

Fashion Design Learning System: A Comprehensive Evaluation of Apparel Design Programs in Education and Training Institutions

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ABSTRACT

The mismatch between graduate skills and labor market needs remains a challenge in education and training due to limited industry involvement in curriculum design. LPP Ariyanti's Fashion Design Training Program stands out by producing work-ready graduates capable of entrepreneurship in fashion design. This study evaluates the program's learning system to understand its effectiveness. A qualitative descriptive approach was used, involving observation (checklist), interviews (guide), and document analysis (sheet). A purposive sampling method selected three informants: a marketing communication representative, a fashion instructor, and a training participant. Data analysis followed four steps: collection, reduction, presentation, and conclusion drawing. The program succeeded across all evaluated aspects. Raw inputs revealed participants with diverse educational backgrounds and ages, yet uniformly productive. Instrumental inputs included skilled instructors, a standards-aligned curriculum, and sufficient infrastructure. Environmental inputs involved engagement in events and institutional partnerships with government and industry. The process incorporated blended, participatory, and project-based learning, complemented by effective formative and summative evaluations. Outputs demonstrated improvements in participants' cognitive, affective, and psychomotor abilities. Outcomes highlighted increased graduate incomes, though few participants have yet started their own businesses. The comprehensive design of LPP Ariyanti's training program, integrating industry partnerships, effective teaching methods, and robust infrastructure, contributes to its success. However, further support is needed to encourage entrepreneurship among graduates. The Fashion Design Training Program at LPP Ariyanti effectively equips participants with skills for employment and entrepreneurship, offering a model for industry-aligned education.

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1. INTRODUCTION

Education is the main foundation in the development of human resources that are superior and able to compete in the era of globalization. One of the areas that plays an important role is fashion design education, which supports the growth of the creative industry, especially fashion, has economic, cultural, and social impacts (Singh, 2021). Fashion education not only develops talent and skills, but also fosters innovation, creativity that drives the development of the industry (Cheng, 2018; Khurana et al., 2017); fostering entrepreneurial skills, especially among youth, which can reduce unemployment and stimulate economic growth (Adebisi & Abiodun, 2022). However, fashion education still faces challenges in bridging the gap between the skills taught and industry needs, which are often not aligned with job market demands (Apriliana et al., 2022; Guiland, 2018). Many educational institutions have not been able to design a curriculum that reflects the changing reality of the fashion industry. As a result, graduates find it difficult to find jobs that match their educational background and skills because their abilities are not relevant to the job market (Chaudhry et al., 2022). One of the causes is that the curriculum is not aligned with the real needs of the labour market (Karakolis et al., 2022); lack of involvement and collaboration of the industrial sector in designing education and training curricula (Gooptu et al., 2023). Collaboration between educational institutions, industry, and government can improve the curriculum that is relevant to real work needs (Mustafa et al., 2022; Schüller, 2020).

Fashion education must also balance technical skills, such as sewing and pattern design, with non-technical skills, such as adapting to new technologies, time management, and problem-solving (Andrea Quam et al., 2022; Arora et al., 2024; Leiby, 2021). The development of non-technical skills is essential to produce graduates who are ready to lead and innovate in the dynamic fashion industry (Prineas et al., 2021). In the digital era, the use of technology in the learning process is very important. The use of technologies such as CAD and 3D simulation can develop skills that are in line with the demands of modern industry (Chen & Tong, 2024; Radulescu et al., 2023). The Eduverse system offers an immersive online learning experience, which can significantly increase student engagement and satisfaction in fashion education (Manocha, 2024). However, not all educational institutions have access to or the ability to integrate technology effectively in teaching, including LPP Ariyanti in Bandung, which is still limited in the application of this technology. This can be a barrier for learners in developing skills relevant to the needs of modern industry.

