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# Origami at the Fingertips: The Effectiveness of a Paper-Folding Intervention on the Attention of Students with Learning Disabilities: A Single-Subject Design Study

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**Abstract**

A short attention span is one of the biggest hurdles faced by students with learning disabilities (SLD), and it directly undermines their mastery of the basic skills of reading, writing and arithmetic. This study examined whether origami, the Japanese art of paper folding, could help one such student at a religious primary school *(Sekolah Rendah Agama)* in Melaka, Malaysia, stay focused during classroom teaching and learning. An A-B-A single-subject design was used, consisting of baseline, intervention and withdrawal phases with three sessions each. Attention was recorded through direct observation for five minutes per session, with a note taken every 20 seconds. During regular lessons, the student was attentive in only 13.3% to 20% of the observed intervals (mean 17.8%). Once origami was introduced, attention jumped to between 80% and 93.3% (mean 86.7%), and every intervention session exceeded the highest baseline value (PND = 100%). When origami was withdrawn, attention dropped back to between 20% and 26.7% (mean 24.4%), close to where it started. This clear rise-and-fall pattern offers strong evidence that origami itself drove the improvement. Origami is more than a craft activity. It works as an effective catalyst for attention, but only for as long as it is used consistently in special education classrooms. Observation reliability was at an acceptable level (IOA = 80%).

**Keywords:** Origami, Attention, Learning Disabilities, Single-Subject Design, Hands-On Learning

## Introduction

In any classroom, attention is the doorway to learning. Without it, basic skills such as reading, writing and arithmetic (known in Malaysia as the 3M skills) are hard to build, no matter how carefully a teacher plans a lesson. Students who do not pay attention usually miss the point of the lesson, and when this goes on for long, the gap between students who succeed and those who fall behind keeps widening.

This gap is most visible among students with learning disabilities (SLD). Beyond struggling with the 3M skills, they often find it hard to learn new skills and to follow instructions. Their attention drifts easily from one stimulus to the next, so they have difficulty filtering out what matters from the many distractions around them (Gutasan et al., 2021). The effects do not stop there. Students with poor attention find it hard to take in instructions, take part less in class activities and make frequent mistakes in their homework. When they neither understand nor focus, disruptive behaviour begins to appear. This cycle needs to be broken, and this is where a well-chosen intervention can make a difference.

Origami, the paper-folding art that originated in Japan, offers an appealing way in. Step by step, a sheet of coloured paper turns into an animal or an object right before the student's eyes. The activity combines *minds-on* and *hands-on* engagement and draws on several senses at once.

## Problem Statement

Teachers in Malaysia's Special Education Integration Programme (PPKI) regularly face students who lose focus quickly and become bored during conventional lessons (Ahmad et al., 2023; Gutasan et al., 2021). Teaching that relies only on explanation and teacher demonstration is not enough to hold their attention. At the same time, most local studies on origami have focused on academic outcomes such as handwriting and reading (Hoe, 2019; Wahab & Mohd Yasin, 2022). Studies that measure attention directly through systematic observation remain scarce. This raises a practical question: how well can students with learning disabilities pay attention during regular lessons compared with lessons that use origami? This study was prompted by three sets of considerations: practical, academic and theoretical. Each is explained below, because together they shaped what we chose to investigate and how we chose to investigate it.

The first motivation was practical and came directly from the classroom. Students with learning disabilities often drift away within the first few minutes of a lesson, and the teachers who work with them have few low-cost tools for winning that attention back. Many of the attention interventions described in the literature depend on computerised training, specialised equipment or long structured programmes (Slattery et al., 2022). These are difficult to sustain in schools with modest budgets and limited specialist support, such as the religious primary school where this study took place. Origami, by contrast, needs nothing more than coloured paper, can be taught in a few minutes and is already familiar to many teachers and parents. We wanted to know whether such a simple and affordable activity could make a measurable difference within an ordinary lesson, rather than in a specially arranged setting.

