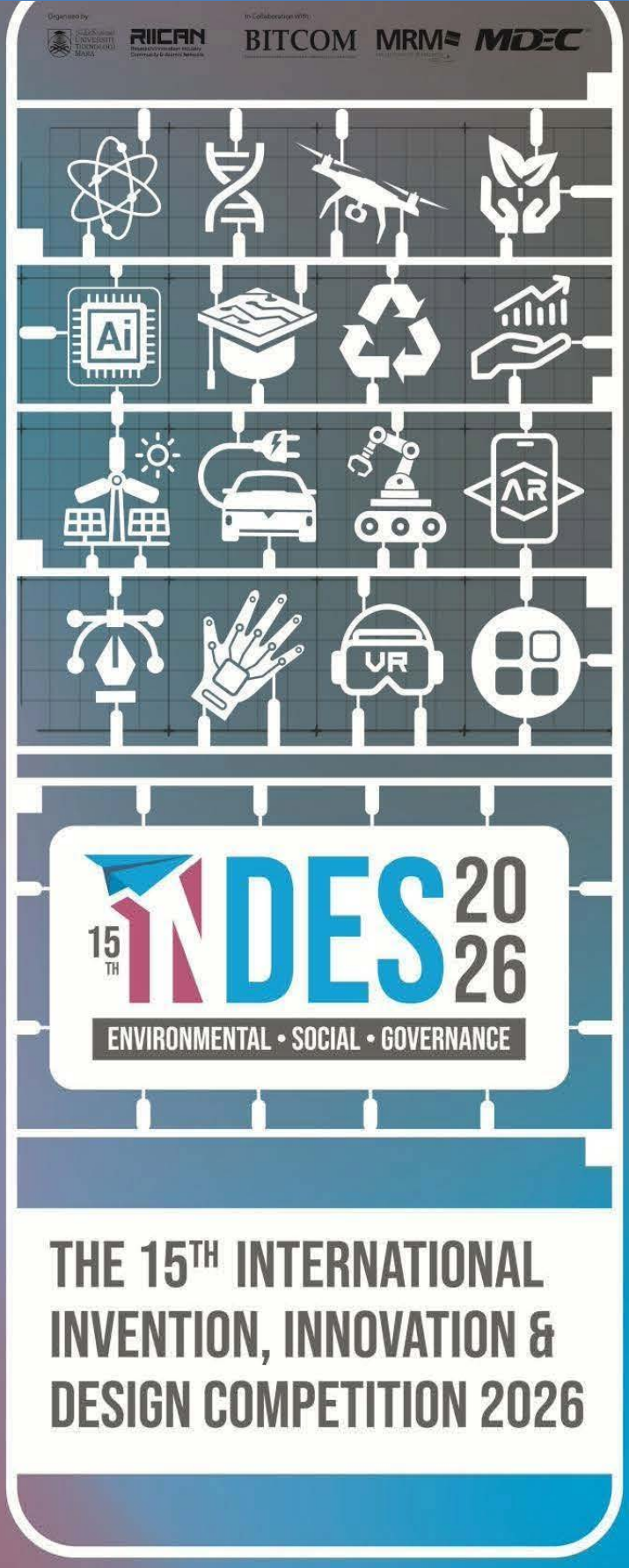


E-BOOK OF

EXTENDED ABSTRACT

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THE 15th INTERNATIONAL
INVENTION, INNOVATION &
DESIGN COMPETITION 2026

Organized by:
Office of Research, Industry,
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DIGITAL THREADS IN FASHION DESIGN EDUCATION WITH E-PORTFOLIO

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ABSTRACT

The integration of digital tools in fashion education has significantly transformed teaching and learning practices, with e-portfolios emerging as an effective medium to showcase and assess student work. This study investigated the application of e-portfolios in fashion design education, focusing on their role in fostering creativity, reflective learning, and personalised assessment. The objectives were to evaluate how e-portfolios enhanced students' digital competencies, supported iterative learning processes, and facilitated more holistic evaluation compared to traditional methods. The methodology integrated classroom observations involving a group of undergraduate fashion design students and analysis of student e-portfolios over a semester. Findings indicated that e-portfolios not only provided a structured platform for students to document progress and experimentation but also encouraged self-reflection and peer feedback, thereby deepening learning experiences. Overall, the application of e-portfolios in fashion design education represents a pedagogical innovation that aligns with industry-relevant practices and prepares students for professional digital portfolios. This study contributes to fashion education scholarship by emphasising the significance of digital learning tools in cultivating reflective, creative, and future-ready designers.

Keywords: e-portfolio, digital learning, fashion design education

1. INTRODUCTION

The rapid advancement of digital technology has significantly influenced educational practices across creative disciplines, including fashion design. In particular, digital fashion design has become an essential skill for fashion designers, defined as the overlapping domains of fashion and communication technologies through virtual creation, production, and presentation via computer-generated design (RADULESCU et al., 2023). Traditional methods remain effective in maintaining discipline and conserving knowledge. However, the limitations may not cater to diverse learning styles and abilities, which can reduce creativity and student engagement through passive learning. To bridge this gap, educators are exploring the use of digital tools such as interactive whiteboards, online learning platforms, multimedia content, and educational apps, offering students the opportunity to broaden their perspectives and learning experiences (Hanspal et al., 2024).

