

Model of Training Learning Based on Video Tutorial for Fashion Major of Vocational Education on Embroidery Course

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Abstract

Students' difficulties in understanding innovative design concepts in fashion major of vocational education require a learning model that has a balance between theory and practice to facilitate understanding and improve students' practical skills. This study aims to develop a valid, practical, and effective training learning model based on video tutorials on Minangkabau embroidery learning material. The research is a design and development research (DDR) using the ADDIE framework. The research subjects involved experts namely media experts, learning material experts, design experts, and learning experts to assess the validity of the learning model, and the experimental subjects involved fashion major of vocational education on undergraduate students. Data collection in the study was carried out using questionnaires, learning achievement tests, and observation sheets. The results indicate a significant contribution to enhancing the cognitive, affective, skill, and attitude abilities of Fashion Education undergraduate students. These results also indicate that this model meets the criteria of valid, practical, and effective. The implications of these findings underscore the potential positive impact of the developed tutorial model on the overall learning experience and outcomes in fashion education.

1. Introduction

The fashion education curriculum emphasizes design techniques, pattern making, sewing, decoration, and the ins and outs of fashion production. Fashion design education is expected to produce future teachers in the field of fashion design, especially in vocational schools (Murzyn-Kupisz & Hołuj, 2021). In other words, fashion education emphasizes skills that, of course, require intensive and practical training. Thus, fashion education not only aims to develop creativity and aesthetics but also focuses on practical aspects applicable in the work environment (Dykhnych et al., 2022). The intensive training that focuses on practical skills provides a strong foundation to ensure that graduates can successfully become qualified teachers and can even contribute to the fashion industry.

However, a recurring issue is the imbalance between theory and practice. Placing too much emphasis on practical skills without a sufficient theoretical foundation can diminish a deep understanding of the concepts and principles behind the techniques being studied (Abu Bedor et al., 2021). Furthermore, the possibility of limited resources, including facilities, equipment, and qualified instructors, could also present an obstacle to providing intensive training in line with industry needs (Lestari et al., 2023; Nurfitria et al., 2021; Varadila et al., 2023).

Overcoming these problems requires achieving a proper balance between theory and practice, implementing a learning model that can deliver relevant and up-to-date education in accordance with the demands of the ever-growing fashion industry. While various learning models have been developed, many tend to prioritize one aspect over the others. Some models emphasize theory excessively, lacking sufficient practical application, while others may lean more towards practice without a robust theoretical foundation. This gap can impact the effectiveness of learning and the application of knowledge in real-world contexts.

This issue is evident in the Bachelor of Welfare Education at the Faculty of Tourism, Universitas Negeri Padang, Indonesia. It highlights that the outcomes of embroidery learning are still relatively low, with competencies that lag behind technological advances. Additionally, students encounter difficulties in grasping innovative design concepts, understanding work principles, and executing high-quality Minangkabau embroidery. These challenges stem from the instructional approach, where lecturers primarily focus on delivering content in a straightforward manner without incorporating an innovative learning model supported by media to enhance student comprehension.

Furthermore, in the Fashion Education Institution (LPTK) there are several unresolved issues to date, including: 1) The standardization and readiness for use of vocational education human resources have not been achieved. 2) There is a lack of relevance between industry needs and the competency of prospective workers produced by Vocational Education Institutions (Fadri et al., 2023; Heriyati & Abror, 2023; Jalinus, Sukardi, et al., 2023; Nurfitria et al., 2021). From the results of the problem identification: 1) The competence of graduates is not standardized; students tend to create products based on pre-existing examples from the internet media. 2) The syllabus is not based on the National Work Competency Standards (SKKNI). Teaching materials about acculturative embroidered decorative patterns, which are highly demanded by consumers and lead to innovative products following fashion trends, are difficult to obtain. 3) Conventional methods and strategies are often used (such as demonstration methods in practical learning), hindering the improvement of creativity, innovation, and product diversification.

Besides, the industry needs more specialized professional designers in its workforce. There is a need for individuals who can adeptly integrate science and technology to meet consumer demands and industry requirements. Product innovation needs to work on keeping pace with advancements in science, technology, and evolving fashion and lifestyle trends. The prevailing business model remains traditional and has not yet embraced modernization. To address these issues, the industry must undergo a transformative shift, continuously adapting to technological developments through the creative input of human resources and innovative product design. Responding to the industry's demands, recruiting individuals with creative and innovative competencies, such as prospective fashion workers, boutique designers, and experts in textile crafts, becomes imperative for sustained growth and relevance (Sun & Zhao, 2018). This issue leads to difficulties for students in translating concepts into design drawings, challenges in developing high-quality, innovative, and diversified products. In Fashion Education, the focus should be on preparing competent prospective teachers and workers aligned with the needs of the industry (Miller, 1984).

