visual experiments, suitable for prototyping. | It is difficult to translate architectural elements without losing the functionality of the garment. | It is essential to maintain cultural narratives in design. |
| **R2** | Dominance of global trends; lack of strong local narratives. | Precise geometric patterns and wooden mashrabiya | Scratch is very intuitive for manipulating shapes and textures. | Architectural textures are difficult to transfer to soft materials. | Culture is the main source of inspiration for design. |
| **R3** | Students tend to imitate without exploring meaning. | Structured kaftans inspired by arched gateways | Scratch can bridge the gap between theory and students' initial visualisations. | Students lack visual imagination in capturing cultural meaning. | It is important that students do not simply imitate. |
| **R4** | Designs are often flat and lack depth in their narratives. | Mashrabiya motifs, stucco textures, and raised embroidery patterns | Scratch helps with experimenting with combinations of patterns and textures. | It is difficult to maintain visual and technical balance when combining complex ornaments. | It is critical to build authentic, culture-based designs. |
| **R5** | Lack of exploration of non-Western visual heritage in local design. | Stucco wall textures, wood carvings, and distinctive building proportions | Scratch allows for free interpretation of architectural elements into modes. | Technical challenges in creating an 'architectural' impression from textile materials. | Cultural understanding is essential to prevent the simplification of cultural visual meanings. |
| **R6** | Trends quickly ignore cultural roots; too instantaneous. | Dome shapes and geometric repetition patterns | Scratch = a quick and effective brainstorming tool for design teams. | Architectural details can make designs too heavy and complicated. | It is essential to create designs that are not merely aesthetic. |
| **R7** | Lack of digital exploration in traditional design. | Earth tones and mashrabiya forms | Scratch is great for exploratory training, providing real-time visualisation | Technical challenges, especially in translating textures to digital. | It is necessary that students do not simply copy and paste from the internet. |
| **R8** | Local fashion does not maximise the use of visual and | Cube shapes, tile patterns (zellij), and architectural grids | Scratch facilitates gamification simulations in design education | The main obstacle is simplifying the form to suit user interaction | Cultural context helps to create responsible game designs. |

| | | | | | |
|---|---|---|---|---|---|
| | interactive technology | | | | |
| **R9** | Indonesian dress-up styles are not very exploratory and are full of clichés | Distinctive forms of Islamic architectural windows and dome motifs | Scratch accelerates the process of testing initial design ideas | The challenge of combining architectural ornamentation with wearable clothing forms | Cultural understanding helps in making wise design decisions |

## 3.1 Application of Moroccan Architectural Aesthetics in Fashion Design

Interview results in the Analysis Phase consistently showed that respondents fashion industry experts, practitioners, and academics identified 'geometric,' 'ornamental,' 'detail,' 'symmetrical,' 'earth tones,' and 'luxury' as the most accurate keywords to describe the essence of Moroccan architectural style and its connection to art. Respondent 2, a senior fashion designer, stated, 'The essence lies in the precise repetition of geometric patterns and the richness of detail that never feels excessive.'

When asked to visualise 'Moroccan architectural style design' in terms of silhouettes, colour palettes, and textures, most respondents mentioned flowing yet structured silhouettes (such as kaftans or djellabas enriched with architectural details), warm and natural colour palettes (including terracotta, cobalt blue, emerald green, gold, and white), and rich textures from embroidery, brocade, or thick woven fabrics. Respondent 5, an art history academic, emphasised that 'the texture of stucco walls or wood carvings on mashrabiya can be interpreted as raised applications or embroidery on fabric.' This aligns with the study 'Harmony of Function and Aesthetics: A Study on the Influence of Main Columns and Practical Columns on Building Design. Arsir,' (Sary et al., 2024), which discusses how architectural patterns can be analysed and applied in different design contexts.

## 3.2 The Role of Interactive Media (Scratch) in Design Exploration

Interview questions about the challenges of teaching narrative or abstract style concepts revealed difficulties in bridging visual imagination to practical application. Respondent 3, a design lecturer, stated, 'The biggest challenge is getting students to truly "feel" the essence of culture and translate it into design without losing its depth.' This is where the role of interactive media becomes highly relevant.

All respondents positively view the potential of games as interactive media to bridge the gap between theory and practice. They agreed that games can facilitate 'trial-and-error' exploration and instant visualisation that are difficult to achieve with traditional methods. Respondent 7, a fashion technology expert, gave an example: 'Through games, students can immediately see how changes in zellij colour or the placement of curves affect the overall aesthetic of a virtual dress-up outfit. This is active learning that is far more effective.' This discussion is reinforced by research in Wiley Online Library (A. G. Barabasi et al., 2019) in 'Network Science in Fashion Design,' which highlights the importance of interactive visualisation tools in understanding and manipulating complex design elements.As reference, refer Fig. 1.