Training institutions are part of the non-formal sector that is very active and plays a role in providing knowledge and attitudes to the community (Simándi, 2023). Skills training at LPP is provided to people who need knowledge, skills, life skills (Wayangkau et al., 2022), and attitudes to develop themselves, continue higher education, and develop professions, as well as help them work in every business unit and entrepreneurship (Mukhlisa, 2022; Pamungkas & Ningrum, 2021). The Ariyanti Education and Training Institute (LPP) in Bandung is one of the institutions that plays an important role in responding to the challenges of industry and society's needs. LPP Ariyanti focuses on competency-based skills education, which is considered the best solution to reduce unemployment. The quality of Ariyanti's alumni is unquestionable, with more than 95 thousand graduates working in major companies across Indonesia and abroad. LPP Ariyanti also teaches students about entrepreneurship so that they can compete for jobs and create jobs, at least for themselves and the surrounding environment. A number of Ariyanti alumni have become successful entrepreneurs, such as opening salons, boutiques, cake shops, and so on. For example, the owner of Roemah Snack Mekarsari, the owner of Narda Catering, the owner of G&G Skin Care Beauty Clinic, the owner of House of Raddysa Salon, Spa, Butiq & Wedding Gallery Cimahi, Van's Salon Wedding Galery & Spa, Anis Salon, Charoline Salon, Uki Salon, and many other salons spread in various regions throughout Indonesia (LPP Ariyanti Documents, 2022).

Along with the growth of the fashion industry in Indonesia, the institute has become one of the main references for aspiring fashion designers who want to acquire the education and skills needed for a career in the industry. Fashion design training programs are designed to equip students with the technical knowledge, practical skills, and creative abilities essential to the highly competitive fashion world. However, the program faces challenges in adopting digital technology and other modern skills needed in

the workplace. The curriculum used still focuses on traditional aspects such as basic sewing skills, while digital skills and understanding of global trends are still lacking. This condition creates a gap between graduate competencies and the real needs of the fashion industry (Wardaya et al., 2024).

This study focuses on the evaluation of the learning system in the Fashion Design Training Program at LPP Ariyanti to equip students with skills relevant to the fashion industry. Using a qualitative descriptive approach, this study collects data through observation, interviews, and document analysis to analyse the effectiveness of the curriculum, teaching methods, and their impact on graduates' readiness to enter the workforce or become entrepreneurs. By evaluating the suitability between education and industry demands, this study seeks to provide in-depth insight into the role of non-formal educational institutions in responding to challenges in the field of fashion design.

2. METHODS

This research is qualitative descriptive in nature, which is a method that clearly describes phenomena in the field based on reality. According to Mukminin & McMahon (2013), qualitative research aims to report information by describing participants' experiences, the researcher's connection with the subject, and the research topics explored. Data collection includes material on the fashion design learning system (both raw input and instrumental input, as well as environmental input), the learning process, and outputs and outcomes. This research was conducted at the Ariyanti Education and Training Institute in Bandung using purposive sampling, selecting three key informants, namely marketing communication, fashion instructors, and training participants, to ensure that the information obtained includes perspectives that are relevant to the research topic.

The data collection instruments consist of three main methods. First, observation using a checklist, which allows researchers to obtain data related to interactions between instructors and participants, the use of facilities and infrastructure, and the learning methods applied. With this method, researchers can describe the dynamics of the learning process without direct intervention. Second, interviews through a guide that is prepared to explore the experiences and views of various parties, including interviews with management to understand the marketing strategy and position of the program in the training industry, as well as with instructors and participants to gain perspectives on the effectiveness of teaching methods, skills mastered, and the impact of training on work readiness or independent business development. Third, documentation includes examining documents such as curriculum, teaching materials, learning outcome reports, and participant attendance records. Analysis of these documents helps in evaluating the suitability of the material to competency standards and identifying areas that require further development.

The data obtained were analyzed using the Miles and Huberman model, which includes several stages. In the data collection stage, information from interviews, observations, and documents was recorded in field notes consisting of descriptive and reflective. Data reduction was carried out by focussing on data relevant to the research objectives and grouping findings into categories such as learning effectiveness, participant engagement, or use of technology. Data presentation was then carried out in the form of descriptions, graphs, tables, or charts to facilitate drawing conclusions. Finally, researchers drew conclusions by interpreting the data and identifying patterns or insights that emerged, which were temporary until additional supporting evidence was found (Miles et al., 2014).

The validity of the data is tested using various methods to ensure the validity and reliability of the findings. The credibility test, or internal validity, is carried out through data triangulation, extended observation, discussion with colleagues, negative case analysis, and member checks. The transferability test or external validity is achieved by providing a rich and detailed description of the research context and selecting key informants who have in-depth knowledge of the topic. To ensure dependability and confirmability, this study uses audits and testing of results that can be relied on and replicated by other researchers, so that objectivity can be maintained throughout the research process.