The second motivation was academic. Research on origami in education has concentrated on geometry, spatial reasoning and academic outcomes such as reading and handwriting (Boakes, 2009; Hoe, 2019; Kandil & Işıksal-Bostan, 2019; Wahab & Mohd Yasin, 2022). Attention, which must come before any of these outcomes, has received far less direct study. Mohd. Ali and Sahal (2016) are among the few Malaysian researchers to have observed attention during origami lessons, and their participants were 14-year-old students in a secondary-level PPKI setting. Much less is known about younger primary-school children, who are still building the basic 3M skills, or about what happens to their attention once the activity is taken away. This second question matters because recent evidence suggests that the benefits of origami can fade after a programme ends (Ridgley et al., 2025). By observing an eight-year-old pupil across baseline, intervention and withdrawal phases, this study responds directly to both gaps.

The third motivation was theoretical. Active and manipulative learning holds that children understand and engage more deeply when they handle concrete materials and learn through several senses at once. Origami brings these principles together in a single activity. It engages sight, hearing and touch at the same time (Mariano et al., 2026), it trains the fine motor control that is linked to mathematics and reading (Li et al., 2025), and every fold gives immediate, visible feedback that rewards the student for staying on task. If these principles hold, origami should do more than make a lesson enjoyable; it should raise on-task attention in a way that can be observed and measured. A withdrawal design offers a direct test of this expectation, because attention should rise when origami is introduced and fall again when it is removed (Kratochwill et al., 2021).

Taken together, these considerations shaped the purpose of the study: to find out whether a low-cost, classroom-ready activity grounded in active learning principles can improve the attention of a young student with learning disabilities, and whether that improvement lasts once the activity stops.

*Research Objectives*

This study aimed to:

1. identify the student's level of attention during regular lessons (baseline phase);
2. identify the student's level of attention during origami-based lessons (intervention phase); and
3. determine whether the level of attention is maintained after the origami intervention is withdrawn.

*Research Questions*

1. What is the student's level of attention during regular lessons?
2. What is the student's level of attention during origami-based lessons?
3. Is the student's level of attention maintained after the origami intervention is withdrawn?

**Significance of the Study**

This study contributes direct observational evidence on how origami affects attention, an outcome rarely measured in earlier work. For special education teachers, the findings offer a practical idea for making lessons more engaging. Origami is also inexpensive, easy to

prepare and simple for parents to continue at home, which makes it a realistic intervention for both schools and families.

## Literature Review

### *Attention and Students with Learning Disabilities*

Sustained attention refers to a person's ability to stay focused on a task over a period of time. Slattery et al. (2022) systematically reviewed popular interventions for improving sustained attention in children and adolescents, including physical activity, mindfulness and computerised training. They found that the quality of the evidence was still mixed. This is a useful reminder that practical interventions tested in real classrooms are still badly needed.

A similar picture emerges in Malaysia. Students with learning disabilities are described as easily distracted, quick to become bored and readily pulled away by stimuli in their surroundings (Gutasan et al., 2021). Ahmad et al. (2023) likewise found that students with special educational needs (SEN) lose interest in conventional lessons and quickly forget concepts they do not get to apply. Interestingly, both studies turned to hands-on kits and reported encouraging results. Students' interest in reading rose from 28.5% to 81.0% after three months of using the LEXSSA Kit (Gutasan et al., 2021), while mean scores in rounding numbers improved from 54.00% to 82.29% (Ahmad et al., 2023).

In terms of measurement, classroom attention is usually recorded with interval-based methods. Haydon and Carnahan (2024), for example, used one-minute *momentary time sampling* to measure on-task behaviour, which rose from a mean of 27.9% at baseline to 73.8% during the intervention. A very similar interval-recording method was used in the present study.

### *Origami as an Educational Intervention*

The link between origami and learning is not new. Boakes (2009) found that origami instruction helped middle school students improve their spatial visualisation and geometry knowledge. Arıcı and Aslan-Tutak (2013) observed that students reasoned better about geometry because of the hands-on, manipulative nature of origami. Kandil and Işıksal-Bostan (2019) strengthened these findings with a quasi-experimental study: Grade 7 students taught through inquiry-based instruction enriched with origami showed significant gains in reflection symmetry achievement and geometry self-efficacy.

However, recent evidence paints a more cautious picture. In a randomised controlled trial with 179 students aged 9 to 11, Ridgley et al. (2025) found that the VisMO origami programme improved spatial vocabulary and reduced mathematics anxiety in the short term. These effects faded after a year, and there was no significant change in mathematics scores. The lesson is clear: the benefits of origami may depend on sustained exposure.