Based on these issues, a model of training learning based on video tutorial has significant potential as a solution to address the imbalance between theory and practice. By presenting learning materials in a visual format, this model enables learners to follow relevant learning steps and is supported by watching video implementations of concepts directly, creating a strong practical understanding (Kusuma et al., 2023; Le et al., 2023; Sansi et al., 2023). Video tutorials can provide in-depth demonstrations of applying theory in practical contexts, allowing learners to observe real-world applications while implementing learning steps. In this way, learners can gain comprehensive understanding that encompasses both theoretical and practical aspects, helping them overcome the gaps that often arise in conventional learning. Therefore, the model of training learning based on video tutorial has the potential to be an effective solution in achieving an optimal balance between theory and practice, providing a holistic and in-depth learning experience for participants.

Fashion education, which emphasizes the importance of maintaining a balance between theory and practical skills, can be effectively achieved through a training learning model (Pereira et al., 2017; Rauch et al., 2020). Training model can increase student competency and an effective way of learning (Gammie & Joyce, 2009). Implementation of the model steps is supported by video tutorials developed specifically for model training (Hafis et al., 2023; Marlina et al., 2019). This video tutorials present messages containing concepts, principles, procedures, or application theory in video form and combined with audio (Budi et al., 2023; Fauzani & Ampera, 2023). Video tutorials have a positive impact on the learning process, so that video tutorial learning media can be utilized in learning more broadly (Morillo et al., 2020)

Currently, the existing training model has the disadvantage that students depend on lecturers in learning (Jalinus et al., 2022; Jalinus & Nabawi, 2018; Kifta et al., 2022; Priambudi et al., 2020). Technology that can be used as a learning medium is through video tutorials because it can replace direct learning because making videos is done by recording directly from the learning process that is being carried out (Chorianopoulos, 2018; Mayer et al., 2020). So far, learning has only used video tutorials and has not been combined with learning models (Fahrul Rozi et al., 2022; Majgaard & Bertel, 2018; Ponzanelli et al., 2019; Septiantoro & Widaningsih, 2022).

Based on these gaps, to increase student creativity and product innovation as well as product diversification, it is necessary to develop a model of training learning based on video tutorial on embroidery learning (*Sulam Minangkabau*) according to industry needs. *Sulam Minangkabau* is an art that is produced by sewing threads decoratively on the surface of the fabric, thus forming an ornate motif or pattern has *Minangbabau* culture. Often the development of embroidery technology develops into IKM centers traditional art crafts in several regions of Indonesia including the West Sumatra area known as *Minangkabau* embroidery. Decorative techniques used in *Minangkabau* embroidery include *suji* embroidery, *suji cair* embroidery (hongkong embroidery), embossed embroidery (fantasy embroidery), gold thread embroidery, *aplikasi cina*, *terawang inggris*, *terawang richelieu*, *terawang hardanger*.

The model of training learning based on video tutorials is learning that is focused on giving training assignments repeatedly, which is supported with the help of video tutorial media on *Minangkabau* embroidery learning material to students in practical learning, both implemented in class and practising assignments at home (real system). Material that is difficult to understand requires practicum to be easily understood by students. It is necessary to carry out continuous training and by displaying learning video media (Hartini, 2021; Rizal Lukman & Kurniawan, 2021; Syahril et al., 2022). In designing a training model strategy is needed (Liu, 2010; Syahril et al., 2020). Training adjusts the industry (Huntzinger, 2006; Jalinus, Syahril, et al., 2023; R.A et al., 2022). Training is supported by the use of information and communication technology (Pawlowski, 2007). Based on this background, this research aims to develop a model of training learning based on video tutorial on *Minangkabau* embroidery learning material and analyze the validity, practicality and effectiveness of this learning model.

2. Method

2.1 Research Design

The research was based on the Design and Development Research (DDR) approach using the ADDIE model as a research framework. This framework consisting of 5 (five) stages namely analysis, design, development, implementation, and evaluation (Branch, 2009). This model provides a systematic and iterative approach, ensuring a comprehensive development process that aligns with the goals of enhancing learning through video tutorial-based training. This analysis phase begins with the implementation of an analysis of the problems and learning needs of students. Needs analysis is an initial investigation of the need for a model of training learning based on video tutorial on *Sulam Minangkabau*.

In the analysis, data collection was also carried out in the industry and analysing empirical data findings, as well as exploring innovative *Sulam Minangkabau* products and varied product diversification, and being able to increase student creativity. At this stage a literature review is also carried out as an initial stage of developing the learning model, literature sources from national and international scientific journals. Furthermore, a needs analysis was carried out by distributing a needs questionnaire, it is concluded that the model developed is needed by students and lecturers. At the design stage, prototyping of the model of training learning based on video tutorial was carried out based on the results of the analysis stage. At the development stage, validation of the model developed is carried out based on expert judgment. The instrument to validate the prototype model of training learning based on video tutorials was assessed first by three experts using an instrument validity assessment sheet. Components of assessing the validity of the instrument include the suitability of the statement with the instrument grid, the instrument can reveal the quality of content, language, and the construction of a learning model of training based on video tutorials, and the instrument is clear and easy to use. At the implementation stage, practical activities are carried out for lecturers and students. At the evaluation stage, a field test was carried out to determine the effectiveness of the model of training learning based on video tutorial.

