

## THE DOORMAT PROJECT TO IMPROVE BASIC SEWING SKILLS OF SPECIAL NEEDS STUDENTS WITH LOW FUNCTION

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### ABSTRACT

Doormat's study was to evaluate the effectiveness of project work conducted on low-functioning students in PPKI SMK Taman Bunga Raya (1). This project was carried out during the basic sewing subject learning sessions and also during the co-curricular activities of the Entrepreneurship Club. A total of 10 students with low functional special needs consisting of "Slow learner", Down Syndrome and physical disabilities were involved in this study. The "Project Based Learning" method is central to the production of doormat products based on used t-shirts. Low-functioning students need more focused and planned learning methods according to their abilities. The production of this doormat uses the basic sewing skills used in Curriculum and Assessment Standard Document Special Education Secondary School Standard Curriculum Basic Vocational Skills Low Functionality. This study uses quantitative and qualitative methods that involve student work. Pre-and post-tests of sewing skills were used to analyse the data. The findings of the study showed that 10 students mastered the basic sewing skills contained in Curriculum and Assessment Standard Document Special Education Secondary School Standard Curriculum low functionality. Students are also more focused on doormat income. The implications of this study can be used as a guide for the improvement of teaching and learning as well as the assessment of low-functioning students based on projects. The alignment of teaching and learning can be practiced through the subjects of Vocational Skills Curriculum Basic Sewing and "Kelab Keusahawanan". It also fosters entrepreneurial spirit among students as this doormat can be varied in terms of design, size and colour to be marketed.

**Keywords:** Doormat, Vocational Skills Curriculum Sewing Basics, Low Functionality, Project Based Learning

### 1. Introduction

The Curriculum and Assessment Standard Document Special Education Secondary School Standard Curriculum low functionality has been introduced since 2019. Among the components found in the is the Curriculum and Assessment Standard Document Special Education Secondary School Standard Curriculum low functionality are Vocational Skills

Curriculum Document Basic sewing. Students with low function (SLF) also need vocational skills-oriented learning activities.

Documents Curriculum Vocational Skills (DCVS) for SLF is constructed by adopting the concept of Community-Based Vocational Education (CBVE) or Vocational Education Community Based (VECB) which was suggested by the Individuals with Disabilities Education Act (IDEA) and the US Department of Labour and Education. This DCVS is an adaptation of the handbook for Implementing Community-based Vocational Education Programs According to the Fair Labour Standards Act, which is a guide for schools to implement VECB in Malaysia. The concept of VECB is adapted and modified according to the suitability of the environment, policies, and the needs of special needs students (SNS) in Malaysia. The basic aspiration of the VECB concept is to ensure a productive career or employment path for all categories of SNS.

SNS should be given an overview of work assignments, rules, routines, and responsibilities based on the variety of job types and work environments. Exposure and experience to a variety of job types and work environments can facilitate SNS to make decisions about the suitability of their choice of skill areas based on interests and potentials. The findings enable teachers to meticulously plan and document all information, needs, and individual support services in the Individual Education Plan (IEP) and Individual Transition Plan (ITP). The Transition to Career module is integrated together during the implementation of vocational skills areas to SNS (Dokumen Kurikulum Kemahiran Vokasional Kurikulum Standard Sekolah Menengah Kefungsian Rendah 2019).

SLF with learning difficulties usually have specific problem in academics. However, parents always hope that the results of formal education received will enable their children to acquire skills either to get a job or self-employment, at least for them to support themselves (Asmah Abdul Hamid, 2019)

Vocational Curriculum planning for Special Education Students especially for SLF should not focus academically or challenge students "intellectual abilities" in teachers' efforts to teach skills to them. Teachers also need to apply a positive interest and attitude to the learning or skills that students want to achieve (Azizah Munib etl 2014). Pupils should be trained according to their abilities.

