

“More to say:” enabling functional communication through aided language stimulation for a child with Autism.

Haylee Parfett
Speech Pathologist



“I acknowledge the support of the Centre for Research Excellence in Cerebral Palsy in the form of a Travel Scholarship, which enabled me to attend this conference.”

Challenges in communication for children with Autism Spectrum Disorders (ASD)

- ▶ All people diagnosed with ASD will experience a communication impairment of some type.
- ▶ Interventions that address the critical skills of functional communication are widely recommended (National Research Council, 2001).
- ▶ This includes providing access to and opportunities to learn;
 - how to express needs, wants, opinions, complaints, protests, feelings, and preferences
 - to express themselves without resorting to problem behaviour or experiencing communication breakdown
 - to generate messages which are easily understood by familiar and unfamiliar communication partners
 - modes of communication which are used in a generalised manner over time (Mirenda, 2003)

Commonly held assumptions about children with ASD

- ▶ It is documented that people with ASD who are non-verbal are failing to achieve successful interactions and valued outcomes (Light & McNaughton, 2015).
- ▶ Researchers suggest that this is often due to a range of commonly held assumptions which have now been disproved by research:
 - too 'low functioning' or cognitively disabled to communicate
 - behaviors must first be under control
 - nothing to communicate - no 'intentional' communication
 - only capable of communicating to request or label (Cafiero, 2010).
- ▶ Assumptions often result in the provision of interventions focused on basic life skills and the use of AAC to make simple requests and terminate or avoid items (Mirenda, 2008).

“There is more to life than cookies!”

(Light, Parsons, & Drager, 2002, p.187)

Brodie: Starting his journey towards functional communication

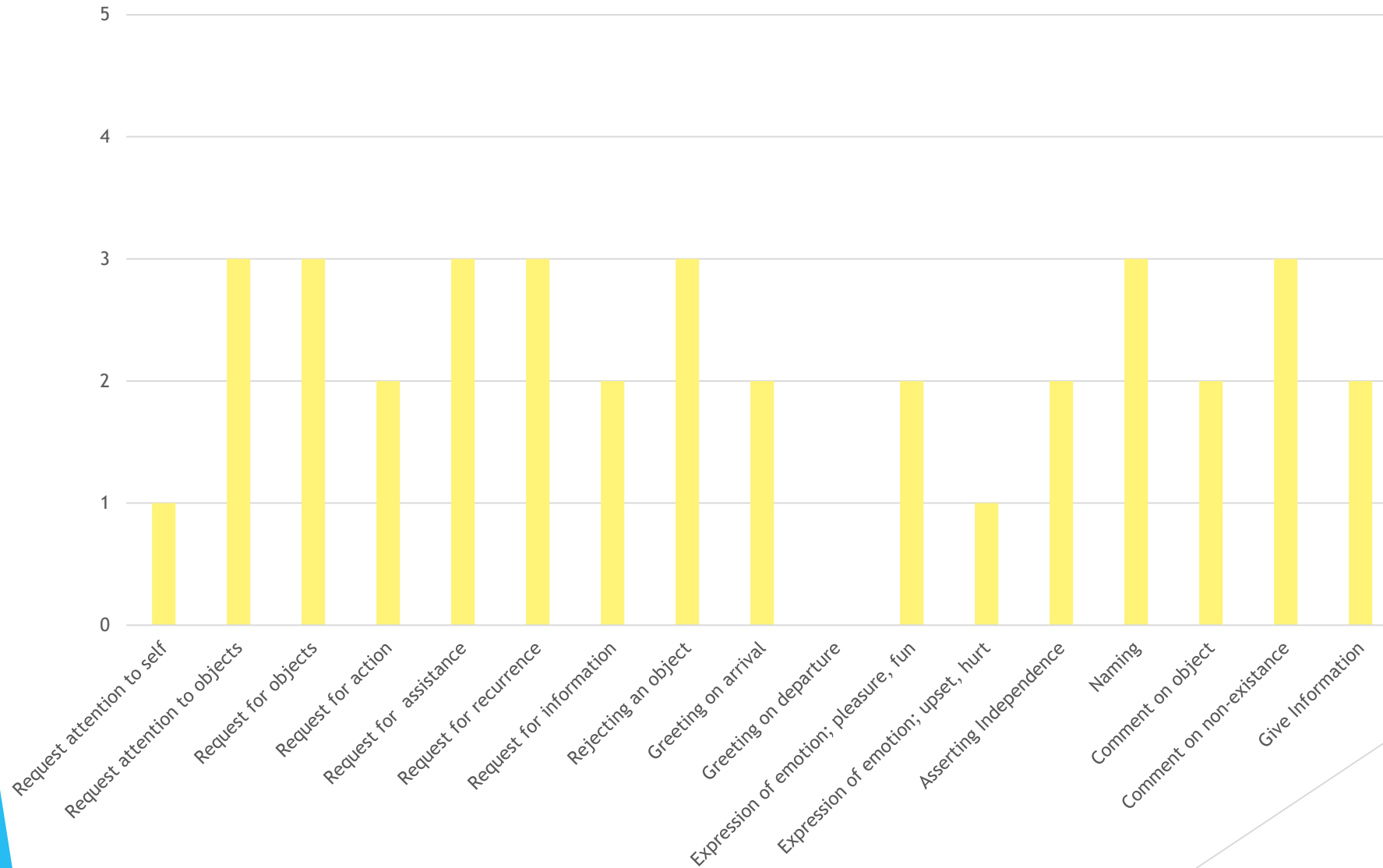
- ▶ Referred by his Paediatrician in May 2014, aged 7;5 years
- ▶ Diagnosed with:
 - Autism and a possible undiagnosed neurodisability
 - Global Developmental disability with presumed moderate intellectual disability
- ▶ Brodie also presented with:
 - challenging behaviours eg. kicking, hitting, pinching
 - severe sensory processing challenges
 - highly restricted, fixated interests
 - delays in fine and gross motor skills