2.2 Research Subject

The research subjects were strategically divided into two main categories. Firstly, experts in relevant fields, encompassing those with expertise in media, material, and instructional design, are involved to assess the validity of the proposed learning model. Their insights contribute to refining and validating the effectiveness of the developed training approach. Secondly, the experimental subjects consist of undergraduate students enrolled in the Fashion Major of Vocational Education at the Faculty of Tourism, Universitas Negeri Padang. By involving students from this specific academic context, the study aims to evaluate the practical applicability and impact of the video tutorial-based learning model in a real educational setting.

2.3 Data Collection

Data collection in this research was carried out using validity assessment, practicality assessment, and effectiveness assessment instruments. The validity instrument used was a questionnaire of the judgment of experts regarding the model developed. The content validity indicators in this instrument are based on the concepts of model training, direct instructional (Joyce et al., 2017), training within industry (Nolker, 1983), and reasoning and problem-solving model (Krulik & Rudnick, 1996). The practicality instrument used was a questionnaire of responses and perceptions from both lecturers and students regarding the use of models developed in lectures. Then the effectiveness instrument was a learning achievement test that is given to measure and assess the extent of student knowledge acquisition and retention. Quantitative data analysis techniques were employed in this study, using a range of research instrument indicators to comprehensively evaluate various dimensions. The video tutorial validity indicators consist of visual quality displayed, audio clarity, text clarity/readability, quality of language use, quality of sentence determination, video presentation, and layout. The model validity indicators consist of the rational model, supporting theory, syntax model, social system, reaction principle, support system, and instructional and nurturant effect. The practicality indicators consist of the ease of following the learning model, the usefulness in fashion education, the usability of the model, and time allocation. Indicators of effectiveness in the skills aspect consist of problem-solving abilities, information collecting and planning, presentation/demonstration of processes, quality of execution, yield quality, work preparation, work process/systematics, and results. Indicators of effectiveness in the attitude aspect consist of discipline, carefulness, independence, creativity, and an innovative attitude.

2.4 Data Analysis

The collected data was then analyzed using quantitative methods. Validity data analysis uses a Likert scale. Calculation of the final value data from the validation results was carried out using the Aiken's V equation (Aiken, 1985). The level of validity of the product developed is based on five categories, namely invalid ($V \leq 0.00$), low validity ($0.001 \leq V \leq 0.400$), medium validity ($0.401 \leq V \leq 0.600$), high validity ($0.601 \leq V \leq 0.800$), and very high validity ($0.801 \leq V \leq 1.000$). Practicality and effectiveness data were also analysed using a Likert scale, while effectiveness data were determined by a calculation that refers to the number of the student scores divided by maximum score and multiplied by 100. The data was determined based on five categories consisting of very high ($90 \leq N \leq 100$), high ($80 \leq N \leq 89$), adequate ($65 \leq N \leq 79$), low ($30 \leq N \leq 64$), and very low ($0 \leq N \leq 29$).

3. Result and Discussion

3.1 Conceptual Framework of Model of Training Learning Based on Video Tutorial

The conceptual framework of this model is derived from a needs analysis, which includes the perceptions of students, lecturers, and industry practitioners, as well as a conceptual analysis incorporating training models, direct instructional methods, training within industry approaches, and reasoning & problem-solving models. The results of the analysis indicate that students encounter difficulties in executing embroidery tasks, such as applying various decorative stitches and techniques to fashion details, and developing innovative embroidery designs with international stylistic diversification. This indicates a necessity for a more holistic learning model oriented towards the practical application of skills within an industrial context. Consequently, the recommendations arising from this analysis advocate the development of a learning model that amalgamates theory and practice, emphasizing direct instructional methods involving intensive interaction among students, faculty, and industry practitioners. Furthermore, instructional strategies supporting the cultivation of students' creativity in embroidery and design are imperative to address the identified challenges. The integration of modern technology and online platforms also presents a viable solution to facilitate distance learning and enhance accessibility to learning resources. Subsequently, from the conceptual analysis, characteristics of each concept are obtained and can be seen in Table 1. The characteristics of these four concepts are then combined by selecting relevant steps, taking into consideration the strengths of each concept. The conceptual framework of the training learning model based on video tutorial can be seen in Figure 1.