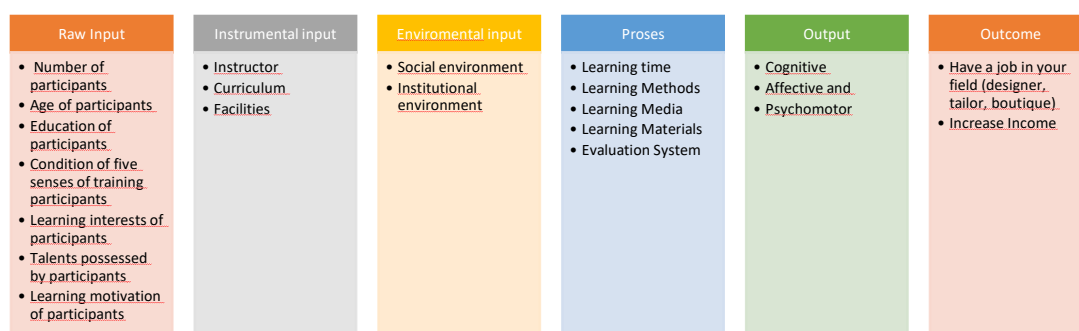


Figure 1. Fashion Design Learning System Model

3. FINDINGS AND DISCUSSION

3.1 Raw Input Components of the Fashion Training Program

Based on research conducted at LPP Ariyanti, the raw input components of the fashion training program for the 2022-2023 school year included 20 female participants aged 15 to 45 years. Their educational backgrounds ranged from vocational school graduates to undergraduates. Participants exhibited strong cognitive abilities, particularly in understanding fashion, pattern making, women's fashion knowledge, fabric decoration, fashion model types, and fashion business management. All participants were in good physical health, enabling them to actively engage in the training. Attendance rates were notably high, ranging from 80% to 100% at each session, reflecting strong interest in the program. While not all participants had prior talent in fashion design, the intensive training significantly enhanced their understanding and skills. Participants' motivations varied, including aspirations to become fashion designers, open boutiques, or support their families. This motivation served as a driving force for many participants to pursue advanced levels of training.

These findings demonstrate that the fashion training program at LPP Ariyanti effectively attracts participants from diverse backgrounds, ages, and educational levels, highlighting its inclusiveness and relevance. Non-formal education programs, including training initiatives, aim to accommodate all segments of society, transcending age, gender, socio-economic status, and educational history (Arabaci & Özkan, 2023; Vaculíková et al., 2023; Wahyuni, 2021). The participants' high levels of motivation, interest, and cognitive abilities serve as vital assets for the program's success. Factors such as age, experience, competence, talent, interest, and motivation are crucial considerations for non-formal learners (Allaste et al., 2022; Peltoniemi et al., 2023), whose diverse characteristics differ from the more homogeneous profiles of formal education students (Herman et al., 2022).

The program's success extends beyond participants' initial talent, relying heavily on effective teaching methods, such as demonstration techniques, which have been shown to significantly enhance students' knowledge, understanding, and sewing skills (Kulsum, 2018). Additionally, a strong interest in the subject matter boosts readiness to learn, which correlates with high attendance rates, as active and engaged participants are more likely to attend regularly (Ernawati, 2022). The participants' strong motivation to pursue professional careers in the fashion industry underscores the program's ability to inspire attractive career prospects (Uriyo & Sarkar, 2024).

The high attendance rates and cognitive performance of the participants reflect the program's alignment with their needs and its overall effectiveness. Beyond imparting technical skills, the training program also creates pathways for promising career opportunities, preparing participants for roles as professionals in the fashion industry. While challenges remain in ensuring that all participants achieve the desired level of competence, the program demonstrates its potential to foster future professionals and support career development in the fashion sector.

3.2 Instrumental Input Component of the Fashion Training Program

The instrumental input component of the fashion training program at LPP Ariyanti is supported by highly qualified instructors. Currently, there are two instructors, Mr. R and Mr. L; however, due to Mr. L's illness, Mr. R leads the training independently. Mr. R holds a Bachelor's degree in Fashion Education and has extensive teaching experience, ensuring the delivery of high-quality instruction. The curriculum follows the 2008 Indonesian National Work Competency Standards (SKKNI) for fashion, comprising 20 core competency units divided into two levels of training: 9 modules for level II and 11 modules for level III.

