

Case Study: Increasing Engagement, Communication, and Teachability in a Toddler with ASD Using Play-Based Behaviour Intervention

Keywords

Autism Spectrum Disorder; Functional Communication; Behaviour Support; Early Intervention; Engagement; Toddler; Learning; Play-Based

Background

Mia commenced therapy at Eureka Learning Centre in November 2022 at 3 years of age. She presented with significant delays across communication, social engagement, play, and self-help skills, alongside a pattern of challenging behaviours that impacted her ability to participate in daily routines. Mia attended therapy consistently for three years, supported by a multidisciplinary team and her family. She was discharged in December 2025 following meaningful progress across communication, regulation, and independence.

Assessment Framework

Mia's program was guided by:

VB-MAPP (Verbal Behavior Milestones Assessment and Placement Program)

Used to assess:

- communication
- social behaviour
- imitation
- listener responding
- learning readiness
- barriers to learning

VB-MAPP Results:

- Milestones: 7.5 (Dec 2022)
- Barriers: 90 (Dec 2022)

These results indicated:

- foundational but emerging communication and learning skills
- significant barriers impacting participation
- strong potential for growth with structured intervention

Clinical Observations & Team Meetings

Across 2023–2025, Mia’s team documented:

- improvements in communication
- reductions in challenging behaviours
- increased engagement in structured learning
- progress in toileting and self-help routines

Session Data

Daily session notes captured:

- frequency and function of behaviours
- progress across programs
- toileting successes and challenges
- communication gains
- sensory regulation needs

Intervention Goals

Mia’s goals were developed collaboratively with her family and informed by VB-MAPP results, clinical observations, and her developmental profile.

Communication

- Develop functional requesting using pointing, key word sign, and verbal approximations
- Increase spontaneous vocalisations and echoics
- Improve receptive understanding of instructions
- Expand expressive vocabulary

Behaviour Regulation

- Reduce headbanging, spitting, throwing, and absconding
- Increase tolerance for transitions and adult-led tasks
- Develop alternative communication to replace challenging behaviours

Learning & Cognitive Skills

- Improve attention to tasks
- Develop imitation skills
- Increase independence in structured activities
- Build early academic foundations (matching, tracing, cutting)

Social & Play Skills

- Increase engagement in social routines
- Develop parallel play and emerging peer interaction
- Improve joint attention

Self-Help & Independence

- Increase toileting participation and success
- Improve dressing and hand-washing routines
- Increase independence in eating routines

Intervention Approach

Mia's program used a combination of:

1. Applied Behaviour Analysis (ABA)

- Discrete Trial Teaching (DTT)
- Natural Environment Teaching (NET)
- Functional Communication Training (FCT)
- Skill-Based Treatment (SBT) for behaviour reduction
- Prompting hierarchies and systematic fading

2. Total Communication Approach

- Key Word Sign (KWS)
- Pointing
- PECS (early phases)
- Vocal modelling
- Song-based routines

3. Sensory Regulation

- Movement breaks
- Deep pressure
- Walking circuits
- Access to preferred sensory items
- Environmental adjustments

4. Toileting Program

- Visual timers
- Transition videos
- Reinforcement (Jumpees, songs)
- Gradual desensitisation
- Structured intervals

5. Parent Collaboration

- Regular team meetings
- Home strategies for toileting, communication, and behaviour
- Consistent reinforcement systems

Outcomes

By discharge in December 2025, Mia demonstrated meaningful progress across all developmental domains.

Communication

- Increased verbal repertoire (e.g., “more”, “no”, “water”, “Daddy finger”, “ABC”)
- Consistent use of pointing and KWS
- Improved ability to request, protest, and comment
- Increased engagement in songs and routines
- Improved receptive understanding

Behaviour Regulation

- Reduced frequency and severity of headbanging, spitting, and throwing
- Increased tolerance for transitions and demands
- Improved ability to regulate with sensory strategies
- Greater use of communication instead of behaviours

Learning & Cognitive Skills

- Improved attention to tasks
- Mastery of multiple ITC activities
- Improved matching, imitation, and early academic skills
- Emerging tracing and cutting skills