Table 1 Fundamental concepts in developing a model of training learning based on video tutorial

Direct Instruction Model (Joyce et al., 2017)	Training Model (Joyce et al., 2017)	Training Within Industry (Nolker, 1983)	Reasoning and Problem Solving (Krulik & Rudnick, 1996)
a. Orientation	a. Clear Objectives	a. Preparation	a. Reading and Thinking
b. Presentation	b. Brief Theoretical Overview	b. Demonstration	b. Exploration and Planning
c. Structured Practice	c. Accurate Theory Demonstration (Simulated Practice)	c. Duplicate	c. Strategies
d. Guided Practice	d. Exercises Accompanied by Assignments	d. Practice	d. Finding Solutions
e. Independent Practice	e. Training Transfer	e. Evaluation	e. Reflection and Expansion

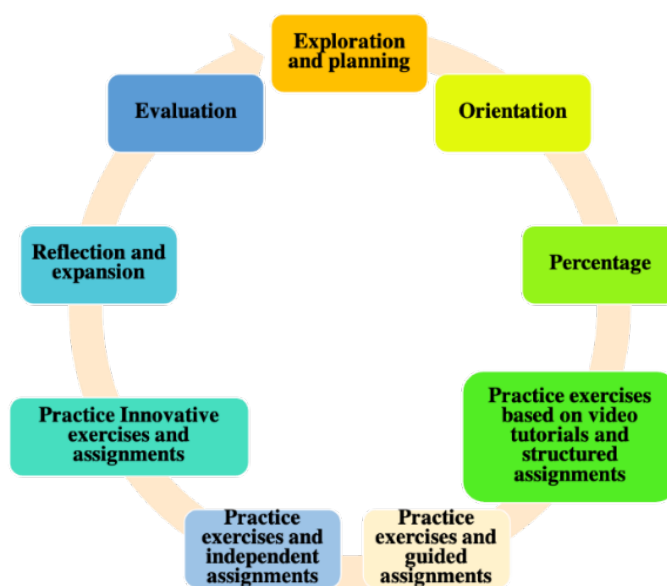


Fig. 1 Model of training learning based on video tutorial framework

3.2 Design of Model of Training Learning Based on Video Tutorial

The model of training learning based on video tutorial is learning that is focused on giving training assignments repeatedly which is supported with the help of video tutorial media on Sulam Minangkabau to students in practical learning both implemented in class and practicing assignments at home (real system), are shown in Table 2. The media display of the Minangkabau Embroidery video tutorial is shown in Figure 2 and Figure 3.

Table 2 Model of training learning based on video tutorial syntax

Syntax	Meeting	Description
Exploration and Planning (Preparation before entering the classroom)	Pre-Meeting	<ol style="list-style-type: none"> 1. The lecturer identifies creativity issues among students and industry human resources, as well as the needs of the industry, consumers, and market demands. 2. The lecturer collects and selects data and information regarding the development of trends and characteristics of locally loaded products. 3. The lecturer defines the problem. 4. The lecturer analyzes the National Work Competency Standards (SKKNI). 5. The lecturer generates solutions to the problems and establishes a learning strategy capable of enhancing creativity, innovative product development, diverse diversification, in accordance with SKKNI, industry needs, market demands, consumer preferences, and fashion trends.

Syntax	Meeting	Description
Orientation (Classroom Preparation)	I	6. The lecturer prepares teaching materials and establishes minimum standard graduation criteria.
		<ol style="list-style-type: none"> 1. To prepare students' prior knowledge in the classroom related to the upcoming material: <ol style="list-style-type: none"> a. The lecturer determines the lesson content. b. The lecturer reviews previous lessons to activate students' existing knowledge related to the teaching material and the issues of ornamental design. c. The lecturer encourages and motivates each student to develop creativity and produce innovative products by exploring design issues, industry needs, consumer society, markets, culture, and fashion trends beforehand. 2. To establish the learning objectives for embroidery and embroidery design training. 3. To determine the teaching procedures for embroidery and embroidery design training. 4. To explain the instructions for using the module.
Presentation (Demonstration of Strategies)	I	<ol style="list-style-type: none"> 1. To implement a teaching strategy that enhances creativity, innovative product development, and diverse diversification: <ol style="list-style-type: none"> a. The lecturer guides the design training learning model with a focus on exercises and tasks. b. The lecturer explains the concept of ornamental design. c. The lecturer assigns exercises and tasks for students to complete at home to reinforce their understanding of the concept of ornamental design.
	II	<ol style="list-style-type: none"> 2. To explain new concepts and skills <ol style="list-style-type: none"> a. The lecturer provides a brief theoretical explanation. b. The lecturer demonstrates the theory through practical simulations, namely: <ol style="list-style-type: none"> 1) The lecturer briefly explains the theory of drawing motifs using the stylization technique. 2) The lecturer demonstrates the technique of drawing motifs using the stylization technique 3. To present visual representations of the task of drawing motifs using the stylization technique provided. 4. To ensure students' understanding.
Structured Practice Exercises and Tasks (Duplicate)	II	<ol style="list-style-type: none"> 1. To provide structured practice exercises through allowing students to emulate the concept demonstrated in the lecturer's simulation of drawing motifs using the stylization technique during the presentation phase: <ol style="list-style-type: none"> a. The lecturer organizes students into groups with examples of practical exercises and tasks in several steps of drawing motifs using the stylization technique. b. Students practice the exercise tasks by emulating the visual representation of the task simulated by the lecturer. c. Students respond to questions. d. The lecturer provides corrections for errors and reinforces correct practice of exercises and tasks.
Guided Practice Exercises and Tasks	II	<ol style="list-style-type: none"> 1. To provide in-class practice exercises and tasks under the guidance of the lecturer: <ol style="list-style-type: none"> a. Students independently practice drawing motifs using the stylization technique to some extent. b. Students practice exercises and tasks under the guidance of the lecturer. c. The lecturer rotates among students to observe and guide their in-class practice of exercises and tasks. d. The lecturer evaluates the achievement of results from exercises and tasks by providing feedback in the form of praise, whispers, or instructions.
Independent Practice Exercises and Tasks (Finding Solutions)	II	<ol style="list-style-type: none"> 1. To provide learning through independent practice exercises and tasks both in class and at home, with the lecturer responding through corrections and reinforcement. Through this experience, students engage in exploration and discover solutions to challenges in design (i.e., adept at actualizing the concepts of basic motif shapes and assembling complete motifs into a design).