Barriers to achieving functional communication

- ▶ Brodie is non-verbal and relied on informal modes of language for communication
- ▶ Attempts at communicating often resulted in breakdowns
- ▶ Limited access to quality educational programs
 - Placed in a high needs classroom (low expectations?)
 - Reported to have made no academic or social progress over 3 years
- ▶ No access to comprehensive communication systems
 - PECS presented as the only option for developing communication
 - Brodie's parents had been told that he was 'not ready' for any other communication system

Baseline communication skills

Dewart and Summers Pragmatics Profile, June 2014



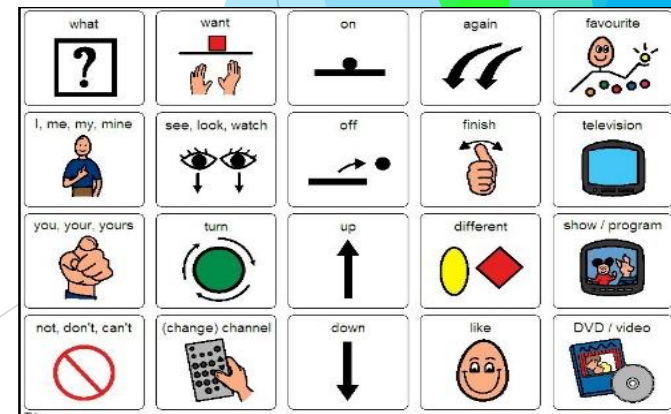
- 5. Sound/letter modes
- 4. Whole word modes
- 3. Conventional gesture
- 2. Informal modes - directed to partner
- 1. Informal modes - not directed to partner
- 0. Function not observed

