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CASE REPORT

Addressing Seizure-Related Learning Disruptions in Childhood Absence Epilepsy using a 3-D Intervention Framework: A Case Report

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ABSTRACT

Childhood Absence Epilepsy (CAE) is a pediatric neurological condition characterized by frequent, brief episodes of impaired awareness that disrupt attention, memory, and learning continuity. This case report is unique in reframing attention difficulties in CAE as neurologically driven micro-disruptions rather than behavioral inattention and in demonstrating the application of a structured educational therapy framework. An 11-year-old boy diagnosed with CAE presented with frequent absence seizures associated with disrupted task initiation, reduced task continuity, impaired memory retention, and limited awareness of missed information, resulting in significant academic difficulties. An 8-week educational therapy intervention based on a 3-D framework (Diagnostics, Dialogics, and Didactics) was implemented to support learning continuity. Data were collected through structured observations, developmental assessment rubrics, and parent–teacher feedback. The intervention resulted in consistent improvement across key domains, including task initiation, task continuity, self-awareness, memory retention, and recovery after interruption, with the most marked gains observed in task initiation and memory retention. This case report highlights that learning disabilities in CAE are best understood as interruptions in cognitive continuity rather than deficits in ability. The findings demonstrate that a structured, neuro-informed educational therapy approach can effectively support learning despite ongoing neurological disruptions, with implications for integrating clinical and educational practice.

Keywords: *early intervention, epilepsy, learning disabilities, seizures*

1. INTRODUCTION

Childhood Absence Epilepsy (CAE) is a common pediatric epilepsy syndrome characterized by frequent, brief episodes of impaired awareness that disrupt attention, working memory, and real-time information processing [1-3]. Although absence seizures typically last only a few seconds, they may occur multiple times throughout the day, creating repeated interruptions in the continuity of cognitive processing during learning activities. As a result, children may miss critical segments of instruction, fail to encode information fully, or lose track of ongoing tasks, leading to fragmented learning experiences despite otherwise intact intellectual ability [4,5,7]. Over time, these repeated disruptions can accumulate, contributing to academic underachievement, reduced task persistence, and difficulties integrating new information with prior learning, thereby increasing the risk of learning disabilities and poorer educational outcomes [4,5].

In educational settings, the subtle and transient nature of absence seizures often leads teachers and caregivers to interpret these interruptions as behavioral inattention, lack of motivation, or disengagement [7,8]. Such interpretations may obscure the neurological basis of the learner's difficulties and result in interventions that focus on behavior management rather than addressing the underlying disruption to learning continuity. Consequently, children with CAE may remain unsupported in developing strategies to recognize and recover information lost during seizure-related interruptions.

Although pharmacological treatments such as ethosuximide and related antiepileptic medications can reduce seizure frequency [3,6], they do not fully address the educational consequences of intermittent cognitive disruption and may introduce additional attentional side effects [7]. Even when seizures are medically managed, learners may continue to experience gaps in information processing, memory encoding, task completion, and classroom participation. These limitations highlight the need for integrative approaches that extend beyond clinical management to address how seizure-related interruptions affect learning processes in everyday educational contexts.

This case is unique in that it reconceptualizes attention difficulties in CAE as neurologically driven disruptions in cognitive and learning continuity rather than as behavioral deficits or indicators of reduced intellectual capacity. While existing literature has focused primarily on seizure control and cognitive comorbidities, comparatively little attention has been given to educational interventions that help learners identify, compensate for, and recover from ongoing disruptions in learning. This report contributes to the literature by presenting the application of a structured 3-D intervention framework comprising Diagnostics, Dialogics, and Didactics within an educational therapy context. Through systematic identification of disruption patterns, development of learner self-awareness and self-advocacy, and implementation of adaptive instructional strategies, the framework aims not only to improve academic performance but also to restore continuity in learning despite recurrent interruptions. The aim of this case report is therefore to examine the effectiveness of this integrative framework in supporting a child with CAE through an in-depth single-subject study.