The facilities at LPP Ariyanti are well-equipped, including modern sewing machines, mannequins, fabric cutting tools, and standard-compliant classrooms, providing a conducive learning environment. However, the integration of digital technologies in the fashion training program remains an area for improvement. Tools such as Adobe Illustrator, CorelDraw, and CAD technology, which are essential for contemporary fashion design education, are not yet included in the program. Incorporating these technologies could enhance the learning experience and better prepare participants for the demands of the modern fashion industry.

This finding shows that LPP Ariyanti has provided good instrumental input components in supporting the fashion training program. The instructor's qualifications are in accordance with the field of expertise, so that training participants receive quality education. The role of instructors is very important in improving the professionalism of trainees and improving the quality of educational services, so they must have appropriate academic qualifications, experience, and continuous training (Muxammadjonovich, 2023). Furthermore, the curriculum has an important role in the education system as a roadmap that directs the learning process and student development (Dvořák, 2023). The implementation of the SKKNI 2008 curriculum creates harmony between the competencies taught in educational and training institutions and the competencies needed by the job market, so that graduates are immediately absorbed and contribute effectively to national economic development (Dadang Kusmayadi et al., 2022; Oloyo, 2019). Instructors with adequate academic qualifications and experience are able to manage classes well, deliver material effectively, and have a comprehensive and relevant curriculum.

Adequate facilities and infrastructure play an important role in creating a conducive learning environment, and training skills in using tools and technology used in the world of work, thus producing competent graduates. Management of educational infrastructure significantly affects student motivation, with well-maintained facilities increasing intrinsic and extrinsic motivation (Agustin et al., 2023). Facilities such as spacious workspaces, modern sewing machines, fabric cutting tools, mannequins, and complete and up-to-date design equipment are essential to support an optimal learning process (Chen et al., 2022). Adequate infrastructure such as textile laboratories, design studios, and material storage facilities also play a key role in providing a comprehensive learning experience (Pangestu et al., 2022). Digital technology for designing clothing with the use of Computer-Aided Design (CAD) in the fashion industry can improve entrepreneurial competency and prepare individuals for independent work in the industry even though digital technology has not been used in the learning process (Marniati & Wibawa, 2020). The instrumental input components provided by LPP Ariyanti are very significant in improving the quality of fashion training programs. The availability of qualified instructors, a curriculum that meets national standards, and adequate facilities contribute to creating competent graduates who are ready to compete in the fashion industry.

3.3 Environmental Input Component of the Fashion Training Program

Research conducted at LPP Ariyanti reveals that the environmental input component of the fashion training program significantly supports the learning process. The social environment around LPP Ariyanti fosters a positive atmosphere, aligning the training with local customs, traditions, and market demands. Participants are provided opportunities to showcase their creations at public events, such as

the Saturday event at D'Botanica Mall in Bandung, where 9 students displayed 27 fashion designs. During the pandemic, the number of fashion exhibitions increased, involving 20 participants and 30 designs. Typically held twice a year, these exhibitions not only enhance the visibility of participants' work but also reinforce community support for the institution.

LPP Ariyanti has established robust partnerships with various government agencies, including the Ministry of Education and Culture, the Ministry of Manpower and Transmigration, the Ministry of Women's Empowerment, the Indonesian National Resilience Institute, the Sumedang Regency Government BKD, BPJS Employment, the Bandung City Education Office, and the BJB Ziebar Bank Cooperative (LPP Ariyanti document, 2022). Furthermore, LPP Ariyanti collaborates with industry partners and other training institutions to ensure the quality and distribution of its graduates. These partnerships also facilitate internship opportunities, enabling participants to gain practical work experience relevant to the fashion industry, further enhancing their professional readiness.

These findings indicate that LPP Ariyanti has provided significant support to the success of the fashion training program. The support of the social environment is facilitated by providing opportunities for participants to showcase their work at public events such as the Saturday Event, which not only motivates participants to produce quality work but also strengthens relationships with the surrounding community (Liberato et al., 2021). Fashion events not only improve individual skills but also contribute to regional economic growth by promoting local designers and increasing textile sales (Agyenim-Boateng et al., 2023).