### *Origami in Special Education*

Interest in origami within special education has grown steadily. Sze (2005) reported that origami construction had positive effects on children with disabilities and also served as a stress-relieving activity. In the Klang Valley, Mohd. Ali and Sahal (2016) conducted a single-subject study with two 14-year-old PPKI students. Both students' attention rose above 60% during the origami intervention and reached 100% in at least two sessions.

Later local studies looked mainly at academic outcomes. Hoe (2019) found that a three-month "Origami Magic" programme improved the Malay-language reading and writing of remedial students. Wahab and Mohd Yasin (2022) reported a significant improvement in the handwriting of 40 children with special needs after origami activities.

Internationally, Üstündağ Şener et al. (2025) found that origami helped 14 fourth-grade students with learning difficulties in Turkey achieve and retain a social studies learning outcome. The students themselves said that origami made concepts easier to understand, sharpened their imagination and hand skills, and taught them patience.

*Multisensory Learning and Fine Motor Skills*

One of origami's strengths lies in its multisensory nature. Sight, hearing and touch all come into play every time a student folds. In a study involving 60 SEN students and 12 special education teachers, Mariano et al. (2026) found that multisensory teaching was associated with better attentional focus, task completion and behavioural regulation. Fan et al. (2024) observed that children playing with multisensory materials stayed engaged longer, around 18 to 25 minutes, compared with 12 to 16 minutes with traditional materials.

Origami also trains fine motor skills and hand-eye coordination. A meta-analysis of 11 studies by Li et al. (2025) showed that fine motor skills correlate strongly with mathematics ($r = 0.60$) and moderately with reading ($r = 0.35$). This gives a reasonable basis for expecting activities such as origami to support basic literacy and numeracy, even if indirectly.

*Single-Subject Design and Analysis Standards*

A single-subject design measures the same behaviour repeatedly across several phases. Each student serves as their own control (Ledford & Gast, 2018), which makes the design well suited to special education, where populations are small and diverse. To judge the quality of the evidence, Kratochwill et al. (2013, 2021) set out the standards summarised in Table 1.

Table 1
*Single-subject design standards and the status of this study*

| Criterion | Minimum standard | Status of this study |
|---|---|---|
| Independent variable systematically manipulated | The researcher decides when the intervention is introduced and withdrawn | Met |
| Interobserver agreement (IOA) | At least 20% of sessions in each phase, with agreement ≥ 80% | Second observer recorded 25.5% of sessions; agreement 80% (met) |
| Number of demonstrations of effect | At least 3 opportunities (e.g., A-B-A-B) | 2 opportunities (A-B-A) |
| Number of data points per phase | ≥ 3 (with reservations) or ≥ 5 (without reservations) | 3 sessions per phase (met with reservations) |

Beyond design standards, the data are judged through visual analysis of six features: level, trend, variability, immediacy of effect, overlap between phases, and consistency of

patterns across similar phases (Kratochwill et al., 2021). Overlap is commonly measured with the Percentage of Non-overlapping Data (PND). According to Scruggs et al. (1987), a PND above 90% indicates a very effective intervention, 70% to 90% an effective one, 50% to 70% a questionable one, and below 50% an ineffective one.

**Theoretical Framework and Research Gap**

This study draws on the principles of active and manipulative learning: students learn more meaningfully when they experience a concept for themselves through concrete, multisensory activity. The literature above reveals three gaps. First, most origami studies measure academic achievement rather than attention itself. Second, many rely on pre-post designs without a control condition, which makes cause and effect hard to establish. Third, Ridgley et al. (2025) suggest that the effects of origami may not last. A single-subject design with a withdrawal phase allows this functional relationship to be tested more clearly (Kratochwill et al., 2021).

**Methodology**

*Research Design*

This case study used an A-B-A withdrawal single-subject design. This design is well suited to examining change in one target behaviour within a small sample (Ledford & Gast, 2018). The withdrawal phase lets the researcher test whether any change in behaviour genuinely comes from the intervention (Kratochwill et al., 2021). All data were collected through direct observation by the researcher during real classroom lessons. No tests, questionnaires or interviews were used. Table 2 summarises the three phases of the study.