2. LITERATURE REVIEW

Childhood Absence Epilepsy (CAE) is associated with disruptions in thalamocortical networks, producing characteristic spike-and-wave discharges that interfere with sustained attention and real-time information processing [1-4]. Although seizures are brief, their high frequency can lead to repeated interruptions in cognitive encoding, resulting in fragmented learning and difficulties in task continuity, working memory, and academic performance [5,7,8]. In educational settings, these disruptions are often misinterpreted as behavioral inattention, which may delay appropriate support and contribute to cumulative learning gaps [7,8].

Pharmacological treatments such as ethosuximide and related antiepileptic medications are effective in reducing seizure frequency but do not fully address the educational impact of intermittent cognitive disruption and may introduce additional attentional side effects [3,6]. As a result, there is increasing recognition of the need for complementary educational approaches that directly target learning processes affected by seizure-related interruptions. Educational therapy offers a process-oriented, individualized approach that integrates cognitive and emotional support, with strategies such as task segmentation, multisensory instruction, and structured repetition shown to support encoding and retention in learners with attention difficulties [9,10].

However, there remains limited literature on how such strategies can be systematically integrated into a coherent intervention model for children with CAE. The 3-D framework, comprising Diagnostics, Dialogics, and Didactics, provides a structured approach that links identification of disruption patterns with learner self-awareness and adaptive instructional strategies [9,10]. This case applies the 3-D framework to address seizure-related learning disruptions in a real-world educational context, contributing to emerging efforts to bridge neurological understanding with pedagogical practice.

3. METHOD

3.1 Case Selection and Design

This case report describes an archived 2007 case of Childhood Absence Epilepsy (CAE) from the now-defunct Centre for Exceptional Children [13]. The case was selected due to its diagnostically challenging presentation and its relevance to current clinical and educational practice. This report is prepared in accordance with the CARE Guidelines [11,12].

3.2 Patient Information

The patient, “AA,” was an 11-year-old Indonesian boy of Chinese descent studying in Singapore at the time of presentation. He had a 9-month history of frequent absence seizures affecting classroom functioning, particularly attention and task completion.

3.3 Clinical Presentation

The participant AA, diagnosed with Childhood Absence Epilepsy (CAE), presented with a 9-month history of frequent absence seizures occurring multiple times daily, as reported by caregivers and supported by electroencephalographic findings. These episodes were characterized by brief periods of staring and unresponsiveness, resulting in repeated interruptions during classroom activities.

In the school setting, AA demonstrated difficulty initiating tasks independently, frequent loss of task continuity, and incomplete work, particularly during multi-step instructions. His teachers observed that he often appeared inattentive or disengaged, especially during transitions or sustained instructional periods. Cognitively, AA exhibited average intellectual ability but showed marked difficulties in working memory, real-time information processing, and retention of recently presented material. He also demonstrated limited awareness of missed information during seizure episodes, which contributed to cumulative learning gaps and reduced academic confidence.

3.4 Therapeutic Intervention

The patient was treated medically with ethosuximide, resulting in partial seizure control.

In addition, an 8-week individualized educational therapy program (see Table 1), prepared by an educational therapist assigned to oversee AA, was implemented (2-3 sessions per week, 30-45

minutes per session). The intervention was structured using a three-component framework consisting of Diagnostics, Dialogics and Didactics [10] (see Figures 1 and 2):

- Diagnostics (D1): Identification of seizure-related learning disruptions, including frequency, timing, and cognitive impact;
- Dialogics (D2): Development of self-awareness and self-advocacy strategies; and
- Didactics (D3): Instructional adaptations, including task chunking, multisensory learning, and structured recovery strategies.