## 1.1 Research Background

This study was conducted at SMK Taman Bunga Raya (1) involving 10 SLF who followed DCVS Basic Sewing. The Doormat project was conducted during basic sewing classes and also during the "Kelab Keusahawanan" conducted every Wednesday for co-curricular activities. For the basic sewing class, the time allocated is 16 hours a week. For the "Kelab Keusahawanan" activities, all students and teachers were directly involved in this project 3 hours per week.

This doormat project was carried throughout 2020 and continues to this year 2021. It was continued while students undergo the Learning Process at home during the Movement Control Order (MCO) and Conditional Movement Control Order (CMCO). It was indirectly a collaborative network of student learning that is supported and assisted by parents at home. However, the data taken only involved 10 targeted students with low functions.

## 1.2 Problem Statement

SLF have low concentration and always need teacher's guidance to achieve learning objectives. Teaching and learning methods should also be simple and not overburden them due to their short concentration span and low hand motor coordination. Based on these factors, teachers need to be creative in creating learning activities that do not require specific focus and require them to think carefully. Planned activities should be concise and meaningful and have a significant impact on students' development and meaningful learning process. Basic sewing skills for SLF require more practical learning and applying the skills which was contained in the basic sewing DVCS. Besides having a short focus problem, SLF also have unpredictable behaviours problems. Therefore, the planned activities should be suitable for students and can create fun for students. Indirectly, the student's learning time will be longer than usual.

The idea of the doormat project was based on a benchmarking tour to *Yayasan Pendidikan Luar Biasa SPLB-C YPLB* in Bandung in 2016 which was organized by JPN Selangor and also a benchmarking tour to SMK Alur Merah, Alor Setar which was organized by PPD Hulu Selangor in 2019. In this tour, the researcher found that both schools implemented a doormat project but using different materials and methods. The results of this tour were used as a guide to implement the doormat project.

The doormat project was started in 2020. This project is one of the main projects of the PPKI SMKTBR (1) and "*Kelab Keusahawanan*". The dumping of used clothes among the community around Bukit Beruntung sparked the idea to carry out a product-based project on used clothes, namely Doormat SPEED Tabura. This project is specially planned for SLF to mediate their talents in the production of this product. The production of the doormat has a positive impact on the future for students and also instills the value of loving the environment.

## 1.3 Research Objectives

The objectives of this study are to: -

- a) Identify the level of basic sewing skills and SLF ability to produce a given project work.
- b) Identify the level of mastery of SLF in basic sewing skills while making the doormat.
- c) Instilling a spirit of love for the environment and cultivating simplicity as well as materials used for a variety of uses.
- d) Create doormat that can be used and sold in the community

## 2.0 Methodology

The study design used was a one-group post-test pre-test (Campbell & Stanley, 1963). This study involved quantitative and qualitative methods to obtain study data. A group post-test pre-test design, which is a quantitative approach, was used in this study as the dominant design of the study. The study conducted involved pre-test and post-test instruments as data collection methods. The instrument used is a modification of the skills instrument found in the Classroom-Based Assessment (PBD) issued by the Ministry of Education Malaysia. Qualitative data collection through observation was also used in this study to strengthen the data obtained from quantitative methods.

The study population consisted of students with special needs with low functional learning problems in the Special Education Integration Program of SMK Taman Bunga Raya

(1). The study sample consists of 10 SLF who follow the Curriculum and Assessment Standard Document Special Education Secondary School Standard Curriculum low functionality which consists of the categories of Slow Learner, Down Syndrome and Physical Disabilities. The sample was selected based on cluster random sampling in which the researcher used the existing classes in the school determined by the school at the beginning of the school session based on the category of students. The following is the analysis table of the study sample:

*Table 1: Analysis of Study Sample by Category*

No	Category	Number of students
1	Slow Learner	6
2	Down Syndrome	2
3	Physical Disability	2
<b>Total</b>		<b>10</b>

### 3.0 Result

The findings of the study were analysed to answer the objectives of the study set. Student achievement is measured using the performance standards set out in the Basic Sewing Standards Document. (DVCS, 2019). There are three levels of performance set out in the Basic Sewing Standard Document as in Table 2 below.

