



The Contribution of Practical Readiness and Practice Intensity to Women's Fashion Learning Outcomes in Grade XI Students at State Vocational High School 4 Yogyakarta

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ABSTRACT

Purpose of the study: This study aims to analyze the contribution of practical readiness and practice intensity to women's fashion learning outcomes in grade XI students at State Vocational High School 4 Yogyakarta

Methodology A quantitative approach with a survey method was employed. The sample comprised 32 grade XI Fashion 4 students selected purposively. Data were collected using Guttman-scale questionnaires for practical readiness and practice intensity, and documentation of practical scores. Simple regression analysis was performed using statistical software

Main Findings: Practical readiness and practice intensity were both in the high category. They contributed 30.0% and 25.2% respectively to learning outcomes, with a combined contribution of 55.2%. Students' average learning outcome score was 87.45, far exceeding the minimum completion criteria.

Novelty/Originality of this study: This research integrates two internal student factors practical readiness and practice intensity into a single contributory model for fashion learning outcomes in a naturalistic vocational school setting. It provides new insights into determinants of practical competency, offering best practices for fashion education.

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1. INTRODUCTION

Vocational High Schools play a strategic role in preparing graduates who are work-ready and competent in their fields. According to Law Number 20 of 2003 concerning the National Education System, vocational education aims to prepare students for employment in specific fields [1], [2]. Vocational high schools' fashion design programs are a key driver in producing skilled workers in the fashion industry. The ability to create women's clothing is a core skill that students must master to compete in the workforce [3], [4]. Therefore, the quality of women's fashion instruction is a key factor in producing superior graduates.

In today's creative industry era, fashion is evolving rapidly and demands continuous innovation. The fashion industry requires a workforce that is not only skilled in sewing but also creative and adaptable to trends [5], [6]. However, the reality on the ground shows that not all fashion design vocational school graduates are able

to meet industry standards. Many still face challenges in applying their skills in fashion design professionally. This indicates a gap between the learning process in schools and the needs of the business and industrial world.

State Vocational School 4 Yogyakarta, as one of the favorite vocational schools in the field of fashion design, has demonstrated various proud achievements, such as winning the Jogja Fashion Week event consecutively [7], [8]. The 11th grade students of Fashion 4 in particular were able to complete the assignment of making party dresses with excellent results and scores above the Minimum Completion Criteria (KKM). However, the causal factors for this success have not been systematically revealed, especially from the students' internal side. A fundamental question arises: what enables students to achieve optimal learning outcomes? Is it due to thorough practical preparation or high intensity of practice?

One way to answer this question is through research that empirically examines the contribution of learning factors [9]. In the context of women's fashion instruction, two aspects strongly suspected to play a role are students' practical readiness and the intensity of their practice [10], [11]. Practical readiness encompasses mastery of theory, understanding of procedures, and the availability of equipment and materials before the practice begins. Meanwhile, practice intensity describes how frequently and diligently students practice outside of formal class hours. This research will examine the extent to which these two aspects contribute to student learning outcomes.

Previous research on fashion instruction has focused more on the effectiveness of the learning models or media used by teachers [12], [13]. For example, research on the application of project-based learning or the use of video tutorials to improve sewing skills. These studies are generally qualitative or experimental in nature, involving specific interventions. Research specifically addressing internal student factors such as readiness for practice and intensity of practice in naturalistic settings is rare [14], [15]. Consequently, understanding how students independently prepare and practice remains limited.

On the other hand, studies in other vocational education fields have shown that readiness to learn and frequency of training positively influence student competency [16]. Research in the automotive industry, for example, found that the intensity of workshop practice correlated with competency test results. However, these results may not necessarily apply to the fashion industry, which has different characteristics, such as demands for precision, creativity, and aesthetics [17], [18]. Therefore, research is needed to confirm whether similar patterns also occur in women's fashion education. This study seeks to fill this gap within a specific context.

The novelty of this research lies in its focus, which integrates two main variables practice readiness and training intensity into a single model of contribution to women's fashion learning outcomes. A quantitative approach with a descriptive survey method was chosen to accurately describe the real conditions in the field [19], [20]. The research subjects were 11th-grade Fashion 4 students at State Vocational High School 4 Yogyakarta, who have a track record of achievement, so the results can become best practices. Furthermore, this study also used instruments specifically developed to measure these two variables, which have not been widely available in previous research [21], [22]. Thus, this study offers a new perspective in understanding the determinants of fashion practice learning outcomes.

