

*\*translated from Malay language original article*

## **Collage Activities to Improve Fine Motor Skills Mastery in Students with Learning Disabilities**

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### **ABSTRACT**

Fine motor skills are critical in the cognitive development of students with learning disabilities. It is the ability or skill of using sensory motor, which involves the coordination of small muscle movements. Collage is one method for overcoming students' failure to master basic manipulative skills such as holding, grasping, and performing other hand activities due to weak hand muscles. This best practice aims to improve students' ability to hold a pencil correctly and firmly so that they can write beautifully and neatly. Students must clump, crumple, tear or cut, twist, and paste in order for their hand muscles to develop properly. This practice also helps students to improve their listening, following instructions, cooperating, and social skills with their peers. Pre-writing abilities have been successfully enhanced by using this best practice, which also helps student cut and coloring beautifully and precisely. In general, this best practice has been effective in helping students with learning disabilities develop their fine motor and sensory skills. In order to fully address the issue of students untidy writing, it is desired that this technique can be consistently applied to all Integration Special Education Program students at SK Belimbing Dalam (Belimbing Dalam National School).

**Keywords:** students with learning disabilities, fine motor, collage, sensory motor, writing skills

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### **Introduction to Best Practices**

The ability to write is a mechanical and systematic process of channel information. Writing problems are a common issue for primary school students. It is also a mechanical issue that students with learning disabilities face (Abdullah bin Yusof, 2006). According to Smith (1998), many students with learning disabilities struggle with writing. Observing the various forms of letters and categorize them into uppercase and lowercase letters has a significant impact on special education students. Poor, inconsistent, and uniform handwriting, as well as problems with space-spacing, letters, words, and sentences, are among the identified writing problems in this case.

The Preschool Standard Document (2017) emphasize some of the fine motor skills that early school children must master, such as crumpling, tearing freely, and cutting to create a shape. Teachers, according to Foster and Headley (1966), can assist students in achieving physical well-being by developing gross motor and fine motor control. It is also emphasized in the Special Education Standard Document (Revision 2017) how crucial it is to grasp the fundamentals of 3M, especially writing abilities. A variety of pre-writing exercises must be used in order for student with special needs to develop this skill so that they can write correctly and neatly. With this collage activity, students practice fine motor skills both without materials and with materials to regulate their finger movements. The Learning Through Playing (LTP) approach is emphasized in the teaching and learning process for students, particularly student with special needs, because it can pique students' interest and make learning enjoyable. Learn while playing such as collage activities encourages student with special need to explore, discover, and build understanding through experience, all while having fun. This method can boost cognitive ability and curiosity, as well as mastery of thinking and psychomotor skills and emotional control (Standard Curriculum and Assessment Document, Curriculum Development Division, 2016).

### **Justification on the Implementation of Best Practices**

Failure to master mechanical writing skills in primary school students is caused by students not being able to differentiate between lowercase and uppercase letters, not being able to recognize the alphabet, not knowing how to read, and so on. The problem of writing failure for students with special needs, on the other hand, is caused by disabilities, such as weak hand muscles, lack of concentration, physical disabilities, obstacles in cognitive and psychomotor development, behavioral problems, and emotional instability. As a result, this best practice of collage is used to assist students with special needs in strengthening hand muscles so that they can hold a pencil firmly and write mechanically well. This best practice was chosen because it is a very interesting activity for improving the cognitive development of special needs students, as well as stimulating brain development and student creativity (Fazura, 2020).

Collage is an effective method for students with special needs that allows them to play while learning. The use of materials (paper) of various color and glue (sticky) is also very popular with students. The variety of techniques required throughout the collage creation process is extremely beneficial to students' overall development. Students with special needs will become more excited and enthusiastic as a result of the produced collage pictures that are diverse, imaginative, and beautiful, especially when their work is supported through praise, gifts, and applause from peers and teachers. Tokens serve as a positive incentive for attaining the goal, according to Jeson, Sloane, and Young (1998). This is consistent with the findings of a research by Ngu Mee Kok, published in 2009, it discovered that praise and money rewards improve student management in the classroom while simultaneously boosting the standard of students' academic performance. According to Haliza Hamzah (2008), the gross muscles have developed but the fine muscles have not yet fully developed in the early

stages of childhood. As a result, it is hoped that by designing activities that require fine motor skills, such as collage, children's physical development will progress optimally. According to Session (1989), in the study of Norain et al. (2005), the goal and priority of teaching children to write is for them to produce beautiful, neat, and easy-to-read writing.

## Implementation Objectives

The following are the objectives of this best practice:

1. Through collage activities, assist students to improve students' focus in doing a work and sitting quietly in a chair and not wandering around in class.
2. Through collage activities can help strengthen the muscles of the student's fingers and hands in gripping strongly and the work results are better.