E-portfolios, defined as digital repositories of learners' achievements and reflections, serve as both pedagogical and assessment tools. The system today refers to online learning environments that are built using web applications to support the creation and sharing of self-authored content and interactions among participants. Moreover, e-portfolios offer flexible functionalities for managing storage, sharing artworks, planning, monitoring, and self-reflection, fostering a more student-centred approach to education (Yang et al., 2023). Recent studies further highlight their value in enhancing creativity and imagination in design-related disciplines, demonstrating how e-portfolios can support experiential learning and artistic expression. Despite these advantages, the use of technology in fashion design is still limited compared to other disciplines. This leaves a critical gap in adopting digital tools to emphasize the potential of creative thinking and enhance technical skills in their curricula (An & Park, 2026). This study aims to contribute new insights into digital pedagogy in fashion design education, providing educators and institutions with practical strategies to align teaching practices with industry-relevant, technology-driven approaches.

2. METHODOLOGY

This study uses a qualitative method to explore the application of e-portfolios in fashion design education. The research was conducted in a higher education institution that consists of students from a fashion design programme. A purposive sampling method was applied to ensure that participants had direct experience with the use of e-portfolios via the Google Sites platform in their coursework. Firstly, classroom observations were carried out weekly to document how e-portfolios were integrated into learning activities and how students engaged with the platform. Secondly, semi-structured interviews with students and instructors provided rich qualitative insights into perceptions, challenges, and benefits of e-portfolio use. Finally, document analysis of selected student e-portfolios was conducted to evaluate how creativity, reflection, and professional readiness were demonstrated in practice. Collectively, these methods allowed for data triangulation, strengthening the reliability and validity of the findings.

2. FINDINGS

The findings indicate that the application of e-portfolios significantly enhanced student creativity and engagement, as learners were encouraged to experiment with diverse digital tools and continuously refine their learning processes, fostering originality and sustained involvement in learning. At the same time, e-portfolios promoted reflective learning and self-assessment by enabling students to critically evaluate their work across different stages, helping them identify strengths, address weaknesses, and monitor their personal development, thereby strengthening their metacognitive skills. From an instructional perspective, e-portfolios facilitated more holistic assessment and feedback, allowing educators to evaluate not only final outputs but also the entire creative process, including experimentation, revision, and reflection, while also supporting more timely and interactive communication. Furthermore, the use of e-portfolios contributed to students' professional preparedness by enabling them to curate digital portfolios aligned with industry standards, enhancing their readiness for internships, employment, or further studies. However, despite these benefits, several challenges were identified, including varying levels of digital literacy among students and the need for more structured guidance in content curation, highlighting the importance of providing adequate training and institutional support to ensure effective implementation.

Table 1 Findings on the Usage of E-Portfolio in Fashion Design Education

Key Finding	Description	Implication
Creativity Development	Enhanced students' creativity by experimentation with digital tools and continuous refinement of design work.	Supports innovative learning and sustained student engagement in digital environments.
Reflective Learning	Enabled students to evaluate their design processes and identify personal development.	Promotes metacognitive skills and self-directed learning.
Assessment Feedback	Allowed instructors to assess both the final product and the creative processes.	Enhances assessment practices by integrating formative and summative evaluation.
Professional Preparedness	Developed industry-relevant portfolio skills with professional standards to support career readiness.	Bridges academic learning with professional practice and employability.
Challenges	Some students faced difficulties with digital literacy and required structured guidance.	Indicates the need for digital literacy training and clear instructional support.

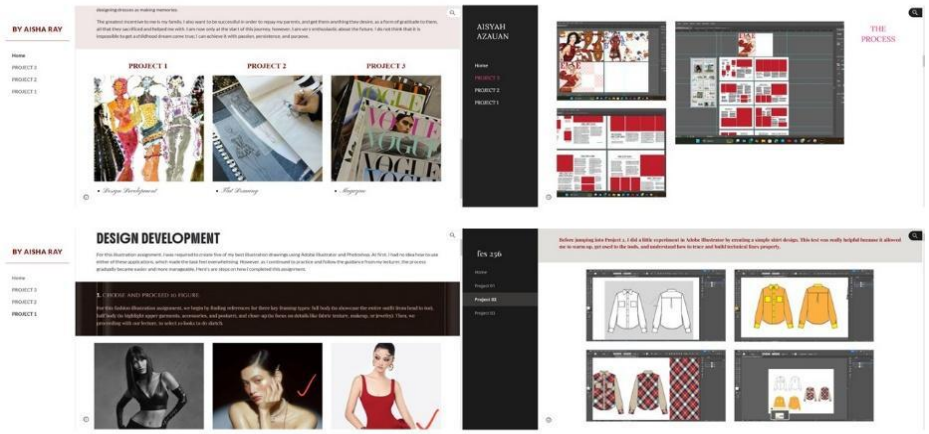


Figure 1 Sample of students' e-portfolios via Google Sites

4. CONCLUSION

This study examined the application of e-portfolios in fashion design education, highlighting their impact on student creativity, reflective learning, assessment, and professional preparedness. The findings demonstrate that e-portfolios enhance student engagement by encouraging experimentation with digital tools and continuous refinement of learning processes, while also fostering reflective learning through critical analysis of creative decisions and self-assessment of progress. From an instructional perspective, e-portfolios support holistic assessment by providing insight into both the creative process and final outcomes, alongside more efficient and interactive feedback mechanisms. Furthermore, their alignment with industry practices strengthens students' readiness for professional contexts where digital portfolios are essential. The implications extend beyond fashion education, suggesting that e-portfolios can serve as an effective pedagogical tool across creative disciplines by integrating creativity, reflection, and assessment within a single platform. However, challenges such as varying levels of digital literacy and the need for structured guidance in content curation highlight the importance of institutional support and targeted training. Future research should consider assessing long-term impacts on student development, as well as comparative studies across disciplines, including the integration of emerging technologies such as artificial intelligence and interactive media. Overall, this study contributes to the advancement of digital pedagogy by demonstrating that e-portfolios function not only as assessment tools but as transformative learning environments that cultivate reflective, creative, and industry-ready designers.

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