The urgency of this research is increasing given the increasingly fierce competition in the fashion industry and the demands of link and match between vocational schools and the world of work [23], [24]. The results of this study are expected to provide input for teachers and schools in designing more effective learning strategies, for example by encouraging increased practical readiness and intensity of student practice. Practically, this research can also serve as a reference for other vocational schools seeking to improve the quality of their graduates [25]. The main objective of this study is to analyze the contribution of practical readiness and intensity of practice to the learning outcomes of women's fashion in grade XI Fashion 4 students at State Vocational High School 4 Yogyakarta. Thus, this study will answer the extent of the role of these two factors in achieving superior competency.

2. RESEARCH METHOD

2.1. Types and Design of Research

This research uses a quantitative approach with a survey method. This type of research is descriptive associative, which aims to describe the conditions of each variable while examining the contribution between the independent and dependent variables. This approach was chosen because it is appropriate for describing phenomena as they are and explaining the relationships between variables through numerical data collected from respondents.

2.2. Place and Time of Research

The research was conducted at State Vocational High School 4 Yogyakarta, specifically in the Fashion Design Expertise Program. The location was selected based on the school's reputation for outstanding achievements in fashion and the availability of adequate infrastructure [26]. Data collection took place from

February to September 2012, coinciding with the implementation of women's fashion instruction for grade XI students in the even semester of the 2011/2012 academic year.

2.3. Population and Sample

The population in this study was all 120 students of class XI Fashion Design Expertise Program of State Vocational High School 4 Yogyakarta in the 2011/2012 academic year and were divided into four classes [27]. The sampling technique used purposive sampling with the consideration of choosing one class that had the highest average value of women's fashion practice, namely class XI Fashion 4, which had 32 students. Based on Arikunto's opinion (2006) that if the population is less than 100, it is better for the entire population to be the research subject, then this study is a population study. Thus, all students of class XI Fashion 4 were made respondents.

2.4. Operational Definition of Variables

This study involves three main variables which are operationally defined as follows:

Table 1. Operational Definition of Research Variables

Variables	Operational Definition	Indicator	Measuring Scale
Practical Readiness (X1)	The condition of students' readiness to participate in practical learning of women's fashion, includes cognitive, mental and material aspects.	1. Mastery of basic theory 2. Understanding of work procedures 3. Completeness of tools 4. Availability of materials	Guttman
Exercise Intensity (X2)	The frequency, duration, and seriousness of students in carrying out women's clothing practice activities outside of formal class hours	1. Frequency of practice per week 2. Duration of each practice 3. Independent practice initiative 4. Completion of additional assignments	Guttman
Women's Fashion Learning Outcomes (Y)	The final grade achieved by students in the competency of making party dresses	Practical value of making party dresses (score 0–100)	Interval

2.5. Data Collection Techniques and Instruments

This study employed three data collection methods: questionnaires, observation, and documentation. The questionnaire was used to collect data on students' practical readiness and training intensity. Observations were conducted to directly observe the learning process [28]. Documentation was used to obtain student learning outcomes data in the form of grades for the prom dress-making practical.

The questionnaire was structured as a checklist with two response options (eligible = 1, unfit = 0) using the Guttman scale. The instrument's outline was developed based on the indicators for each variable, as follows:

Table 2. Practical Readiness Instrument Grid (X1)

Indicator	Sub-Indicators	Item Number	Total
Theory Mastery	Understanding pattern material, Understanding procedures	1, 2, 3, 4	4
Mental readiness	Motivation, Concentration, Self-Confidence	5, 6, 7, 8	4
Completeness of tools	Main tools, Supporting tools, Tool conditions	9, 10, 11, 12, 13	5
Availability of materials	Main ingredients, supporting ingredients	14, 15, 16	3
Total			16

Table 3. Exercise Intensity Instrument Grid (X2)

Indicator	Sub-Indicators	Item Number	Total
Exercise frequency	Practice at school, Practice at home	1, 2, 3, 4	4
Duration of exercise	Time per exercise, Punctuality	5, 6, 7	3
Independent initiative	Practice without orders, Looking for additional assignments	8, 9, 10, 11	4
Sincerity	Repeating failure, Perseverance	12, 13, 14	3
Total			14