Syntax	Meeting	Description
Innovative Practice Exercises and Tasks (Transfer of Training)	III	<ul style="list-style-type: none"> a. Students independently practice exercises and tasks in class (drawing basic motif shapes). In this phase, the lecturer delays feedback and provides it at the end of the practice session. b. Students independently practice exercises and tasks at home, focusing on drawing complete motif shapes and assembling motif elements into compositions. c. Independent practice of exercises and tasks is repeated several times over an extended period until students find solutions to their difficulties, enabling them to resolve both student and industry challenges: the ability to actualize design concepts into design drawings.
		<ul style="list-style-type: none"> 2. The lecturer evaluates the results of independent practice exercises and tasks in the form of a portfolio and provides assessment feedback, grades, and corrections according to the criteria of minimum graduation/success standards.
Reflection and Expansion (Development)	III	<ul style="list-style-type: none"> 1. To provide innovative practice exercises and tasks by transforming the experience of independent practice into innovative products, both in class and as assignments at home: <ul style="list-style-type: none"> a. The lecturer explains the concept and skills related to innovation. <ul style="list-style-type: none"> 1) Provides a brief theoretical explanation of the concept and process of designing innovative products. 2) Demonstrates new skills through practical simulations of designing innovative products. b. Students engage in innovative practice exercises and tasks in class and at home, focusing on drawing naturalistic motif shapes in various compositions. c. The lecturer ensures students' understanding. d. The lecturer presents visual representations of the given innovative tasks. e. Students continue innovative practice exercises and tasks at home by transferring previously acquired skills, drawing geometric motif shapes in various compositions. f. Innovative practice exercises and tasks are repeated several times over an extended period until enhanced creative skills, innovative products, and competencies meeting the standard success criteria are achieved. g. The lecturer evaluates the results of innovative practice exercises and tasks in the form of a portfolio and provides assessment feedback and corrections according to the criteria of minimum success standards.
Evaluation of Learning Outcomes	III	<ul style="list-style-type: none"> 1. To provide time for thinking, asking questions, and seeking new references for product development: <ul style="list-style-type: none"> a. The lecturer assigns semester tasks to reinforce creativity and practical competence that have been correctly developed through reflective exercises and expansion (drawing decorative motif shapes in various compositions). b. Students respond by practicing and completing semester tasks through the transfer of previous training and incorporating new innovations. 2. To assess the outcomes of training and tasks: <ul style="list-style-type: none"> a. Measure the achievement of work standards. b. Provide feedback on the outcomes of student training and tasks. 3. To conduct learning evaluations and examine the achievement and completion of each cycle: <ul style="list-style-type: none"> a. The lecturer evaluates the outcomes of practice exercises and tasks at the end of each task (structured, guided, independent, innovative, reflective, and expansive) through corrections and reinforcement. b. Reflect on what has been learned in each cycle. c. Conduct an evaluation of the learning experience. 3. The lecturer performs a final evaluation to assess achievement and completion through: <ul style="list-style-type: none"> a. Formative tests conducted mid-semester.