Table 2
*Phases of the study*

| Phase | Condition | Description |
|---|---|---|
| A1 | Baseline | Regular lessons following the timetable; attention recorded from the teacher's set induction |
| B | Intervention | Lessons using the Origami Module |
| A2 | Withdrawal | Intervention stopped; return to regular lessons |

*Participant*

The participant was one student with a learning disability (Student 1), selected through purposive sampling. The student had a short attention span and was easily distracted by environmental stimuli, which made him a suitable candidate for this intervention. The study was carried out at a religious primary school (Sekolah Rendah Agama) in Melaka, Malaysia. Student 1 is an eight-year-old boy.

*Target Behaviour*

The target behaviour was attention. The student was counted as attentive when meeting at least one of three criteria: (a) looking at the teacher or the learning material, (b) working on the assigned task, or (c) responding to the teacher's questions. This operational definition follows the one used by Mohd. Ali and Sahal (2016). Each 20-second interval was coded as either √ (attentive) or X (not attentive). Examples of inattentive behaviour included

daydreaming, looking out of the window, playing with unrelated objects, leaving the seat and disturbing classmates.

*Instruments*

Three instruments were used in this study:

1. Baseline Observation Form: records the student's attention during regular lessons.
2. Intervention Observation Form: records the student's attention during origami lessons.
3. Origami Module: a step-by-step guide for folding animals or objects from coloured paper.

The content validity of the Origami Module and both observation forms was reviewed by a special education teachers with more than five years of experience.

*Data Collection Procedure*

Each observation session lasted five minutes, with attention noted every 20 seconds, giving 15 observation intervals per session. The study involved nine sessions in total, three in each phase (A1: sessions 1-3; B: sessions 4-6; A2: sessions 7-9). The procedure for each phase was as follows:

1. Phase A1 (baseline). The teacher taught as usual according to the daily lesson plan, without any origami activity. Observation began as soon as the teacher started the set induction. This phase continued until the data were stable, defined as at least three consecutive sessions with no upward trend.
2. Phase B (intervention). The teacher delivered origami lessons guided by the Origami Module in three steps. First, the teacher showed a finished origami model to spark the student's interest. Second, the teacher demonstrated each fold step by step while the student folded along (guided practice). Third, the student completed the folds independently with minimal support (independent practice).
3. Phase A2 (withdrawal). The origami activity was stopped and the teacher returned to regular lessons, as in Phase A1. The observation procedure remained the same.

*Data Analysis*

The data were analysed descriptively. The percentage of attention for each session was calculated as follows:

$$\textit{Percentage of attention} = (\textit{Number of attentive intervals} \div 15) \times 100\%$$

The data were then plotted as a line graph by session and phase and analysed visually for level, trend and stability within each phase, as well as change between phases (Kratochwill et al., 2021). To make the results easier to interpret, the percentages were grouped into three levels, as shown in Table 3.

Table 3
*Levels of attention*

| Level of attention | Attentive intervals (out of 15) | Percentage range |
|---|---|---|
| Low | 0–5 | 0%–33% |
| Moderate | 6–10 | 40%–67% |
| High | 11–15 | 73%–100% |

The effectiveness of the intervention was also assessed using PND (Scruggs et al., 1987):

*PND = (Intervention sessions exceeding the highest baseline value ÷ Total intervention sessions) × 100%*

*Interobserver Agreement*

To ensure the recorded data were reliable, a second observer recorded attention simultaneously but independently in 25.5% of all sessions, above the 20% minimum. Agreement between the two observers was calculated interval by interval:

*IOA = Agreements ÷ (Agreements + Disagreements) × 100%*

An IOA of at least 80% is considered acceptable (Kratochwill et al., 2013). In this study, the IOA obtained was 80%, meeting that threshold.

*Permission and Confidentiality*

Permission to carry out the observations was obtained from the school's headteacher before any observation began. Throughout the study, the participant's confidentiality was carefully protected. The student's identity was not disclosed, and the student was referred to only as Student 1 in all observation forms, analyses and reports. No information that could identify the student or the school was recorded, and the observation data were used solely for the purpose of this study.