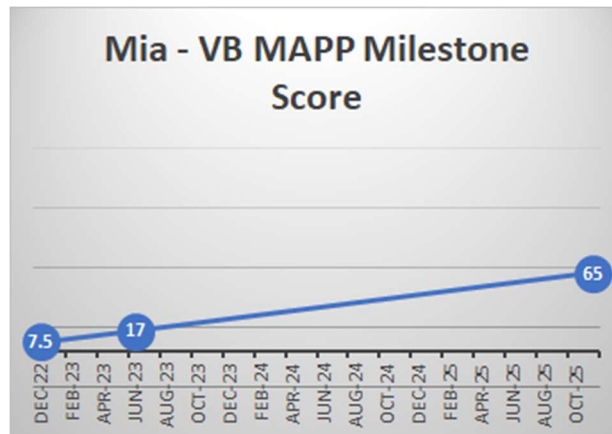
Social & Play Skills

- Increased engagement in social songs
- Improved tolerance of peers
- Emerging social reciprocity
- Functional pretend play with support

Self-Help & Independence

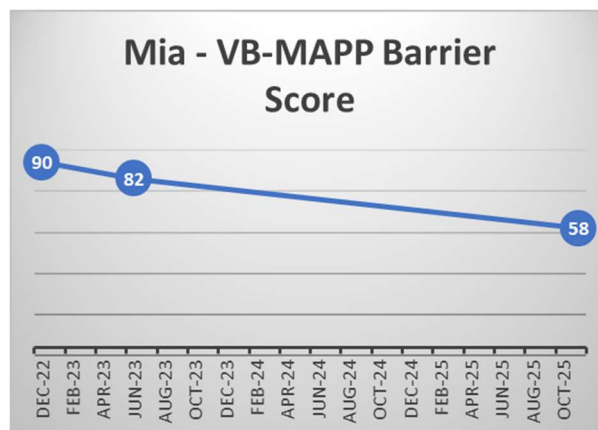
- Consistent wees in toilet
- Improved transitions to bathroom
- Partial independence removing pants
- Completed most hand-washing steps
- Improved eating routines with reduced spitting

VB-MAPP Milestone Score - Mia



Mia showed steady and significant growth in her foundational communication and learning skills, increasing her VB-MAPP Milestones score from 7.5 (Dec 2022) to 17 (Jun 2023), and reaching 65 by late 2025. This reflects major gains in engagement, imitation, receptive understanding, and early expressive communication.

VB-MAPP Barrier Score



Mia's VB-MAPP Barriers score reduced from 90 (Dec 2022) to 82 (Jun 2023), and further to 58 by late 2025. This reduction indicates improved regulation, fewer behaviour-based obstacles to learning, and increased readiness for structured tasks and daily routines.

Discussion

Mia's progress reflects the effectiveness of a structured, consistent, and highly individualised intervention program. Her early challenges — including limited communication, high behavioural needs, and resistance to toileting — required a comprehensive approach combining ABA, sensory regulation, and total communication strategies.

Over time, Mia demonstrated:

- increased engagement
- improved communication
- reduced challenging behaviours
- greater independence
- stronger learning readiness

Her progress was supported by:

- consistent attendance
- strong family involvement
- a responsive therapy team
- structured routines
- clear reinforcement systems

While Mia continued to require support for complex instructions, emotional regulation, and toileting independence, she left the program with a significantly stronger foundation for school readiness and daily living.

Conclusion

During her three years at Eureka Learning Centre, Mia made substantial gains across communication, behaviour regulation, learning, and independence. She transitioned from limited functional communication and high behavioural needs to a child who could request using words and signs, participate in structured learning, engage in social routines, and complete many self-help tasks with support. Mia's growth reflects her resilience, her family's commitment, and the effectiveness of a structured, evidence-based intervention program. At discharge in December 2025, Mia demonstrated increased confidence, engagement, and independence across her daily routines.

Disclaimer:

This case study reflects the experience of one child. Outcomes vary based on individual strengths, needs, and circumstances. No guarantee of similar results is implied.