Syntax	Meeting	Description
		<p>b. Summative tests conducted at the end of the semester.</p> <p>4. Students respond by conducting an evaluation of their learning experience through tests and performance assessments.</p>

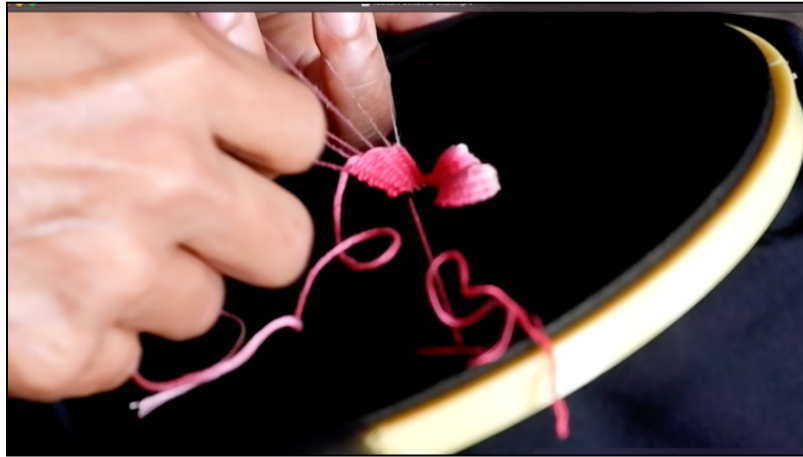


Fig. 2 *Early stage Minangkabau embroidery tutorial*



Fig. 3 *Final stage Minangkabau embroidery tutorial*

In the model of training learning based on video tutorial regarding industry needs for innovative, quality designs, following fashion trends, and various verification, so as to increase market competition, increase HR creativity, design students, produce innovative, quality products, and varied verification based on industry needs through practical exercises and assignments initiated by students prior to class exploring the problems and planning practical exercises and assignments to create a portfolio. So that the embroidery produced produces a quality product, in line with the findings of previous researchers that the embroidery made must be of high quality and have market value in the industry, as well as patterned embroidery. In this model the lecturer guides and guides the students in discussions outlining problem-solving plans into stages of training and assignments according to the subject matter of the learning material. The lecturer provides examples of the use of skills and creativity as well as the strategies needed so that practice exercises and assignments can be completed.

3.3 Validation of Model of Training Learning Based on Video Tutorial

The results obtained from assessing the validity of the validity instrument were 0.85. The average validity value (Aiken's Values) of the learning model instrument based on video tutorials from experts is greater than 0.6 in the valid category. In this way, the validity instrument can validate the learning model of training based on video tutorials. Validation of model of training learning based on video tutorial was carried out in written form and discussed until the experts agreed that the developed was valid, as shown in Table 3. The validation results for the model of training learning based on video tutorial, assessed using the Aiken V equation, provide a detailed insight into its various components. The Rational Model, with an average score of 87% in the valid category, indicates a highly effective and logically structured approach toward achieving learning goals. Similarly, Supporting Theory, scoring 85%, reinforces the model's sound theoretical foundation, aligning well with the valid category. Model Syntax, also with an average score of 85% in the valid category, suggests that the operational steps and procedures for learning are well-structured, contributing positively to the attainment of learning objectives.

Furthermore, the Social System, with an average score of 83% within the valid category, underscores the reasonably effective environment, norms, and social interactions within the learning process, albeit with some potential for improvement. Principles of Reaction, achieving an 88% average score in the valid category, signifies highly effective ways in which instructors perceive, treat, and respond to learners, positively impacting engagement and understanding. The Support System, scoring 87% within the valid category, indicates that the resources, tools, and learning environment are robust and contribute positively to the overall training experience. Lastly, Instructional Impact and Accompaniment, with an average score of 86% within the valid category, suggest that the direct learning outcomes and guidance provided by instructional elements are effective. Collectively, the validation results affirm the model's overall effectiveness, with an impressive 86% average score, placing it in the "very good" category according to (Aiken, 1985).

Table 3 The model validation results

Information	Percentage value
Rational Model	87%
Supporting Theory	85%
Model Syntax	85%
Social System	83%
Reaction Principle	88%
Support System (video tutorial media)	87%
Instructional and accompaniment impact	86%
Average	86%

3.4 Practicality of Model of Training Learning Based on Video Tutorial

At the implementation stage a practicality test is carried out which is measured through usability model of training learning based on video tutorial. In practicality, it aims to determine the convenience of the developed model to be tested on a small scale first. The practicality test involves lecturers and students.

3.4.1 Lecturer Practicality

The Lecturer Practicality Test was tested on 3 lecturers who took embroidery courses, as shown in Table 4. The results revealed that the model of training learning based on video tutorial achieved an average practicality score of 87%, indicating a high level of feasibility and applicability in a real-world educational setting. Simultaneously, the video tutorials demonstrated practicality with an average score of 86%, highlighting their effectiveness in facilitating learning. The combined assessment of both components yielded an overall average lecturer practicality score of 86.5%, placing it within the "practical" classification. This result suggests that the lecturer practicality results affirm the suitability and functionality of the model of training learning based on video tutorial, indicating their practical utility in educational contexts.