**Findings**

Overall, Student 1's attention rose sharply from a mean of 17.8% during regular lessons to 86.7% during the origami intervention, before dropping back to 24.4% when the intervention was withdrawn. Figure 1 shows this change session by session.

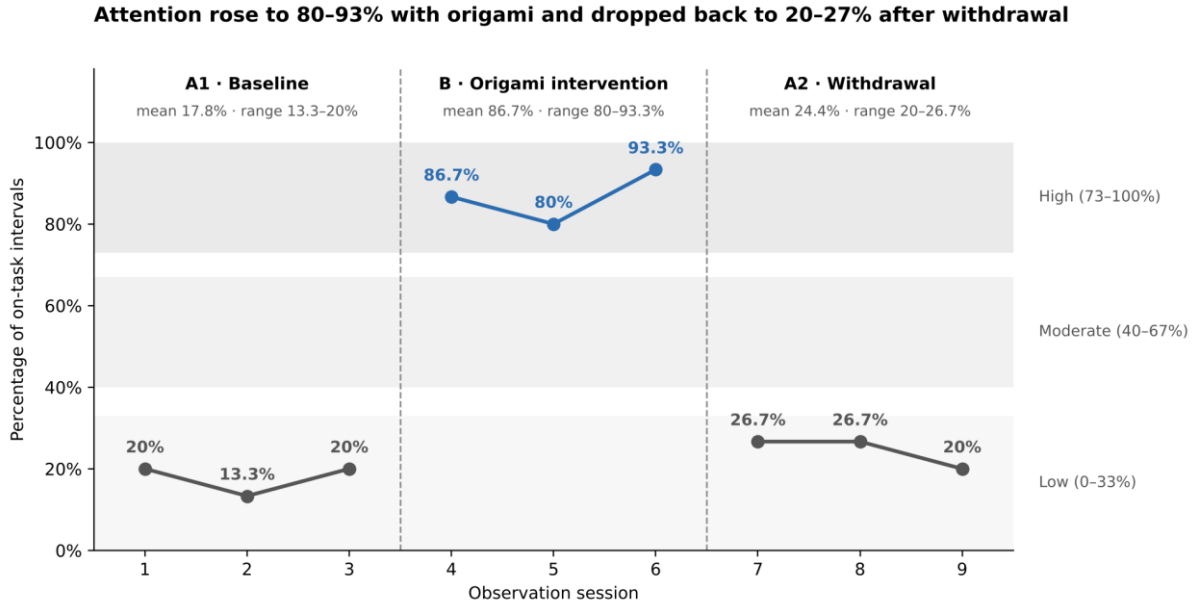


Figure 1: Student 1's percentage of attention by session and phase

The A-B-A pattern in Figure 1 is unmistakable. Every session in Phase B falls within the high range, and none overlaps with any session in Phase A1 or A2.

*Research Question 1: Attention during Regular Lessons*

Throughout the baseline phase (sessions 1–3), the student's attention stayed in the low range, between 13.3% and 20%. In other words, the student was attentive in only two or

three of the 15 observation intervals, with a mean of 17.8%. The data were stable with no upward trend, which met the condition for starting the intervention. In most intervals, the student did not meet even one of the attention criteria.

*Research Question 2: Attention during Origami Lessons*

Things changed as soon as origami was introduced. In the intervention phase (sessions 4–6), the student's attention leapt into the high range, between 80% and 93.3% (12 to 14 of 15 intervals), with a mean of 86.7%. The jump was immediate: from session 3 (20%) to session 4 (86.7%), attention rose by 66.7 percentage points. The highest level was recorded in session 6 (93.3%). Although there was a slight dip in session 5 (80%), attention remained within the high range.

*Research Question 3: Maintenance after Withdrawal*

As soon as origami was stopped in Phase A2 (sessions 7–9), the student's attention dropped back into the low range, between 20% and 26.7% (three to four intervals), with a mean of 24.4%. The drop was immediate, a fall of 66.7 percentage points from session 6 (93.3%) to session 7 (26.7%), and attention slipped further to 20% by session 9. The Phase A2 mean was only 6.7 percentage points above Phase A1. Put simply, about 90% of the gain made during the intervention disappeared once origami was gone. This almost symmetrical A-B-A pattern provides strong evidence of a functional relationship between origami and attention.