Developing a shared understanding with key communication partners

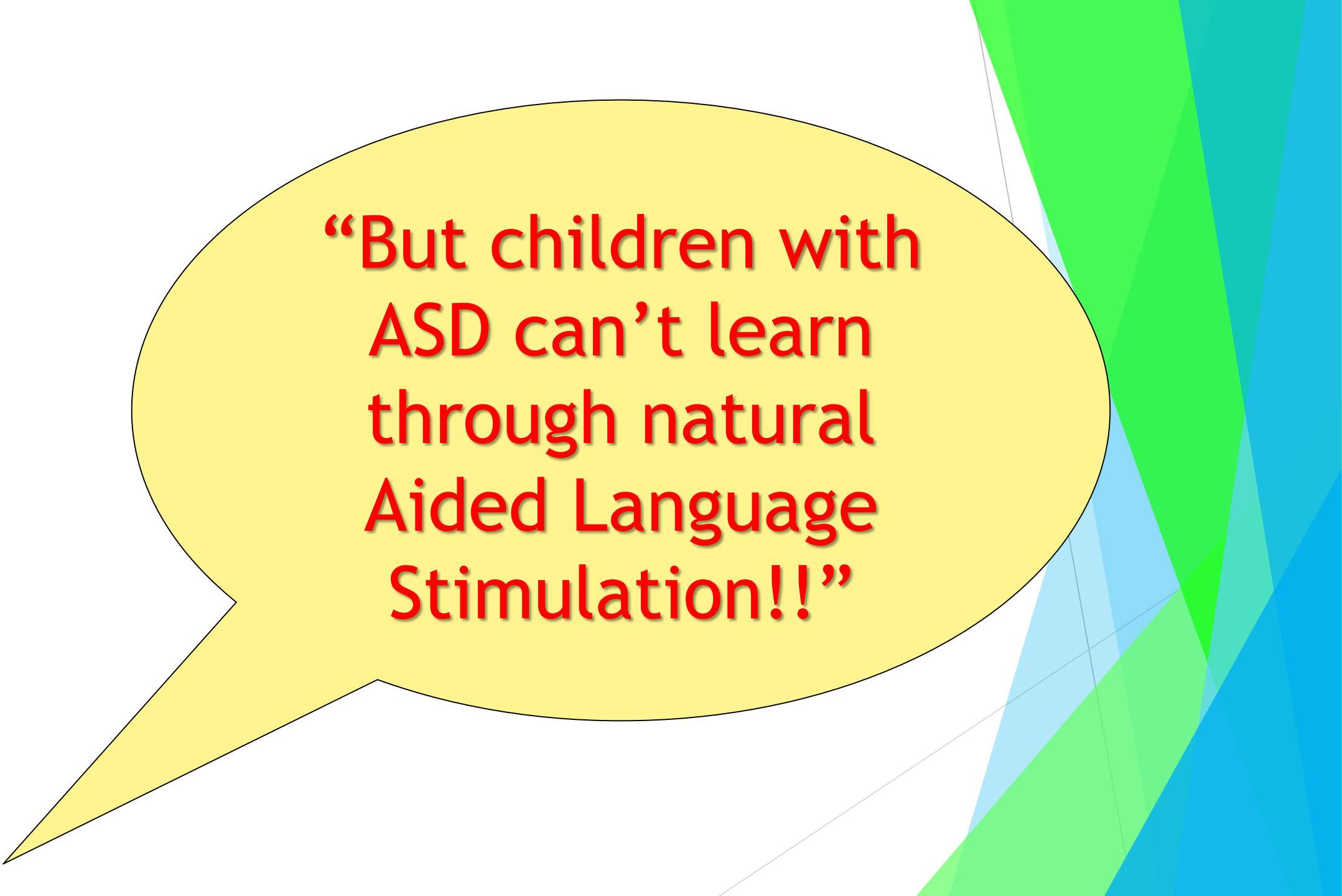
- ▶ Brodie needed access to a robust language system to enable him to develop functional communication
- ▶ For the success of any AAC intervention it is recommended that all partners have an understanding of the need for:
 - Communication autonomy
 - Communication accessibility

June 2014: Aided language intervention. Starting small and giving it a go!

- ▶ The environment was engineered to enable communication partners to provide aided language for learning:
 - General Interactive Aided Language Display (ALD) to develop the HABIT.
 - Activity based ALD's for routines and activities around the home eg. watching TV, having a bath.
- ▶ Brodie's parents were shown how they could use the ALD's to provide aided language stimulation for a wide range of purposes in naturally occurring contexts and environments.



(Chat Now, Scope, 2014)



**“But children with
ASD can’t learn
through natural
Aided Language
Stimulation!!”**

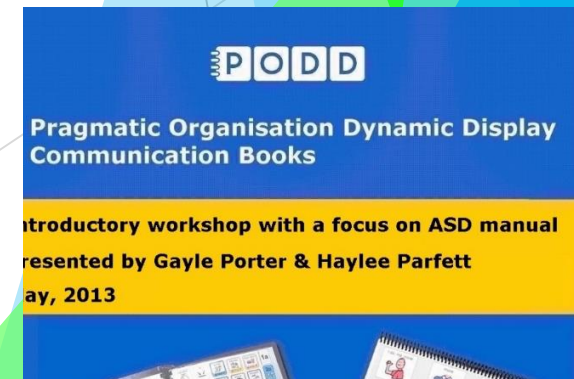
ASD and Aided Language Stimulation

- ▶ Studies have indicated that children with ASD can learn motor imitation and language concepts from observing adults and peers (Egel et al., 1981; Varni et al., 1979, as cited in Mirenda, 2014 ISAAC Pre-conference Workshop)
- ▶ Studies utilising natural aided language stimulation with children with ASD have shown improvements in:
 - symbol comprehension
 - symbol production
 - turn taking skills
 - syntax