*Table 2: Basic Sewing performance level.*

No.	Competence	Description	Scale
1.	Excellent Competent	SNS were able to perform basic skills well and was able to complete more complex work tasks with focus, accuracy, and creativity without guidance. Pupils are interested, independent and willing to work.	3
2.	Good Competent	SNS were able to perform basic skills and complete work assignments well with minimal guidance. Pupils have an interest and are willing to work but are still unsure of the field and need transition support.	2
3.	Competent	SNS were able to perform basic skills and complete assigned work assignments with maximum guidance. Pupils are unsure of the field of interest and need on-the-job training for a longer period for transition support.	1

The results of the study focus on the objectives of the study and the research questions stated. Each study question was analysed in detail to show the importance of this doormat project work in imparting mastery of basic sewing skills to SLF. Pre-and post-tests were used to elaborate on each of the stated research questions. Data was analysed using the "Wilcoxon Signed Rank Test" to answer the study hypotheses. The results are shown in table 3 as follows:

Table 3: Number of students who mastered the Pre-Test and Post-Test of Basic Sewing Skills

No	Skills	Pre-Test		Post-Test	
		Number of students mastered	Percentage (%)	Number of students mastered	Percentage (%)
1	Pick up and hold the scissors properly	5/10	50	10/10	100
2	Cut the fabric the right way	3/10	30	7/10	70
3	Students wrapped yarn / fabric on wood / nails	2/10	20	8/10	80
4	Cut a t-shirt with a size of 20 cm x 1cm	2/10	20	7/10	70
5	Equalize the length of the left and right fabric	2/10	20	8/10	80
6	Insert the fabric that has been cut in the hole between the fabrics	1/10	10	9/10	90
7	Then, tie off twice	2/10	20	8/10	80
8	Name 3 materials used in making Doormat.	5/10	50	8/10	80
9	Repeating activities without guidance.	2/10	20	8/10	80
10	Pack the product	0/10	0	8/10	80

(Resources : DKKV KSSMPK KR Asas Jahitan (2019), Bahagian Pembangunan Kurikulum, KPM)

Table 3.1 : Basic Statistic

**Ranks**

	N	Mean Rank	Sum of Ranks
Pos - Pra Negative Ranks	0 <sup>a</sup>	.00	.00
Positive Ranks	10 <sup>b</sup>	5.50	55.00
Ties	0 <sup>c</sup>		
Total	10		

- a. Pos < Pra
- b. Pos > Pra
- c. Pos = Pra

The Negative Rank between the percentage of students who mastered the Basic Sewing Skills for Pre-Test and Post-Test was 0 regardless of whether the value is N, Mean Rank, or Sum Rank. This value of 0 indicates that there was no decrease between the Pre-Test and Post-Test values.

Positive Rank between the percentage of the number of students who mastered basic sewing skills for Pre-Test and Post-Test. Here there were 10 positive data (N) which meant

10 students showed improvement in mastering the basic sewing skills from Pre Test value to Post Test value. The mean rank showed an increase of 5.50 and the sum rank was 55.00.

Ties were formed by the comparison of the values of the Pre Test and Post Test. Since the value of ties is 0 in this case, it can be said that there was no equal value between Pre Test and Post Test.

Table 3.2 : Basic Statistic

Test Statistics <sup>a</sup>	
	Pos - Pra
Z	-2.825 <sup>b</sup>
Asymp. Sig. (2-tailed)	.005

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Based on the output of "Test Statistic" above, it was known that Asymp.Sig (2-tailed) was worth 0.005. Because the value of 0.005 was smaller than 0.05, it can be concluded that the hypothesis was acceptable. That is, there was difference in the percentage of students who mastered basic sewing skills between the Pre-Test and Post-Test. This proves that this doormat project had positive effects on SLF in mastering basic sewing skills.