Table 4 Practicality results according to lecturer

Indicator	Percentage value
Practicality training learning model	87%
Practical video tutorials	86%
Average	86,5%

3.4.2 Student Practicality

The practicality testing conducted among students yielded highly favorable results for both the training learning model and the associated video tutorials, as shown in Table 5. The training learning model achieved an impressive average practicality score of 88%, indicating a high level of feasibility and relevance in the student learning experience. Similarly, the video tutorials demonstrated strong practicality, attaining an average score of 88%, highlighting their effectiveness in enhancing the learning process. The amalgamation of these outcomes resulted in an overall average student practicality score of 88%. This exceptional score categorizes the student practicality as "very practical," showcasing the model and tutorials as not only viable but also highly beneficial for student engagement and understanding. The conclusion suggests that these practicality results are robust and can be successfully implemented among students in Sulam Minangkabau, reflecting the applicability and effectiveness of the instructional approach.

Table 5 Practicality results according to student

Indicator	Percentage value
Practicality training learning model	88%
Practical video tutorials	88%
Average	88%

3.5 Effectiveness of Model of Training Learning Based on Video Tutorial

3.5.1 Cognitive Aspect Results

The cognitive learning outcomes were measured through pre-test and post-test scores, as shown in Table 6. The pre-test scores averaged 30.75, indicating the baseline understanding of students before the implementation of the model. Post-test scores showed a significant improvement, with an average of 82.50. This substantial increase between pre-test and post-test scores underscores the effectiveness of the video tutorial approach in enhancing student knowledge.

Table 6 Student cognitive results

Pretest	Posttest
30.75	82.50

The utilization of video tutorials in the learning process has proven to be instrumental in fostering interactive and effective learning experiences, aligning with findings from previous studies (Diar, 2022; Handayani et al., 2020; Valentová & Brečka, 2020). The integration of technology, particularly in the creation of video tutorials, played a crucial role in this positive outcome. (Preradovic et al., 2020) suggests that tutorial videos contribute significantly to the learning process, leading to excellent learning outcomes. Additionally, the motivational aspect of video tutorials, as highlighted by studies like (Henderson et al., 2017), adds another layer of benefit, indicating that these instructional tools not only deliver knowledge effectively but also inspire and engage students in the learning journey. Overall, the cognitive evaluation results affirm the success of the model of training learning based on video tutorial model in enhancing student learning outcomes and engagement in Sulam Minangkabau.

3.5.2 Skill Aspect Results

The assessment of student skills, as measured through project assessments following the implementation of the model of training learning based on video tutorial (Table 7), aimed to gauge their proficiency and capabilities. The outcomes revealed that the average score for Project 1 was 75.50, indicating the initial skill level, while the average score for Project 2 notably increased to 84.00. This observed improvement between the two projects signifies an enhancement in the students' abilities as they progressed through the learning process.

Table 7 Student skills results

Project 1	Project 2
75.50	84.00

Research findings, such as those presented by (Fahrul Rozi et al., 2022), support the positive impact of showcasing videos in authentic contexts. The ability to observe video tutorials in authentic settings facilitates students in gaining specific control and understanding, ultimately enhancing their skills. The study suggests that

students find it easier to follow instructional videos, providing them with a practical and accessible learning resource. Furthermore, the results align with the broader literature, as indicated by (Gammie & Joyce, 2009), emphasizing that training methodologies contribute significantly to improving student competence and serving as an effective means of learning. In other words, the evaluation of student skills demonstrates a tangible improvement in their abilities, showcasing the efficacy of the model of training learning based on video tutorial in enhancing practical skills. The integration of authentic video contexts and training methodologies has proven to be a valuable strategy in promoting effective learning and skill development among students.

3.5.3 Attitude Aspect Results

The assessment of student attitudes, encompassing discipline, conscientiousness, independence, creativity, and innovation, aimed to measure the impact of the model of training learning based on video tutorial on these key indicators during the learning process. The outcomes, as presented in Table 8, illustrate positive shifts in student attitudes.

Table 8 Student attitudes results

Information	The value of attitude learning outcomes
Discipline	80.50
Carefully	84
Independent	85
Creative	87
Innovative	83.50
Average	84

The findings align with the concept of continuous learning emphasized in the training model. According to (Rahmiati & Yuliarma, 2023), a training model emphasizing continuous learning has the potential to positively influence student attitudes, subsequently impacting overall learning outcomes. This suggests that the video tutorial-based approach not only contributes to academic knowledge but also cultivates desirable attitudes, creating a holistic learning experience for students.

3.5.4 Attitude Aspect Results

The significance test conducted indicated that all variables demonstrated a significance level above 0.5, with a p-value of $0.000 < 0.05$. This signifies not only the statistical significance but also a positive direction in the influence of the variables. Figure 5, depicting the results of data analysis, showcases the effectiveness of the video tutorial-based training learning model in achieving positive outcomes in cognitive aspects, skills, and attitudes. The research findings align with (Ponzanelli et al., 2019), highlighting the effectiveness of video tutorials in providing comprehensive introductions to new technologies through step-by-step, learn-by-example approaches. The distinctive feature of the video tutorial-based training learning model lies in its focus on repetitive training assignments supported by video tutorial media. This approach enables students to actively engage in practices, facilitating easy repetition and controlled participation. The visual and auditory elements incorporated in the tutorial further contribute to a concrete and step-by-step understanding, enhancing the overall learning experience for students.