LPP Ariyanti's partnerships with various government agencies and other institutions enhance the credibility and accreditation of the training program. Collaboration with industry and other training institutions allows graduates to be channelled into a wider workforce, providing better career opportunities (Mustafa et al., 2022). Internship programs facilitated by partnerships provide opportunities to apply participants' knowledge in real-world situations, thereby increasing job readiness after graduation (Zhao & Ko, 2022). The aspirations of the community to have an education that can be directly applied in the world of work are also fulfilled by LPP Ariyanti. The institution supports participants in achieving their aspirations to become professionals in the field of fashion design. The strong and diverse environmental input components at LPP Ariyanti play an important role in supporting the success of the fashion design training program. Social support and institutional partnerships have contributed to the success of the program; graduates have access and job opportunities. The programs offered by the institution are unique in the standards applied and the facilities provided, which increase the competitiveness of this program.

3.4 Process Components of the Fashion Training Program

Based on the results of research conducted at LPP Ariyanti, the process components in the fashion training program are as follows: The training program has a predetermined duration according to the curriculum, namely 88 hours for level II and 184 hours for level III, with a proportion of 30% theory and 70% practice. Learning is carried out for 8.5 months for basic and advanced classes. The methods used include practice, independent assignments, demonstrations, questions and answers, and lectures. The learning media used include mannequins, sewing equipment, infocus, laptops, and other aids, all of which are categorised as very good. The combination of these media provides a holistic learning experience for participants. Evaluation is carried out through the mid-semester exam, final semester exam, and competency tests organised by the Fashion Competency Certification Institute (LSK), which is recognised by the government and industry. Evaluation is carried out in and outside the classroom, including direct observation and assessment of participant assignments. The results of the participants' designs were assessed and exhibited in a "Gelar Karya Busana," which was then followed by a fashion show.

These findings indicate that the learning process at LPP Ariyanti provides flexible learning and is tailored to the needs of the training participants. The clear duration and structure of the learning time provide a stable framework for mastering the material. The proportion of practice time is 70% and

theory is 30% in accordance with the applied curriculum standards. The training program is one of the non-formal educations that offers learning opportunities that can be adapted and are flexible to the specific needs and schedules of students (Mustangin et al., 2021). The three stages of the fashion learning process are introduction to tools and materials, pattern making, and sewing with a machine. effective teaching methods, and facilities that support an optimal learning process (Fradila & Sunarti, 2022). Interactive and participatory teaching methods, such as live demonstrations, hands-on practice, group discussions, and the use of visual aids, are essential in supporting fashion training learning (Gasnas et al., 2022; Nechipor et al., 2023). The use of teaching aids such as mannequins, video tutorials, and infocus enriches the learning process and helps participants understand concepts more deeply and applicatively. Effective learning relies heavily on the use of appropriate learning media to improve understanding and efficiency (Hasanah Lubis et al., 2023). Video tutorials can show the sewing process step-by-step; participants can observe carefully and follow easily (Hadijah et al., 2022). Interactive videos enhance student learning outcomes in Fashion Technology courses (Sholikhah et al., 2019). This method supports various learning styles, both visual, auditory, and kinaesthetic, so that learning is more inclusive.

A comprehensive and ongoing evaluation approach ensures that participants receive consistent feedback throughout the program. Evaluation through UTS and UAS: self-assessment instruments were developed to evaluate students' character during fashion design practicum, with a focus on honesty, discipline, and responsibility (Budiasuti et al., 2023), plus a competency test recognised by the industry. Participants who successfully pass the LSK exam will receive a nationally recognised competency certificate (Horiuchi et al., 2007). This certificate is not only proof of the skills and knowledge possessed but also opens up opportunities for graduates to obtain jobs that are in accordance with their field of expertise (Zhebago et al., 2022), ensuring that individuals meet the standards required for competency certification (Novaliendry et al., 2023). The "Gelar Karya Busana and fashion show as part of the final evaluation serve as an assessment tool and platform for participants to demonstrate their abilities to the public, increase self-confidence, and provide real experience in the industry. The process components at LPP Ariyanti are well-arranged; participants not only receive comprehensive education but are also ready to enter the workforce with the skills needed.

3.5 Output Component of the Fashion Training Program

Research conducted at LPP Ariyanti revealed significant improvements in the output component of the fashion training program across three key areas: cognitive, psychomotor, and affective abilities. Participants demonstrated substantial gains in knowledge, including fashion design, pattern-making techniques, sewing methods, textile motifs, fashion aesthetics and ethics, and fashion business management. Cognitive abilities, particularly in understanding theoretical concepts and foundational principles of fashion, were rated as excellent.