2.6. Instrument Validity and Reliability Test

2.6.1. Validity Test

The instrument's validity was tested using construct validity, which involved expert judgment. Two experts consulted on the instrument: A learning strategy expert and a fashion material expert. The expert assessments indicated that the instrument was suitable and reliable for use, with the following scores:

Table 4. Validity Test Results by Judgment Expert

Judgment Expert	Score	Quality	Interpretation
Expert 1	24	Worthy and reliable	Instruments can be used
Expert 2	28	Worthy and reliable	Instruments can be used

After expert testing, the instrument was piloted on 10 students of grade XI Fashion 2 who had similar characteristics to the research respondents. The item validity test used the Pearson product moment correlation formula [29]. The test items were declared valid if the calculated r value $>$ r table (0.374) at a significance level of 5%. The trial results showed that of the 30 instrument items, there were 28 valid items and 2 items were dropped. The dropped items were not replaced because they were already represented by other items.

2.6.1. Reliability Test

The instrument's reliability was tested using an internal consistency approach. The instrument was deemed reliable because it met the eligibility criteria based on expert assessment. The test results indicated that the instrument had a sufficient level of consistency for use as a data collection tool.

2.7. Data Analysis Techniques

The data analysis techniques used were descriptive statistics and simple regression analysis. Descriptive statistics were used to describe the data trends for each variable, including calculating the mean, median, mode, and percentage. The results of the descriptive analysis were presented in the form of frequency distribution tables and diagrams [30]. Simple regression analysis was used to test the contribution of the practice readiness variable (X1) to learning outcomes (Y), as well as the contribution of practice intensity (X2) to learning outcomes (Y). Prior to conducting the regression analysis, prerequisite analysis tests were conducted, including a test for data normality using the Chi-Square formula and a test for linearity of the relationship between the independent and dependent variables.

The hypothesis testing criteria were performed at a 5% significance level. The magnitude of the contribution is indicated by the coefficient of determination (R^2), which illustrates the extent to which the independent variables explain the dependent variable. The entire data analysis process was assisted by statistical software to ensure calculation accuracy.

3. RESULTS AND DISCUSSION

This research was conducted at State Vocational High School 4 Yogyakarta on grade XI Fashion 4 students in the 2011/2012 academic year with 32 respondents. The research data were collected through a questionnaire to measure the variables of practical readiness (X1) and practice intensity (X2), as well as documentation of practical values for the variable of women's fashion learning outcomes (Y). The following is a description of the data for each variable.

3.1. Description of Practice Readiness Variable (X1)

The practice readiness variable was measured using a questionnaire instrument consisting of 16 statements with a score of 0-1, so the theoretical score range was 0-16. Based on the collected data, the highest score achieved by respondents was 15 and the lowest score was 10. The results of descriptive statistical analysis showed that the average score of students' practice readiness was 12.84 with a standard deviation of 1.32. The frequency distribution of practice readiness scores is presented in Table 5.

Table 5. Frequency Distribution of Students' Practical Readiness Scores

Score Interval	Category	Frequency	Percentage (%)
13,6 – 16,0	Very high	10	31,25
11,2 – 13,5	Tall	18	56,25
8,8 – 11,1	Enough	4	12,50
6,4 – 8,7	Low	0	0
$<$ 6,4	Very Low	0	0
Total		32	100

Table 5 shows that the majority of students (56.25%) had a high level of practical readiness, and 31.25% were in the very high level. No students were in the low or very low level. This indicates that the 11th grade students of Fashion 4 at State Vocational High School 4 Yogyakarta are well prepared to participate in the practical learning of women's fashion, both in terms of mastery of theory, mental readiness, and completeness of tools and materials.

3.2. Sub section 1 Description of Exercise Intensity Variable (X2)

The exercise intensity variable was measured using a questionnaire consisting of 14 items with a score of 0-1, so the theoretical score range was 0-14. Based on the collected data, the highest score achieved by respondents was 13 and the lowest score was 8. The results of descriptive statistical analysis showed that the average score of students' exercise intensity was 10.91 with a standard deviation of 1.25. The frequency distribution of exercise intensity scores is presented in Table 6.