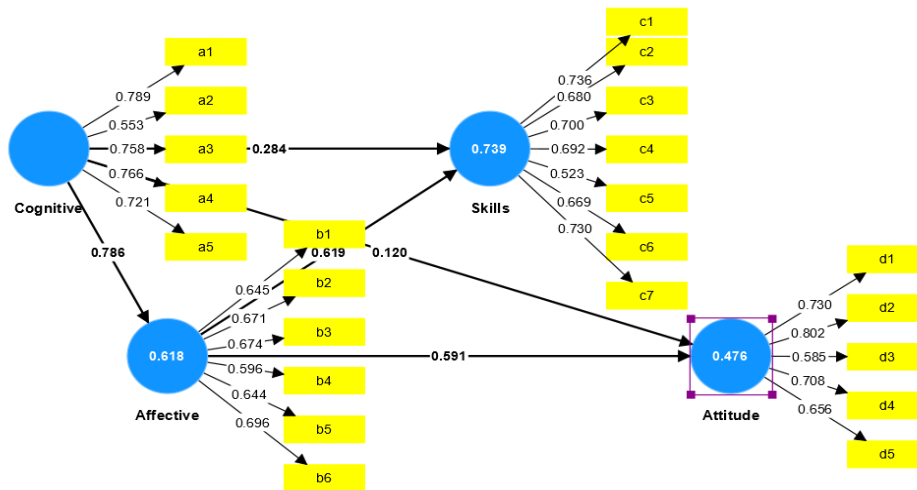


Fig. 4 Data analysis result

Based on the results obtained, the model of training learning based on video tutorials fulfills the intervention quality criteria (valid, practical, and effective) as a learning model that can be used in fashion education. This research significantly contributes to the advancement of Fashion Education through the implementation of a model of training learning based on video tutorials. The research findings indicate a positive impact on the enhancement of practical skills, creativity, and student attitudes in the context of fashion design. The implementation of this model can be constructed as a crucial impetus in preparing Fashion Education students to become a qualified teacher and able to face the evolving landscape of the fashion industry. Within the realm of practical skills acquisition in fashion design and production, this study demonstrates that video tutorials serve as an effective tool for augmenting student understanding. The implications are highly relevant in Fashion Education, where practical skills play a central role in preparing students for the professional demands of the industry.

Furthermore, the research underscores the importance of student attitudes, including discipline and creativity, in achieving success in the fashion industry. These positive attitudes can be directly integrated into the context of Fashion Education, shaping the character and professionalism of students. The model of training learning based on video tutorials with an emphasis on repeated practice is also highly relevant in shaping sustainable skills, aligning with the dynamic demands of the fashion industry. Thus, the research provides a conceptual contribution to the understanding of the model of training learning based on video tutorials and offers practical guidance for improving the quality of Fashion Education. The implementation of this model can serve as a progressive step in meeting the demands of the modern fashion industry and cultivating a generation of professionals ready to compete and innovate in the ever-changing market.

In general, the research findings provide valuable insights for the development of curriculum and learning methods. The integration of video tutorial strategies not only enhances students' understanding of Sulam Minangkabau but also brings valuable innovation in the context of Fashion Education. Considering these results, educational institutions can design a more dynamic learning approach, utilizing technology more effectively to enhance the quality of student learning. These findings provide a strong foundation for further research and development efforts in creating a more effective and responsive learning environment for students in various learning contexts.

4. Conclusion

In conclusion, the model of training learning based on video tutorial has a high quality in terms of validity, practicality, and effectiveness. the model of training learning based on video tutorial consists of syntax, including exploration and planning, orientation, percentage, practice based on video tutorials and structured assignments, practice exercises and guided assignments, practice exercises and independent assignments, innovative exercises and assignments, reflection and expansion, and evaluation. the implications of these findings can increase students' cognitive abilities, skills, and attitudes in studying "Sulam Minangkabau" for fashion major of vocational education. Acknowledging potential limitations in generalizability, future research should explore the integration of diverse media and additional learning syntax to enhance the model of training learning based on video tutorial adaptability. Investigating its applicability across various educational contexts and subjects would further contribute to its effectiveness. Continuous updates and collaboration with educators can enrich the model's development, ensuring its relevance and effectiveness in evolving educational landscapes.

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Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

Author Contribution

*The authors confirm contribution to the paper as follows: **study conception and design:** Yuliarma, Sunarya, Kudiya, Rasul; **data collection:** Yuliarma; **analysis and interpretation of results:** Yuliarma, Novitra; **draft manuscript preparation:** Yuliarma, Novitra. All authors reviewed the results and approved the final version of the manuscript.*

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