## Implementation of Best Practices

This good practice of collage creation should be done on a regular basis. The frequency varies according to the students' group. There are three types of students with special needs:

Table 1  
*Categories of student ability*

No.	Category of Students	Method of Implementation	Frequency		
			Very frequently	Frequently	Periodically
1.	Students with low functioning abilities, such as those who cannot grasp an object firmly.	- Collage activities such as clumping, crumpling, tearing/shearing, and pasting are done more independently or with full guidance. Pictures are provided.	√		
2.	Students with moderate functioning cannot connect the dots correctly, and their writing is difficult to read.	- Collage activities are more like clumping, crumpling, twisting paper, tearing/scissoring, and pasting independently or with partial guidance. - Pictures are provided. Two or three objects in a single drawing. (For example, bees, flowers, and leaves.)		√	

<p>3. High functioning students who can write but whose neatness needs to be improved.</p>	<p>Collage activities are more akin to clumping, crumpling, twisting paper, tearing/scissoring, and pasting without supervision.                  - Students draw a picture based on the image provided.                  - For example, pictures of scenery or local fruits.</p>	<p>√</p>
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The following are the steps taken to put this good practice into action:

Table 2  
*Implementation Steps for Best Practices*

Step	Description
<p>Step 1</p>	<p>Prepare the materials.  <b>Examples:</b> Colored paper, drawing paper, pencils, glue and scissors (if necessary).</p>

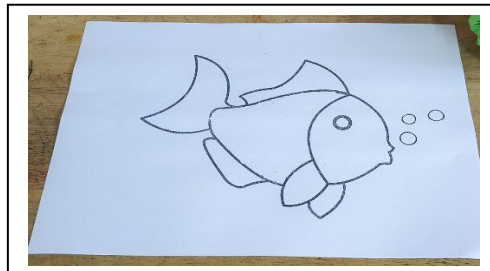
Figure 1: Tools and materials used to implement activity.



<p>Step 2</p>	<p>Determine the collage's theme. The subject matter must be appropriate for the students' grade level and aptitude. On the drawing paper, use a pencil to sketch the image in accordance with the selected theme.</p>
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Figure 2: Theme of a collage.

**Example:** a fish in the water



Step 3 Students crumple, clump, and crumple color paper.

Figure 3: The paper is clumped, squeezed, and crumpled until it becomes round and the structure of the paper softens.

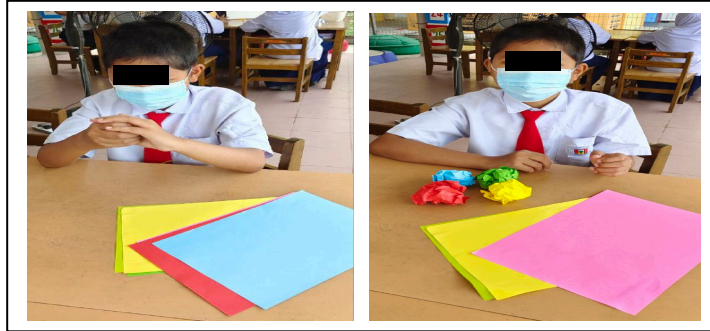
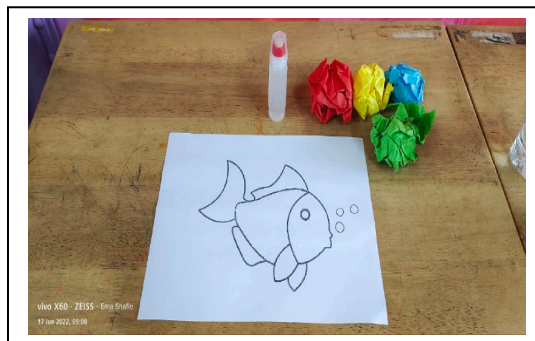


Figure 4: The collage activity is ready to be implemented

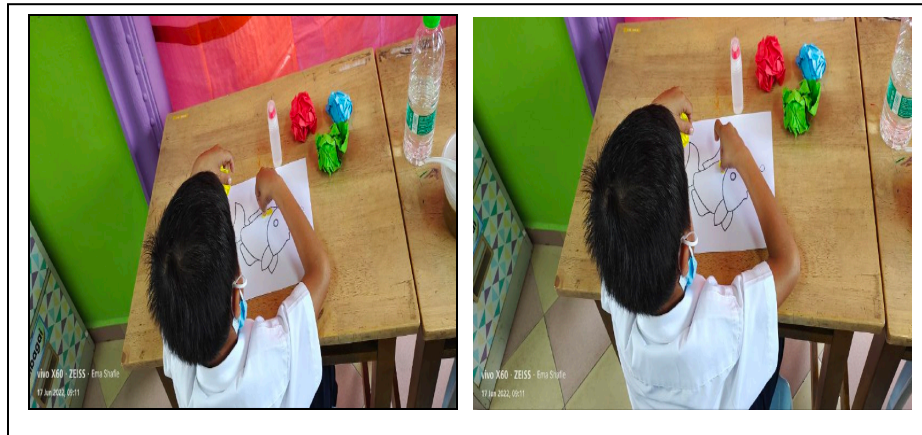


Step 4 Apply a small amount of glue to the surface of the drawn image. Tear the colored paper into small pieces and stick them on the colored part of the picture.