*Visual Analysis*

Table 4 summarises the visual analysis of Student 1's data using the features outlined by Kratochwill et al. (2021).

Table 4
*Visual analysis of change between phases*

| **Feature** | **Change A1 → B** | **Change B → A2** |
|---|---|---|
| Level (mean) | 17.8% → 86.7% (+68.9 percentage points) | 86.7% → 24.4% (−62.2 percentage points) |
| Immediacy (last session → first session of the new phase) | Session 3 → session 4: 20% → 86.7% (+66.7) | Session 6 → session 7: 93.3% → 26.7% (−66.7) |
| Trend | A1 flat; B slightly rising (86.7% → 93.3%) | A2 slightly falling (26.7% → 20%) |
| Variability (range within phase) | A1: 6.7 points; B: 13.3 points | A2: 6.7 points |
| Overlap | PND = 100% (3/3 B sessions above 20%) | No overlap with B (3/3 A2 sessions below 80%); A2 close to A1 |

A PND of 100% places the origami intervention in the very effective category (Scruggs et al., 1987). Even so, this result should be read with care, because the study has only three data points per phase and two demonstrations of effect. The IOA of 80% meets the minimum reliability standard. The evidence therefore meets the design standards with reservations only (Kratochwill et al., 2013).

*Session-by-Session Data*

Table 5 presents the raw data recorded on the observation forms during the lesson observations. The level for each session is classified according to the ranges in Table 3.

Table 5
*Student 1's attention data by session*

| Session | Phase | Attentive intervals (/15) | Percentage of attention | Level |
|---|---|---|---|---|
| 1 | A1 | 3 | 20.0% | Low |
| 2 | A1 | 2 | 13.3% | Low |
| 3 | A1 | 3 | 20.0% | Low |
| 4 | B | 13 | 86.7% | High |
| 5 | B | 12 | 80.0% | High |
| 6 | B | 14 | 93.3% | High |
| 7 | A2 | 4 | 26.7% | Low |
| 8 | A2 | 4 | 26.7% | Low |
| 9 | A2 | 3 | 20.0% | Low |

**Discussion and Conclusion**

The findings give clear answers to all three research questions. Origami raised Student 1's attention immediately and consistently, from a mean of 17.8% to 86.7%, with a PND of 100%. However, the effect almost entirely disappeared once origami was stopped. In brief:

1. Attention during regular lessons was in the low range, between 13.3% and 20%.
2. Attention during origami lessons was in the high range, between 80% and 93.3%.
3. Attention after the intervention was withdrawn did not last. It dropped back into the low range, between 20% and 26.7%, close to baseline.

*Effectiveness of Origami Compared with Earlier Studies*

The 68.9-percentage-point gain in this study is consistent with Mohd. Ali and Sahal (2016), who found that the attention of two PPKI students rose above 60% during an origami intervention. The Phase B range in this study (80% to 93.3%) is slightly lower than that of their Sample 2 (93% to 100%) but still well above the 60% threshold they reported. A similar pattern was reported by Haydon and Carnahan (2024), where on-task behaviour increased from 27.9% to 73.8% after a classroom intervention. Table 6 compares the attention ranges in this study with those of Mohd. Ali and Sahal (2016).

Table 6
*Comparison of attention ranges by phase*

| Phase | This study (Student 1) | Mohd. Ali & Sahal (2016): Sample 1 | Mohd. Ali & Sahal (2016): Sample 2 |
|---|---|---|---|
| A1 (baseline) | 13.3% to 20% (mean 17.8%) | 20% to < 40% | 7% to 20% |
| B (origami, teacher demonstration) | 80% to 93.3% (mean 86.7%) | Up to 100% | 93% to 100% |
| A2 (withdrawal) | 20% to 26.7% (mean 24.4%) | 13% to 47% | < 50% |
| C (origami, video) | Not conducted | Up to 73% | 87% to 100% |
| A3 (second withdrawal) | Not conducted | 33% to 53% | < 73% |

All three participants show the same pattern: low attention at baseline, a sharp rise with origami and a drop once origami stops. One further finding by Mohd. Ali and Sahal (2016) deserves attention. For Sample 1, origami taught through live teacher demonstration produced higher attention than origami taught through video (100% versus 73%). This suggests that the interaction between teacher and student is a key ingredient in the intervention's success.