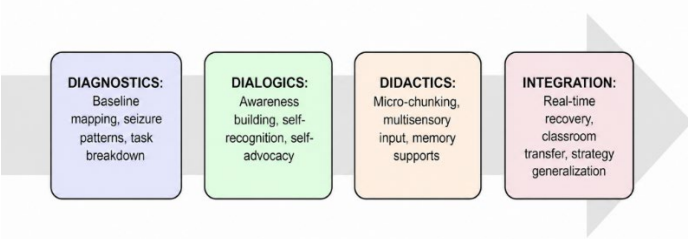


Figure 1. The 8-week Intervention Model (Process Flow)

Figure 1 illustrates the 8-week Intervention Model (Process Flow), which presents a structured and progressive framework for intervention implemented across four interconnected phases. The process begins with Diagnostics, where baseline mapping is conducted to identify the individual's presenting issues, behavioural patterns, triggers, and areas of functional breakdown [10]. This initial stage establishes a foundation for individualized intervention planning by clarifying strengths, challenges, and therapeutic priorities.

The second phase, Dialogics, emphasizes the development of awareness through dialogue, reflective understanding, emotional insight, and the promotion of self-advocacy [10]. Building on this foundation, the Didactics phase introduces explicit teaching strategies, including micro-chunking of information, multisensory approaches, and instructional supports designed to scaffold learning and behavioural adaptation [10].

Finally, the 3-D model culminates in Integration, where the focus shifts to real-time recovery, transfer of learned strategies, sensory regulation, and generalization of skills into daily contexts. Collectively, the model reflects a sequential yet dynamic intervention process that moves from assessment and awareness toward practical skill acquisition and sustainable functional application.

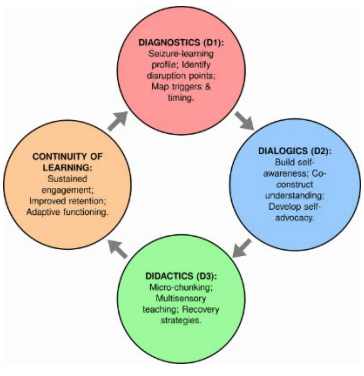


Figure 2. The 3-D Intervention Framework (Conceptual Model)

Figure 2 illustrates the 3-D Intervention Framework as a cyclical and integrated model designed to establish the continuity of learning through three interconnected phases: Diagnostics (D1), Dialogics (D2), and Didactics (D3) [10]. The framework begins with Diagnostics (D1), which involves systematically identifying the learner's profile, disruption points, triggers, and timing of difficulties in order to develop an informed understanding of the factors affecting learning engagement. Building

upon this foundation, Dialogics (D2) emphasizes collaborative and reflective interaction to cultivate self-awareness, co-construct understanding, and strengthen self-advocacy, thereby enabling learners to actively participate in interpreting their own experiences and needs. Subsequently, Didactics (D3) translates diagnostic insights and dialogic understanding into structured pedagogical action through micro-chunking, multisensory teaching, and recovery-oriented strategies tailored to the learner's functioning and readiness. The dynamic interaction among these three domains ultimately promotes the continuity of learning, characterized by sustained engagement, improved retention, and adaptive functioning, ensuring that intervention remains responsive, learner-centered, and continuously reinforced over time.