Table 6. Frequency Distribution of Students' Exercise Intensity Scores

Score Interval	Category	Frequency	Percentage (%)
11,9 – 14,0	Very High	9	28,12
9,8 – 11,8	Tall	19	59,38
7,7 – 9,7	Enough	4	12,50
5,6 – 7,6	Low	0	0
< 5,6	Very Low	0	0
Total		32	100

3.3. Description of Women's Fashion Learning Outcome Variable (Y)

The women's fashion learning outcome variable was obtained from the practical value of making party dresses documented by the teacher. The theoretical value range was 0-100. Based on the data obtained, the highest value achieved by students was 95 and the lowest value was 80. The average student learning outcome was 87.45 with a standard deviation of 4.02. This average value was far above the Minimum Completion Criteria set by the school of 75.00. The frequency distribution of student learning outcomes is presented in Table 7.

Table 7. Frequency Distribution of Students' Learning Outcomes on Women's Fashion

Value Interval	Category	Frequency	Percentage (%)
90 – 100	Very High	10	31,25
80 – 89	Tall	22	68,75
70 – 79	Enough	0	0
60 – 69	Low	0	0
< 60	Very Low	0	0
Total		32	100

Table 7 shows that all students (100%) achieved learning outcomes in the high (68.75%) and very high (31.25%) categories. No students scored below 80. This demonstrates that the students' competence in making party dresses is very satisfactory and has met the expected competency standards.

3.4. Results of the Analysis Prerequisite Test

Before conducting a regression analysis to test the contribution of the independent variable to the dependent variable, prerequisite tests were first carried out, including normality tests and linearity tests.

3.4.1. Normality Test

Data normality tests using the Chi-Square formula were performed on each variable. The results of the normality test are presented in Table 8.

Table 8. Results of Data Normality Test

Variables	χ^2 Count	χ^2 table ($\alpha = 5\%$, dk = 5)	Description
Practical Readiness (X1)	5,23	11,07	Normal
Exercise Intensity (X2)	6,47	11,07	Normal
Learning outcomes (Y)	4,89	11,07	Normal

Table 8 shows that all calculated χ^2 values are smaller than the table χ^2 , so it can be concluded that the data is normally distributed and meets the requirements for regression analysis.

3.4.2. Linearity Test

The linearity test was conducted to determine whether the relationship between the independent and dependent variables was linear. The results of the linearity test are presented in Table 9.

Table 9. Results of the Linearity Test for the Relationship Between Variables

Variable Relationship	F Count	F table ($\alpha = 5\%$)	Information
X1 with Y	1,32	2,15	Linear
X2 with Y	1,48	2,15	Linear

Table 5 shows that the calculated F value for each relationship is smaller than the F table, which means the relationship between the independent and dependent variables is linear. Thus, the requirements for regression analysis are met.

3.5. Hypothesis Testing

Hypothesis testing in this study used simple regression analysis to determine the contribution of each independent variable to the dependent variable. The results of the regression analysis are presented in Table 10.

Table 10. Summary of Simple Regression Analysis Results

Independent Variable	Regression Coefficient (b)	t count	t table	R	R ²	Contribution (%)
Practical Readiness (X1)	1,84	4,23*	2,04	0,548	0,300	30,0
Exercise Intensity (X2)	1,62	3,87*	2,04	0,502	0,252	25,2

3.5.1. Contribution of Practical Readiness to Learning Outcomes

The regression analysis between practical readiness (X1) and learning outcomes (Y) yielded a correlation coefficient (R) of 0.548 and a coefficient of determination (R²) of 0.300. The calculated t-value of 4.23 exceeded the t-value (2.04) at the 5% significance level, thus accepting the hypothesis that practical readiness contributes positively to learning outcomes. Practical readiness contributed 30.0% to learning outcomes in women's fashion, with the remaining 70.0% influenced by other factors not examined.

3.5.2. Contribution of Exercise Intensity to Learning Outcomes

The regression analysis between practical intensity (X2) and learning outcomes (Y) yielded a correlation coefficient (R) of 0.502 and a coefficient of determination (R²) of 0.252. The calculated t-value of 3.87 exceeded the t-value (2.04) at the 5% significance level, thus accepting the hypothesis that practice intensity contributes positively to learning outcomes. The contribution of training intensity to women's fashion learning outcomes is 25.2%, while the remaining 74.8% is influenced by other factors that were not studied..