Figure 5: Students apply glue to the surface of the picture. Tear the colored paper into small pieces and pasted on the picture where the glue was previously applied.



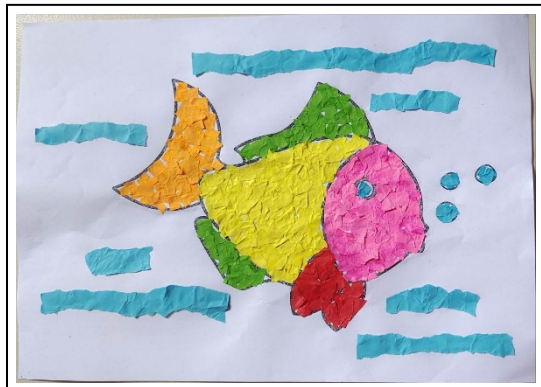
Figure 6: A small piece of paper is pasted on the surface of the sketched picture until it is finished.



Step 5

Repeat this activity until all of the colored paper has been pasted onto the picture.

Figure 7: The picture's entire surface has been collaged.



Collages can be modified based on imagination. Depending on the creativity and adaptability of students with special needs, a variety of materials can be used for this collage exercise, including discarded pieces of cloth, magazines, newspapers, tissues, dry leaves, beans, beads, and more.



Figure 8 shows some of the creative outcomes from good practices for students.

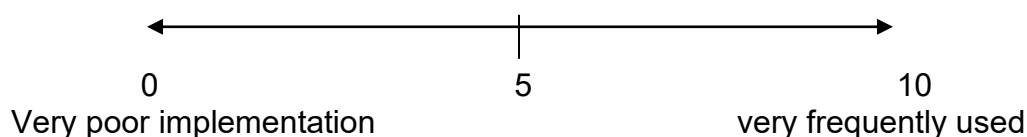


### Effectiveness from the Implementation of Best Practices

According to the findings of surveys and interviews conducted in ten schools in Melaka's Alor Gajah District, the majority of Special Education teachers choose collage activities as one of the activities in the classroom for the majority of subjects, particularly for low- and medium-functioning students. Teachers like to implement this collage activity because it is simple to use and can be enjoyable for students with special needs. Additionally, a variety of skills that can be taught to students, like how to precisely and neatly cut, shred, clump, glue, and paste in an image context, can increase these abilities. While students enjoy collage activities because they can experiment with different colors and materials such as beads, seeds, twigs, and leaves, as well as cut, tear, clump, thicken, and play with glue and paste to express their creativity. Sand play, play dough, categorizing small objects, 'busy board,' arranging objects according to shape, pasta chains, playing with clothespins, sketching along lines, and sewing are all activities that Special Education teachers always do. All of these activities, when done repeatedly and consistently, can help students produce neat and beautiful writing.

Table 3 summarizes the analysis of fine skills techniques used in teaching and learning based on interviews conducted in ten random schools in Alor Gajah District, Melaka, on a scale of 1 to 10, as shown in Figure 9.

**Figure 9**  
*Fine Motor Skills Execution Frequency Scale*



**Table 3**  
*Analysis of the Fine Motor Skills Implementation Frequency in a Month at the Integrated Special Education Program at SK Belimbing Dalam*

No	Methods for Improving Fine Motor Skills	Frequency
1	Play Sand	2
2	Play Dough	5
3	Paste (Collage)	8
4	Categorize Small Objects	4
5	Busy Board	4
6	Sort By Shape	6
7	Pasta Chain	3
8	Play Clothespins	3
9	Draw Parallel	5
10	Sewing	2

According to the results of the above survey, the frequency of implementation of collage activities in the Integrated Special Education Program of SK Belimbing Dalam is the highest, at 8 times that of other activities. The frequency of arranging objects according to shape is only 6 times, playing dough 5 times, sketching according to lines 5 times, activities of categorizing objects according to size and 'busy board' only 4 times, pasta chain 3 times, playing with clothespins 3 times, sewing and playing with sand the most is only 2 times a month.