Table 1. CARE-Style Timeline of Clinical Course and Intervention

Time Point	Clinical Status / Context	Intervention	Observed Outcome
Pre-intervention (Baseline)	9-month history of frequent absence seizures; attention lapses and incomplete task performance; EEG confirmed generalized 3-Hz spike-and-wave discharges; on ethosuximide with partial seizure control	Baseline assessment: seizure-learning profile; cognitive screening (attention, working memory); collection of teacher and parent observations	Identified disruption patterns in task initiation, continuity, and retention; reduced academic consistency
Week 1	Initial engagement phase; limited insight into learning disruptions	Rapport building; introduction of seizure-learning profile; establishment of observation logs; child-friendly explanation of condition	Improved engagement; baseline diagnostic map established
Week 2	Persistent micro-disruptions during tasks	Task analysis (reading, math); identification of breakdown points; introduction of visual supports (step cards, task strips)	Clear identification of task breakdown patterns; early structural support in place
Week 3	Emerging awareness of missed information	Development of self-awareness through storytelling/drawing; introduction of self-monitoring cues and self-advocacy scripts	Increased recognition of missed content; initial use of self-advocacy
Week 4	Variable task recovery following interruptions	Co-construction of support strategies; implementation of personal signal system; alignment of teacher-parent-therapist responses	More consistent post-seizure recovery; improved support coordination
Week 5	Ongoing difficulty sustaining multi-step tasks	Introduction of task chunking ("First-Then-Next"); guided practice with immediate feedback	Improved task completion and reduced cognitive overload
Week 6	Retention inconsistencies following interruptions	Multisensory learning strategies (visual, kinesthetic, verbal); introduction of learning journal and session recap	Improved memory encoding and recall
Week 7	Need for real-world application	Practice of "Pause-Recover-Continue" strategy; simulated classroom scenarios; teacher implementation of reinforcement strategies	Increased independence in managing disruptions in classroom settings
Week 8 post-intervention	Improved but still variable attention and continuity	Reassessment of attention, task completion, retention; development of long-term accommodations; adjustment to support strategies alongside medication	Measurable improvement across all domains; increased independence and learning continuity

The intervention progressed from baseline assessment and rapport building to strategy development, classroom generalization, and consolidation of independent learning strategies.

3.5 Data Collection

Data were triangulated from multiple sources to enhance validity and depth of analysis, including the teacher observation logs that documented in-session and classroom behaviors, weekly developmental rubrics that tracked progress across key learning domains, the parent feedback that provided contextual insights into AA's functioning at home, and the relevant clinical and educational records that informed the understanding of AA's medical and academic background.

Adherence to the intervention was inferred from consistent session participation, engagement in structured activities, and progressive improvement across domains, while tolerability was evaluated qualitatively through the absence of distress and positive parent and teacher reports indicating emotional acceptance and sustained participation.

3.6 Outcome Measures and Analysis

AA's progress was evaluated across five domains: task initiation, task continuity, self-awareness, memory retention, and recovery after interruption (see Appendix A). Performance was assessed using a 5-point developmental scale (1 = not demonstrated to 5 = independent), with comparisons made between baseline and post-intervention functioning.

3.7 Ethical Considerations and Consent

Parental consent for assessment and intervention was obtained at the time of the original case in accordance with prevailing regulatory requirements. For the present report, all data have been anonymized. Reasonable efforts were made to re-establish contact with the patient's caregivers; however, these were unsuccessful.

4. RESULTS

4.1 Clinical Course and Outcomes

Across the 8-week intervention period (see Table 1), the patient demonstrated progressive improvement across all five functional domains (see Table 2) scored on an Observational Rating Scale (see Appendix A): task initiation, task continuity, self-awareness, memory retention, and recovery after interruption.

Table 2. Developmental Progression Across Key Domains (Weeks 1-8)

Week	Task Initiation	Task Community	Self-awareness	Memory Retention	Recovery After Interruption
1	2	1	1	2	1
2	2	2	1	2	1
3	3	2	2	2	2
4	3	3	3	3	2
5	4	3	3	3	3
6	4	4	3	4	3
7	4	4	4	4	4
8	5	4	4	5	4

At baseline, performance was most impaired in task continuity, self-awareness, and recovery after interruption, reflecting frequent seizure-related disruptions to ongoing cognitive processing. Following implementation of structured supports within the 3-D framework, a consistent upward trajectory was observed (see Table 2).

Task initiation improved from *emerging* (Score = 2) at Week 1 to *independent* (Score = 5) at Week 8. This change coincided with the early introduction of structured routines and visual cues (Weeks 1-2), suggesting improved readiness to engage with tasks.

Task continuity improved more gradually, from *not demonstrated* (Score = 1) to *consistent* (Score = 4). Gains became more evident after the introduction of micro-chunking and stepwise scaffolding (Weeks 4-5), which enabled the patient to complete tasks despite intermittent interruptions.