The first goal is to identify the level of basic sewing skills that students achieve based on the Basic Sewing Standard curriculum, which discovered that students had mastered the basic sewing set. Based on the findings of the study using the instrument used to study the skill level of students. All students achieved performance level 3, indicating that SLF was able to perform basic skills well and complete more complex work tasks with focus, accuracy, and creativity without guidance. Pupils are interested, independent and willing to work. It is based on the findings of the study given in table 3.

To answer the second objective of the study, which is to identify the level of ability of students to produce a given project work. According to the results of the post-test, eight out of ten students were successful in all the prescribed skills. It is within the excellent competency level set out in the Basic Sewing Basic Document.

The findings of the study also show that the third objective of the study is to identify the extent to which this doormat project provides basic sewing skills to students with special needs. The results of the study based on table 3.1 found ten positive data which means that all students can master the basics of sewing set at the level of excellent competence. This proves that this doormat project can improve students' mastering the prescribed skills with a planned and organized method according to simple guidelines and work procedures for teachers and parents to help students master the skills as found in DCVS and produce the prescribed products.

The findings of this study address the study's fourth objective, which is to create a product that can be used and marketed. Based on the results shown in tables 3.1 and 3.2, it is found that students can produce a work that can be marketed because they have mastered the skills given according to the skills set. Based on the contents of the basic sewing standard document, teachers need to plan an action plan for students' career transition based on the prescribed skills, namely Preparing an Individual Transition Plan (ITP) to support SLF readiness to enter adulthood and employment. (DCVS, 2019).

Overall, based on the findings of the study, it shows that SLF can master the basic sewing skills set out in the Basic Sewing Standard Document in the excellent competent category through this doormat project.

## 4.0 Conclusion

The implementation of the Doormatt SPEED Tabura project work can be used as a basis for students to implement a broader project work for SLF. It is also a first step for students to be independent after they leave school, as well as a measure to reduce dependence on parents and relatives. By associating with the “*Kelab Keusahawanan*”, students are also instilled with the desire to build a career. Based on the action plan found in the Basic sewing skills curriculum standard document (DCVS, 2019). Teachers need to plan an action plan by combining several skills and strategies to ensure that SLF acquire optimal skills.

Given that the doormat project provides an increase in the mastery of basic sewing skills among low-functional SLF as well as expands SLF creativity towards an entrepreneurial one. So, we plan to make some improvements to this doormat project as follows:

- i. Innovate the production of this doormat in terms of the use of key materials. Initially, we used t-shirts as the main material. The main materials for the innovation we propose using old batik fabric and used shawls. In addition, we would also like to diversify the size and shape of this doormat in the future.
- ii. Making the doormat as the niche product of PPKI SMK Taman Bunga Raya (1).
- iii. Further expand the marketing of this doormat. So far, this doormat is only marketed on a small scale, that is, its sale is only among PPKI teachers and school residents. The marketing of this doormat product among the surrounding community by placing this doormat product in school cooperatives, grocery stores and kiosks in supermarkets and creating an online marketplace.
- iv. Involve all MBK and PPKI teachers as well as PPM SMK Taman Bunga Raya (1) in the doormat production project. In addition, to ensure the success of this project, strengthen the collaborative relationship between parents or guardians and the PPKI. Make detail and comprehensive planning such as the distribution of students in small groups that will be guided by 2 teachers.

Exposure to teachers and students as well as parents of the importance of project work for SLF can be used as a backup for teachers to explore the future of students in a more organized and directed manner. In addition, this project can also help parents provide education and train their children at home during MCO. It can be a collaboration between the parents and the school in ensuring the well-being of students, especially SLF.

Overall, this study achieved the objectives of the study set for students to acquire basic sewing skills as in the objectives of the first to the fifth study. It is also a step towards the career transition of students with low-functioning special needs. It is the hope of teachers, schools and the MOE that these low-functioning special education students can work, live independently, and make their own decisions as well as generate their own income. The effectiveness of this project work is a catalyst for the MOE's efforts so that low-functional students also acquire skills such as medium-functional students who are involved in Specific Vocational Skills that enable them to have the opportunity to obtain the Malaysian Skills Certificate.

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