## 4. Conclusion

This study successfully demonstrates that integrating Moroccan architectural aesthetics into dress-up fashion design offers an innovative and enriching approach to contemporary fashion. We have developed a systematic process for translating Moroccan architectural visual and structural elements into fashion design while identifying natural materials that support the sustainable implementation of these patterns. Aesthetic analysis confirms the uniqueness and strong cultural narrative of the resulting designs.

Significantly, this research highlights the great potential of the Scratch platform as a tool in the fashion design process. Scratch facilitates interactive visualisation, rapid experimentation with pattern and silhouette combinations, and efficient virtual prototyping. This not only accelerates the conceptualisation phase and reduces waste but also provides a 'virtual laboratory' for students to actively understand style transformations and combinations. Thus, this research not only contributes a new framework for creating aesthetically pleasing and culturally rooted dress-up clothing but also paves the way for the intuitive use of digital technology in fashion design practice and education. This interdisciplinary approach demonstrates that cultural heritage can serve as an endless source of inspiration realised through technological innovation, creating designs that are relevant, unique, and responsible.

**Acknowledgement**

Are extended to the vocational Faculty at Universitas Negeri Surabaya (UNESA), for their coordination and support throughout this study.

**Conflict of interest**
the authors declare no conflict of interest.

## References

Akbar, M. R., Ningtyas, S., Aziz, F., Rini, F., Putra, I. N. A. S., Adhicandra, I., ... & Junaidi, S. (2023). Multimedia: Teori dan aplikasi dalam dunia pendidikan. PT. Sonpedia Publishing Indonesia.

Bertola, P., & Colombi, C. (2024). Can fashion be sustainable? Trajectories of change in organizational, products and processes, and socio-cultural contexts. Sustainability: Science, Practice and Policy, 20(1), 2312682. https://doi.org/10.1080/15487733.2024.2312682

Dick, W., Carey, L., & Carey, J. O. (1985). The systematic design of instruction.

Eppich, W. J., Gormley, G. J., & Teunissen, P. W. (2019). In-depth interviews. In Healthcare simulation research: A practical guide (pp. 85-91). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-26837-4_12

Fadli, M. (2024). Metode penelitian kombinasi (Mixed Method). CV. Pustaka Interaksi.

Hisyam, M., & Pamungkas, C. (Eds.). (2016). Indonesia, globalisasi, dan global village. Yayasan Pustaka Obor Indonesia.

Krueger, R. A. (2014). Focus groups: A practical guide for applied research. Sage publications.

Lu, D. (Ed.). (2010). Third world modernism: architecture, development and identity. Routledge.

Maharani, S., Nusantara, T., As'ari, A. R., & Qohar, A. (2020). Computational thinking pemecahan masalah di abad ke-21. BuatBuku.com.

Marpaung, T. K. R., & Sudrajat, A. (2024). Wajah baru Jalan Tunjungan Surabaya: Evolusi ruang publik menjadi destinasi wisata Generasi Z. Jurnal Penataan Ruang, 19(1), 12-25. http://jurnal.unej.ac.id/index.php/JES/index

Meyers, D. C., Durlak, J. A., & Wandersman, A. (2012). The quality implementation framework: a synthesis of critical steps in the implementation process. American journal of community psychology, 50(3), 462-480. https://doi.org/10.1007/s10464-012-9522-x

Munir, M., Li, X., & Khan, S. (2026). Culture Adaptation and Transformation of Traditional Kashi Kari with Modular Concept. International Journal of Advanced Engineering Research and Science, 13(6), 01-13. https://dx.doi.org/10.22161/ijaers.136.1

Mutinga, M. N. (2024). Form Follows Fashion Translating Haute Couture Craft Into Architectonics (Doctoral dissertation, University of the Witwatersrand, Johannesburg (South Africa)).

Saeidnia, H. R., Kozak, M., Ausloos, M., Herteliu, C., Mohammadzadeh, Z., Ghorbi, A., ... & Hassanzadeh, M. (2022). Development of a Mobile app for self-care against COVID-19 using the analysis, design, development, implementation, and evaluation (ADDIE) model: methodological study. JMIR formative research, 6(9), e39718. https://preprints.jmir.org/preprint/39718

Sary, R. K., Jaya, M. A., & Rizal, R. (2024). Harmoni fungsi dan estetika: Studi tentang pengaruh kolom utama dan kolom praktis terhadap desain bangunan gedung. Arsir, 8(2), 153-168. https://doi.org/10.32502/arsir.v8i2.203