Self-awareness increased from *not demonstrated* (Score = 1) to *consistent* (Score = 4). By Week 3, the patient began verbalizing missed information (e.g., “I missed that”), and by Week 7 demonstrated consistent use of self-advocacy strategies introduced during the dialogic phase.

Memory retention showed marked improvement from *emerging* (Score = 2) to *independent* (Score = 5). This corresponded temporally with the introduction of multisensory encoding strategies and repeated retrieval practices (Weeks 5-6).

Recovery after interruption improved from *not demonstrated* (Score = 1) to *consistent* (Score = 4). By Week 7, the patient was able to independently apply the “pause-recover-continue” strategy with minimal prompting, indicating improved adaptive functioning in real-time learning contexts.

Overall, the greatest gains were observed in task initiation and memory retention, while task continuity and recovery improved more gradually. No adverse events were observed in AA after the intervention.

4.2 Triangulated Observations (Parent and Teacher Reports)

Qualitative feedback from both caregivers and the classroom teacher supported the observed quantitative improvements (see Appendix B). In addition, AA, normally very quiet, gave his only statement, “I now know when I miss something and can ask for help…”

Caregivers reported increased self-awareness, with the patient independently recognizing and verbalizing attentional lapses. Improvements were also noted in task initiation, with reduced need for prompting, and in homework engagement, which became more consistent and less distressing.

The classroom teacher observed improved task initiation and completion, particularly when structured supports (e.g., visual cues, task segmentation) were used. Gains in self-advocacy were evident through the patient’s increased ability to request clarification following missed information. Improvements in memory retention and post-interruption recovery were also noted, particularly following implementation of multisensory strategies and the “pause-recover-continue” routine.

Across the settings (at home and in class), consistent themes have been included:

- Increased independence in task engagement
- Improved recognition and management of learning disruptions
- Reduced frustration and improved emotional regulation

These observations were concordant with the developmental progression scores, supporting the internal consistency of findings.

5. DISCUSSION

This case illustrates that learning disabilities in Childhood Absence Epilepsy (CAE) may be more accurately understood as disruptions in cognitive continuity rather than deficits in underlying intellectual ability. The patient's baseline profile, characterized by age-appropriate intellectual functioning but difficulties with task persistence, information retention, and awareness of missed learning, supports the view that recurrent absence seizures interrupted the continuity of learning experiences rather than the capacity to learn itself. In this context, academic challenges did not appear to arise not from an inability to understand content. They were also the results of repeated interruptions in encoding, processing, and maintaining engagement with ongoing learning activities.

The findings suggest that absence seizures can create 'micro-disruptions' in learning that fragment instructional experiences [14]. Each interruption may result in missed information, incomplete processing of teacher instructions, or loss of task progression. When such disruptions occur repeatedly throughout the day, learners may struggle to connect information across lessons, maintain task continuity, and consolidate new knowledge into long-term memory. Consequently, behaviors commonly interpreted as inattention or poor concentration may instead reflect the cumulative effects of seizure-related interruptions in cognitive continuity.

The observed improvements correspond closely to the staged implementation of the 3-D framework. Early gains in task initiation aligned with diagnostic clarification and environmental structuring (D1), while subsequent improvements in self-awareness reflected the dialogic processes (D2) that supported metacognitive development. Importantly, the patient gradually developed the ability to recognize when information had been missed during an interruption and to seek clarification or repetition when necessary. This emerging self-awareness transformed the learner from a passive recipient of disruption into an active participant in learning recovery. Later gains in memory retention and task continuity coincided with the introduction of targeted instructional adaptations (D3), including multisensory encoding, task segmentation, and structured opportunities to revisit missed information.

The pattern of uneven but progressive gains, with faster improvement in task initiation and retention and slower progress in continuity and recovery, appears consistent with the known neurocognitive profile of CAE. Absence seizures primarily affect sustained attention and ongoing information processing rather than learning capacity itself [7,15]. Consequently, interventions may be most effective when they are designed to accommodate and remediate interruptions rather than assuming that all learning disabilities stem from attentional deficits or poor motivation.