**The Efficiency of Collage Activities in Improving Students' Ability to Concentrate on Their Work and Sit Still in Their Seats without Regularly Disrupting Their Classmates.**

The excitement of preparing the final collage result in producing beautiful and creative pictures with the use of various materials such as colorful paper, additional materials such as beads, seeds, twigs, leaves, cotton, scissors, glue, and so on keeps students focused on the activities that are completed. During the implementation of this collage, students are more focused and complacent with the activity because it involves a combination of various skills such as cutting, tearing paper, clumping, twisting and pasting. Pupils are also free to combine various skills with their own creativity in producing their work. It is done freely and leisurely over a set period of time, such as



two hours or more depending on the image that needs to be produced. This allows them to have fun while completing tasks without feeling rushed. This collage activity can also be accompanied by slow music to improve the situation and put students with special needs in a good mood.

Special Needs students, particularly those who have a short attention span in class, dislike studying, prefer to play with friends, and prefer to wander and leave the classroom, will tend to sit in their assigned seat to complete the collage because they are interested in it. This situation may reduce the number of times they move from their seats and disturb their classmates. When students can do what they enjoy and are interested in, they become complacent and easier to control.

Table 4  
*Shows How Frequently Students Get Up from Their Seats and Bother Their Classmates*

Week(w)	Frequency	
	Disturbing Friend	Moving From Seat
w1	25	17
w2	23	14
w3	19	11
w4	14	9
w5	12	7
w6	10	5
w7	7	3
w8	5	1

The study's findings show that the frequency of students interrupting friends and getting up from their seats decreases from Week 1 to Week 8. This demonstrates that collage activities are popular and can motivate students to complete their collage work. In an indirect way, this situation can help reduce common behavioral issues in class, such as disturbing classmates, fighting, and stealing from classmates' belongings.

**Through Collage Activities Can Help Strengthen the Muscles of The Student's Fingers and Hands in Gripping Strongly and The Work Results are Better.**

Teachers and parents frequently hear excuses such as students being tired of writing, crying when asked to prepare even a small amount of writing, failing to hold objects firmly, being unable to cut properly, and so on. This condition is most likely caused by weak muscles in their fingers and hands. To address this issue, the collage activity was chosen to be implemented in the SK Belimbing Dalam Special Education Program. This good practice was chosen because creating a creative collage work necessitates a variety of activities, including grasping, clumping, crumpling, thickening, twisting,

tearing, cutting, and pasting. All these activities necessitate muscle strength, finger coordination, and hand-eye coordination.

### Figures 10(a) and (b)

*show the difference in work results before and after the Collage activity is completed*



Figure 10(a) shows the outcome of the first collage activity.



Figure 10(b) shows the outcome of the work after two months of engaging in collage activities.

The pupils' collage work is getting better, cleaner, and more beautiful as a result of the collage activities that are done routinely and continuously. The differences between the work outputs before and after the collage activity was conducted during a two-month period are shown in Figures 10(a) and 10(b). When the hand and finger muscles are stronger, it is discovered that the student's work results are improved. Therefore, it is important to practice continuously and consistently so that pupils may create stunning, imaginative, and well-organized collages.

## Conclusion and Recommendations

This good practice is very beneficial in developing the potential of Special Needs Students in general, particularly in helping to improve their fine motor skills. This good practice can help low-functioning Special Needs students with pre-writing, and it can help medium-functioning and high-functioning Special Needs students overcome the problem of messy and difficult-to-read writing. According to the study's findings, the more frequently this good practice is done, the stronger the muscles of their fingers and hands develop. As a result, their ability to hold, grasp, welcome, pinch, and manipulate objects is improving. As a result, because the muscles and coordination of their fingers, hands, and arms have developed well, they can perform a variety of activities well. Their inability to correctly and firmly hold the pencil in order to produce beautiful and neat writing can also be overcome with time. Students with better fine motor skills produce more beautiful, neat, and easy-to-read writing. This good practice can not only

overcome writing problems among Special Needs Students at SK Belimbing Dalam, but it can also overcome other learning problems such as improving student concentration in class while studying or doing any activity at school, and controlling students' behavioral because students no longer like to disturb their friends or leave class when the teacher is absent. Discipline issues can also be reduced because students are less likely to bother their friends, fight, or take their friends' belongings which are causes of fights. Students can learn to listen and follow directions, work methodically, interact, and communicate with friends through the process of creating a collage that must be carried out in accordance with the recommended step-by-step. Because it greatly benefits students, especially in assisting their overall and balanced physical, mental, emotional, and social development, it is hoped that this good practice can be continuously implemented not only in the Special Education Program for Integration (PPKI), but also in the mainstream of SK Belimbing Dalam.

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