In terms of psychomotor skills, participants developed proficiency in practical tasks such as selecting clothing that aligns with ethical and aesthetic standards, creating patterns, sewing, and finishing garments with high-quality results. Their hands-on skills showed exceptional improvement. Additionally, participants exhibited strong affective abilities, reflected in positive attitudes like accuracy, responsibility, high motivation, and confidence in designing clothing. They also demonstrated creativity, independence, and accountability, highlighting their ability to effectively express their ideas and uphold high professional standards in the field of fashion.

These findings indicate that the training output at LPP Ariyanti provides cognitive, affective, and psychomotor improvements for participants in the fashion design program. The results of a training program can be evaluated through improvements in participants' skills, attitudes, and knowledge (Fu et al., 2023). The increase in participants' knowledge such as design, pattern techniques, and aesthetics shows that the training program is successful in providing a strong foundation. Mastery of knowledge allows participants to understand the context of the practical skills they learn and apply knowledge in real situations (Peručica et al., 2022). The ability to apply theory in practice, such as sewing and pattern

making, proves that participants are ready to enter the industry directly with the skills needed (Bicho et al., 2022). Sewing skills are needed to develop people's creativity (Jeon, 2023), increase income, and work independently both as employees and as entrepreneurs so that they can create competent training in the world of work (Sibarani & Dewi, 2019; Yuninda et al., 2022).

Affective improvements were also seen in the training. Attitude development showed that the training program focused on technical aspects and the personal and professional development of participants. Positive changes in participants' attitudes indicate that the training not only succeeded in improving technical skills but also in developing the character needed in the workplace (Alnedral et al., 2020). The output components of the fashion training program at LPP Ariyanti show that participants not only gain the knowledge and skills needed to succeed in the fashion industry but also develop attitudes and values that are important for long-term success.

3.6 Outcome Component of the Fashion Training Program

Research conducted at LPP Ariyanti highlights that the fashion training program has significantly contributed to improving graduates' welfare by enabling them to pursue careers aligned with the skills acquired during the training. Key findings indicate that most graduates have secured relevant employment in the fashion industry, taking on roles such as fashion designers, stylists, and tailors. Approximately 85% of graduates have successfully started their own businesses or found employment in their trained fields, leading to increased income and economic stability. In addition to joining the industrial workforce, many graduates have established home-based sewing businesses, equipped with the necessary tools to operate in the fashion sector.

These outcomes demonstrate that the program effectively fosters both welfare and entrepreneurial development among participants. The success rate of 85% in careers and business ventures is a strong indicator of the program's effectiveness in preparing participants for the workforce and self-employment. The long-term impact of the training is evident, particularly in increasing income levels (Suh & Lee, 2023). With refined sewing skills and recognized competency certifications, graduates are better positioned to secure jobs in the competitive fashion industry (Pinnington et al., 2023). Additionally, the skills gained through the program open opportunities for independent ventures, such as boutique businesses or tailoring services, which, although initially small-scale, provide sustainable income streams (Barinua et al., 2022).

The success of the outcome component underscores the program's ability to achieve its primary goal of enhancing graduates' welfare through income growth and business development. Beyond producing job-ready graduates, the program also cultivates new entrepreneurs who contribute to local economic growth, underscoring its broader societal impact.

4. CONCLUSION

The fashion training program at LPP Ariyanti can be assessed as very good based on the evaluation of the learning components. In the input component, the training participants consisted of 20 women of productive age with varied educational backgrounds, showing diversity in abilities and interests. Quality instructors with competency certification, a 2008 SKKNI-based curriculum, and adequate infrastructure provide a strong foundation for the learning process. The 8.5-month training process uses a blended learning and project-based learning model with an adaptive approach to participants' needs. Evaluation is carried out through summative and formative methods, followed by an exam from the Competency Certification Institute (LSK) to ensure graduate competency. The output of the training shows that participants become independent, confident, creative, and skilled in fashion design, while the outcome can be seen from the success of graduates in getting jobs according to their skills, opening their own business, or becoming fashion designers. The success of this program has a broad impact on vocational education and training, especially in preparing a workforce that is ready to face industrial demands. The recommendation for institutions is to develop a curriculum that is relevant to industry

skills and needs, the integration of digital technology in the design process, which is now a standard in global industrial fashion, is still a challenge for many educational institutions in Indonesia, including LPP Ariyanti; and provide training facilities with more sophisticated tools to ensure program relevance and effectiveness.

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