This case also highlights the importance of integration across intervention components. The effectiveness of the framework appeared to depend not on any single strategy, but on the iterative interaction between diagnostic insight, learner awareness, and instructional adaptation. Diagnostic understanding helped to reframe apparent inattentiveness as neurologically based disruption; dialogic processes enabled the learner to understand and monitor these disruptions; and didactic adaptations provided practical mechanisms for recovering missed information and maintaining engagement. Together, these components supported the restoration of learning continuity despite the persistence of seizure-related interruptions.

A particularly significant outcome was the development of self-awareness and self-advocacy. As the patient became increasingly able to recognize moments when information had been lost or fragmented, he learned to request clarification, seek repetition of instructions, and use compensatory strategies to reconnect with the learning task. These skills reduced the likelihood that missed information would remain unnoticed and accumulate over time. The ability to actively recover lost learning may, therefore, represent an important mechanism through which educational interventions can mitigate the academic impact of CAE.

Findings from this case are consistent with existing literature emphasizing:

- the role of individualized, neurologically informed assessment in guiding intervention;
- the importance of metacognitive and socio-constructivist approaches in developing learner agency;
- the effectiveness of multisensory and structured instructional strategies in supporting memory and attention under conditions of cognitive disruption; and
- the value of fostering self-awareness and self-advocacy skills that enable learners to recognize and compensate for seizure-related interruptions in learning.

5.1 Clinical and Educational Implications

This case suggests several implications for practice:

- Apparent 'inattention' in CAE should be interpreted as neurologically driven interruption of learning continuity rather than behavioral disengagement.
- Educational assessment should consider the cumulative impact of repeated missed moments of instruction, not solely observable attention-related behaviors.
- Effective intervention requires integration of medical and educational perspectives to address both seizure management and learning recovery.
- Task segmentation, multisensory instruction, and structured review opportunities can mitigate the impact of transient disruptions in information processing.
- Supporting self-awareness and self-advocacy is critical because these skills enable learners to recognize missed information and actively recover lost learning.
- Consistency across home, school, and therapeutic contexts enhance opportunities for maintaining learning continuity and reinforcing compensatory strategies.

5.2 Limitations

This report describes a single case, limiting generalizability. The 8-week duration restricts conclusions regarding the long-term sustainability of observed improvements. Outcomes were based partly on observational ratings, which may introduce subjectivity despite triangulation. In addition, concurrent pharmacological treatment (ethosuximide) [3,6] may have contributed to improvements independently of the intervention. Contextual variables, including classroom environment, teacher practices, and caregiver support, were not controlled. Future research involving larger samples and longitudinal follow-up is needed to determine the extent to which interventions focused on restoring learning continuity and developing self-advocacy skills can support educational outcomes in learners with CAE.

6. CONCLUSION

In this case of AA, an 11-year-old with Childhood Absence Epilepsy (CAE), learning disabilities were primarily driven by interruption-related attentional lapses rather than reduced cognitive capacity. A structured 8-week intervention based on the 3-D framework was associated with meaningful improvements in task initiation, memory retention, self-awareness, and recovery after disruption, while gains in task continuity were slower but observable. A plausible scientific rationale is that frequent, brief absence seizures transiently disrupt thalamocortical network activity underlying sustained attention and working memory, leading to repeated breaks in encoding and consolidation rather than a global deficit in ability; cumulative effects of these interruptions, along with factors, such as medication-related cognitive slowing, fluctuating vigilance, and metacognitive under-recognition of lapses, may further compound learning disabilities. Within the 3-D framework, intervention strategies (e.g., task segmentation, multisensory encoding, and explicit recovery cues) likely support re-engagement, strengthen redundant encoding pathways, and compensate for disrupted attentional continuity, while fostering self-awareness and self-advocacy enhances adaptive regulation and independence. This case underscores the importance of aligning clinical insight with adaptive

educational design, although larger studies with longer follow-up are needed to confirm generalizability and durability.