*Why Origami Works*

Why is origami so effective? At least four factors help explain it.

1. Curiosity and motivation. Each fold brings the student one step closer to the finished shape, and curiosity about how it will look keeps them going until it is done. Kandil and Işıksal-Bostan (2019) found that origami significantly improved students' self-efficacy.
2. Precision and focus. Neat folds demand full attention at every step. Students in the study by Üstündağ Şener et al. (2025) said themselves that origami taught them patience. This fine motor practice may also support literacy and numeracy, given that fine motor skills correlate with mathematics (r = 0.60) and reading (r = 0.35) (Li et al., 2025).
3. Multisensory engagement. Origami engages touch, sight and hearing at the same time. Mariano et al. (2026) linked multisensory teaching with better attentional focus and task completion among SEN students.
4. A sense of fun. Brightly coloured paper and charming shapes lift the mood of the classroom and reduce boredom. Sze (2005) described origami as a stress-relieving activity, while Fan et al. (2024) found that children stay engaged longer with multisensory materials.

The small dip to 80% in session 5 may be related to the difficulty of the origami model used that day. Future studies could test this by recording which model is used in each session.

*Reversal and Maintenance*

The sharp fall in Phase A2 strengthens the findings of this study. When behaviour returns almost to its starting point as soon as the intervention stops, we can be more

confident that the gains in Phase B were caused by origami rather than by other factors, such as maturation or the student growing used to the observer (Kratochwill et al., 2021). The Phase A2 mean sat only 6.7 percentage points above A1, and session 9 (20%) matched the highest A1 value. In other words, almost no carry-over into regular lessons took place. This differs slightly from Sample 1 in Mohd. Ali and Sahal (2016), whose attention in Phase A3 (33% to 53%) remained above A1 (20% to < 40%).

For practice, the message is clear. About 90% of the gain in attention vanished once origami was stopped, echoing Ridgley et al. (2025), who saw the effects of origami fade after their programme ended. Origami should not be treated as an occasional "remedy" whose effects last on their own. Instead, it needs to become part of the lesson routine, woven into subject content and faded out gradually so that attentive behaviour can transfer to regular lessons.

**Limitations**

Several limitations should be kept in mind when interpreting these findings.

i. *Sample size.* The study involved a single student, so the findings cannot be generalised to all students with learning disabilities.
ii. *Number of data points.* Three sessions per phase meet the minimum standard only with reservations, not the full standard of five sessions (Kratochwill et al., 2013).
iii. *Design.* An A-B-A design offers only two demonstrations of effect and ends in a no-intervention phase, when the student's attention is lower.
iv. *Observation length and reliability.* Five minutes of observation per session may not capture the student's attention across a full lesson, and the IOA of 80% sits right at the minimum threshold, so the consistency of the observations could still be improved.
v. *Type of activity.* Attention in Phase B was measured during an origami activity, whereas Phase A was measured during regular lessons. Part of the difference may stem from the type of activity itself rather than the teaching method alone.

**Implications**

i. *Special education teachers* can use origami as a set induction or a core activity to lift students' attention into the high range.
ii. *School leaders and PPKI coordinators* can include the Origami Module in teacher training, as it is low-cost and easy to implement.
iii. *Parents* can continue origami at home to sustain attention and build their child's fine motor skills.

**Conclusion**

This study shows that a single sheet of coloured paper can make a real difference in a special education classroom. The origami intervention lifted the attention of a student with learning disabilities from the low range to the high range, although sustaining that gain requires ongoing use. Because attention underpins the mastery of reading, writing and arithmetic, origami deserves serious consideration by educators as a method that is inexpensive, enjoyable and well aligned with the goal of nurturing students who are both cognitively capable and creative.

**Recommendations for Future Research**

i. Use an A-B-A-B or multiple-baseline design involving at least three students.
ii. Collect at least five data points per phase and train observers so that IOA exceeds 90%.
iii. Test a fading phase to see whether attention of around 87% can be maintained in regular lessons.
iv. Measure the effect of origami on reading, writing and arithmetic achievement directly through tests.
v. Integrate origami with subject content, for example by counting folds in Mathematics or writing out the folding steps in Malay language lessons.

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