3.6. Description of the Implementation of Women's Fashion Learning

As supporting data, the results of observations and interviews indicate that the implementation of women's fashion learning at State Vocational High School 4 Yogyakarta is going very well. Learning is conducted twice a week face-to-face with a duration of 4 x 45 minutes per meeting. Teachers use team teaching so that student attention is more optimal. The learning methods used are varied, including lectures, questions and answers, demonstrations, exercises, and assignments. The learning media available is quite complete, such as whiteboards, job sheets, modules, fragments (finished objects), and LCDs. Evaluation is carried out in stages, starting from process evaluation, final evaluation of the material, and end-of-semester evaluation. The practical assessment pattern emphasizes conformity to the design, accuracy of size, neatness, and timeliness of assignment submission.

Practical readiness among Grade XI Fashion 4 students at State Vocational High School 4 Yogyakarta was classified as high, with an average score of 12.84. Practice intensity also reached a high category, with an average score of 10.91. Learning outcomes in women's fashion achieved an average score of 87.45, exceeding minimum competency criteria. Every student achieved high or very high learning outcomes, indicating satisfactory practical performance. Results suggest that strong preparation and active participation supported successful achievement in women's fashion practice.

Regression analysis revealed that practical readiness contributed 30.0% to learning outcomes, while practice intensity contributed 25.2%. Combined contribution of both variables reached 55.2%, indicating substantial influence on student achievement. Higher practical readiness helped students complete practical activities with better organization and fewer mistakes. Higher practice intensity allowed students to strengthen technical skills through repeated learning experiences. Findings indicate that both variables play important roles in improving competency in women's fashion practice.

Results support previous studies reporting positive relationships between learning readiness, practice frequency, and vocational competency. Earlier research explained that students with better readiness usually demonstrate stronger understanding of practical procedures and higher learning achievement. Previous studies also

found that continuous practice improves technical skills through repeated experience. However, many previous studies focused on instructional models or learning media rather than internal student factors in vocational education. Present findings extend existing evidence by confirming significant contributions of practical readiness and practice intensity in women's fashion learning.

Novelty of this study lies in integration of practical readiness and practice intensity into one contribution model for women's fashion learning outcomes. Previous studies generally examined instructional strategies or learning media instead of student readiness and independent practice. Current study investigated internal student factors under natural classroom conditions without applying specific learning interventions. Research also employed instruments specifically developed to measure practical readiness and practice intensity in vocational fashion education. Findings provide additional evidence regarding important determinants of practical competency in women's fashion programs.

Findings have important implications for teachers, schools, and vocational education programs. Teachers should strengthen student readiness before practical sessions through theoretical review, equipment checking, and procedural guidance. Schools should provide additional opportunities for independent practice outside regular classroom hours. Improving both readiness and practice intensity may increase practical competency and learning outcomes. Results may also serve as a reference for other vocational schools seeking to improve quality of practical learning in fashion education.

Several limitations should be considered when interpreting findings. Sample included only 32 students from one class, limiting generalization to broader vocational education settings. Data for practical readiness and practice intensity were collected using self-report questionnaires, creating possibility of response bias. Study examined only two independent variables, while other factors such as learning motivation, parental support, teaching quality, and learning facilities may also influence learning outcomes. Future research should involve larger samples, multiple vocational schools, and additional variables to provide more comprehensive understanding of factors affecting women's fashion learning outcomes.

4. CONCLUSION

This study concluded that the practical readiness of eleventh-grade Fashion 4 students at State Vocational High School 4 Yogyakarta was in the high category, with an average score of 12.84. This indicates that students were well-prepared in terms of mastery of theory, understanding of procedures, and the availability of tools and materials prior to practice. Students' practice intensity was also in the high category, with an average score of 10.91, indicating that students actively practiced outside of class, both at school and at home. Students' learning outcomes for women's fashion reached an average of 87.45, far exceeding the Minimum Completion Criteria of 75.00, with all students in the high and very high categories. Practical readiness was shown to have a positive and significant contribution of 30.0% to learning outcomes, while practice intensity contributed 25.2%. Thus, these two variables simultaneously contributed 55.2% to student learning outcomes.

These findings confirm that internal student factors, particularly pre-practice readiness and independence in practice, play a crucial role in the success of women's fashion practical learning. Teachers and schools need to systematically build student readiness through pre-tests and equipment checks before practice begins. Schools should also facilitate access to practice spaces outside of class hours to increase the intensity of students' independent practice. This study is limited by its sample size and the use of a self-report questionnaire, so further research with a broader scope is needed. Future research is recommended to explore other factors, such as learning motivation, parental support, and the quality of practice facilities, which were not yet explored in this study.

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