7. ACKNOWLEDGEMENT

None.

8. COMPETING INTERESTS

The authors have declared that no competing interests exist.

9. FINANCIAL DISCLOSURE

No funds obtained.

10. ARTIFICIAL INTELLIGENCE DISCLOSURE

During the preparation of this manuscript, the authors used ChatGPT for language editing and formatting support. All content was reviewed and edited by the authors, who take full responsibility for the final version of the manuscript.

11. DATA AVAILABILITY STATEMENT

Not applicable. No primary data were generated or analysed in this study.

12. ETHICS APPROVAL

This report describes an archived 2007 case of Childhood Absence Epilepsy (CAE) from the now-defunct Centre for Exceptional Children. Written parental consent for assessment and intervention was obtained at the time in accordance with prevailing regulatory requirements, including the Personal Data Protection Act (PDPA). All data in the present report have been anonymized. Reasonable efforts were made to re-establish contact with the patient's primary caregivers/guardians; however, these attempts were unsuccessful.

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APPENDIX A

OBSERVATIONAL RATING SCALE (Weeks 1–8 Progression)

Below is an observational rating scale to measure the weekly progression into behaviorally anchored descriptors, so each rating (1–5) is observable and measurable across the five domains.

Rating Levels (Applied Across All Domains)

- 1 – Not Demonstrated: Skill is absent even with support
- 2 – Emerging: Skill appears inconsistently; requires significant prompting
- 3 – Developing: Skill is evident with moderate support; partial independence
- 4 – Consistent: Skill is performed reliably with minimal prompting
- 5 – Independent/Generalized: Skill is performed independently across contexts

Instructions for Completing the Observational Rating Scale:

1. Observe the learner during task engagement: Focus on naturally occurring behavior during structured or routine learning activities. Observe across the full session where possible.
2. Rate each domain independently: For each domain (Task Initiation, Task Continuity, Self-Awareness, Memory Retention, Recovery After Interruption), consider only the behaviors relevant to that domain.
3. Select the rating that best matches observed behavior: Read the descriptors for levels 1 to 5, then:
   - ❖ Circle or tick ONE rating per domain
   - ❖ Choose the level that most closely reflects the learner's typical performance, not isolated incidents
4. Base ratings on consistent behavior
   - ❖ Prioritize behaviors that occur more than once during the observation period
   - ❖ Avoid overrating based on a single strong or weak instance
5. Consider level of support provided: Take into account the amount of prompting or assistance required:
   - ❖ More support = lower rating
   - ❖ Greater independence = higher rating
6. Account for interruptions (if applicable): If interruptions occur (e.g., seizures, distractions), rate based on how the learner responds and recovers, not just the interruption itself.
7. Add brief notes (optional but recommended): Record examples or contextual factors (e.g., type of prompts used, duration of engagement, specific strategies observed).
8. Complete ratings regularly
   - ❖ Ideally, complete the scale at the end of each session or weekly
   - ❖ Use repeated ratings to monitor progress over time

Example of rating method:
Task Initiation: 1 2 3 4 5
(*Circle 3 if the learner initiates tasks with occasional prompting*)

Scoring reminder:

- There are no "right" or "wrong" scores
- The goal is to capture accurate, objective observations
- When unsure between two levels, select the lower rating unless the higher level is consistently demonstrated

Domain-Specific Behavioral Indicators:

1. Task Initiation

- 1: Does not begin tasks even with repeated prompts
- 2: Begins tasks only after frequent verbal/physical prompting
- 3: Initiates tasks with occasional prompting or visual cues
- 4: Initiates tasks independently in familiar routines
- 5: Independently initiates tasks across settings without prompts

2. Task Continuity
   - 1: Unable to sustain engagement; tasks remain incomplete
   - 2: Engages briefly but frequently disengages; requires constant redirection
   - 3: Sustains engagement for short periods; completes simple tasks with support
   - 4: Maintains engagement and completes tasks with minimal interruptions
   - 5: Sustains attention and completes multi-step tasks independently

3. Self-Awareness
   - 1: Shows no awareness of errors or missed information
   - 2: Rarely recognizes mistakes even with prompting
   - 3: Identifies errors or gaps when prompted
   - 4: Independently recognizes and verbalizes learning gaps
   - 5: Consistently self-monitors and applies self-advocacy strategies

4. Memory Retention
   - 1: Unable to recall recently presented information
   - 2: Recalls limited information with significant prompting
   - 3: Recalls information with cues or repetition
   - 4: Retains and retrieves information with minimal support
   - 5: Independently retains and applies information across sessions

5. Recovery After Interruption
   - 1: Unable to resume task after interruption
   - 2: Resumes task only with full guidance
   - 3: Resumes task with prompting or structured support
   - 4: Independently resumes task with minimal cues
   - 5: Quickly and independently resumes tasks using strategies

Optional: Observational Use Guide

- Frequency of rating: At least once per session or weekly
- Evidence sources: Direct observation, task completion, verbal responses
- Scoring method: Rate each domain (1-5) and track progression over time (e.g., weekly charting as in your dataset)
- Interpretation:
  - ✓ Movement from 1→3 = Acquisition phase
  - ✓ Movement from 3→4 = Stabilization
  - ✓ Movement from 4→5 = Generalization

APPENDIX B

1. Patient Feedback (Post 8-Week Intervention)

Patient Feedback: “I now know when I miss something and can ask for help…”

2. Parent Feedback (Post 8-Week Intervention)

Parent Feedback Sample 1 (Mother): “We have noticed that AA is now more aware when he ‘misses something.’ Previously, he would just remain quiet and confused, but now he tells us, ‘I think I blanked out.’ At home, he is also more willing to ask us to repeat instructions, which is a big change from before. His homework time is smoother, with fewer frustrations.”

Parent Feedback Sample 2 (Father): “AA seems more confident starting his work independently. Earlier, he needed constant reminders to begin tasks, but now he often starts on his own, especially when tasks are broken into smaller steps. We also see that he remembers instructions better, even after short interruptions.”

Parent Feedback Sample 3 (Combined Parents): “The strategies taught during therapy, especially the ‘pause-recover-continue’ approach, have been very helpful. After a seizure, AA is now able to return to his task instead of giving up. This has reduced his anxiety and improved his overall attitude toward learning.”

Parent Feedback Sample 4 (Home Generalization): “We see improvements beyond academics. AA is more communicative about his learning needs and seems less frustrated. He also uses some of the techniques independently, such as repeating information aloud or checking back on missed steps.”

3. Teacher Feedback (Post 8-Week Intervention)

Teacher Feedback Sample 1 (Classroom Teacher): “AA shows noticeable improvement in task initiation. He now begins assignments with minimal prompting, particularly when visual supports or step-by-step instructions are provided. This is a significant change from earlier observations where he required repeated cues.”

Teacher Feedback Sample 2 (on Task Continuity): “While AA still experiences interruptions due to absence seizures, his ability to sustain task engagement has improved. The use of micro-chunking strategies allows him to complete tasks in smaller segments, which has increased his overall task completion rate.”

Teacher Feedback Sample 3 (on Self-Awareness & Advocacy): “AA has become more self-aware of his learning gaps. He now signals when he has missed information and appropriately asks for clarification. This reflects strong progress in his self-advocacy skills, which were previously absent.”

Teacher Feedback Sample 4 (on Memory & Learning Retention): “There is clear improvement in AA’s ability to retain and recall information. Multisensory strategies (e.g., visual aids and repetition) appear to support his learning effectively despite intermittent disruptions.”

Teacher Feedback Sample 5 (on Recovery After Interruption): “AA is now able to resume tasks after interruptions with minimal prompting. The ‘pause-recover-continue’ routine has been particularly effective in helping him re-engage in classroom activities.”