“...there appears to be a small but growing evidence base for the use of modeling interventions with individuals with ASD.”
(Drager, 2009)

A robust language system to enable Aided Language Stimulation

- ▶ A PODD communication book with 40 symbols on a page was selected and trialled with Brodie.
- ▶ How to use the PODD book to model, scaffold and expand Brodie's language was demonstrated.
- ▶ The PODD template was heavily customised to provide vocabulary to interact around his interests.
- ▶ Brodie was provided with lots of opportunities to practice and receive corrective feedback.



Processes of aided language acquisition

- ▶ Varying comprehension of spoken language by children with complex communication needs
- ▶ Two main developmental paths for acquiring aided language
 1. Intact comprehension of speech. Aided form is mapped onto an existing understanding of a language concept.
 2. Very limited or no comprehension of spoken language. Acquire a communication system without reference to spoken language. Independent creation of a meaning system with AAC language forms.

(see von Tetzchner & Grove 2003)

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Brodie has “More to Say!”

Intervention:

- ▶ Used Brodie’s mode of communication to interact
- ▶ Attributed meaning to his messages
- ▶ Expanded his messages using his modes to develop additional language skills
- ▶ Acknowledged and valued his multi-model communication

Observations:

- ▶ Initiated communication using conventional gesture
- ▶ Demonstrated operational competencies
- ▶ Requested using multi-word utterances
- ▶ Deep pressure to shoulders often met sensory needs to enable attention

Brodie has even “More to Say!”

Intervention:

- ▶ Heavily customised PODD communication book
- ▶ Joint problem solving process to construct meaning
- ▶ Ongoing natural Aided Language Stimulation

Observations:

- ▶ Improved engagement and concentration
- ▶ More frequent initiations
- ▶ Broader range of communicative functions
- ▶ Improved topic maintenance
- ▶ Continuing to experience communication breakdowns due to lack of vocabulary

Access to Literacy Learning

- ▶ An IEP meeting was held in mid 2015 to explain and demonstrate to school staff how they could use Brodie's PODD book to develop his communication and literacy skills.
- ▶ Brodie is now placed in an academic classroom at his special school due to significant improvements in:
 - behaviour
 - communication
 - language skills
- ▶ Brodie is making remarkable progress in literacy and social skills and is now an early conventional reader and writer.

August 2015: Written Communication

On firday igoning
to crANBONRERACEING. CONCATY
RACEING. BRODIE will see horse
Raceing. 10 winer you and dad are
going home

On satrday and sunday i went
too noth land ontvisaw dealor
no deal brodie sayde home
mum and dad radabook spot

Reading Comprehension

How did Mrs Wishy Washy and the animals get to the beach?

On the sun shine tain (independent)

Name the characters in the story?

Animals cow pig duck Mr's Wishy Washy
(some verbal prompting)

What was not allowed on the seats?

Fett (independent)

What did the animals get sand on?

At the beach (independent)

What was the big tub? Water (verbal prompting)

What did they eat? Samwich (independent)

What did the animals do in the water?

Slplash in the wave (independent)

Spelling

GOLDEN WORDS

To and a of is was in it I the be
that

AQUA WORDS

Night for (four) fast dog shool
(school) wter (water) away
going tree wrok (work) keep
bird rund (round) thn(thing)
hand always let many peple
(people) take

PURPLE WORDS

Wish fer (far) how setp (step)
say find again room own
nother (mother) best to (too)
thes (these) man kind left ask
give w ak (walk) baing (bring)

A Mother's Observations

- ▶ **Conversations without frustration.** Once Brodie has got his message out he actually relaxes and is not on edge anymore.
- ▶ Brodie now has an ability to **communicate with others.** This was one of the very big things that has been an issue, now everyone can understand what he is talking about.
- ▶ Brodie's **behaviour is improving**; now he knows that if he wants to tell you something he can just get his book and he does.
- ▶ Brodie will **initiate conversation**; he will go get his book and tell you what he wants.
- ▶ Brodie would never usually concentrate on anything but PODD is a totally different story. He can tell you his message and **concentrate on the book** without a problem.

September 2015: Introducing a High-tech Communication Device

Intervention:

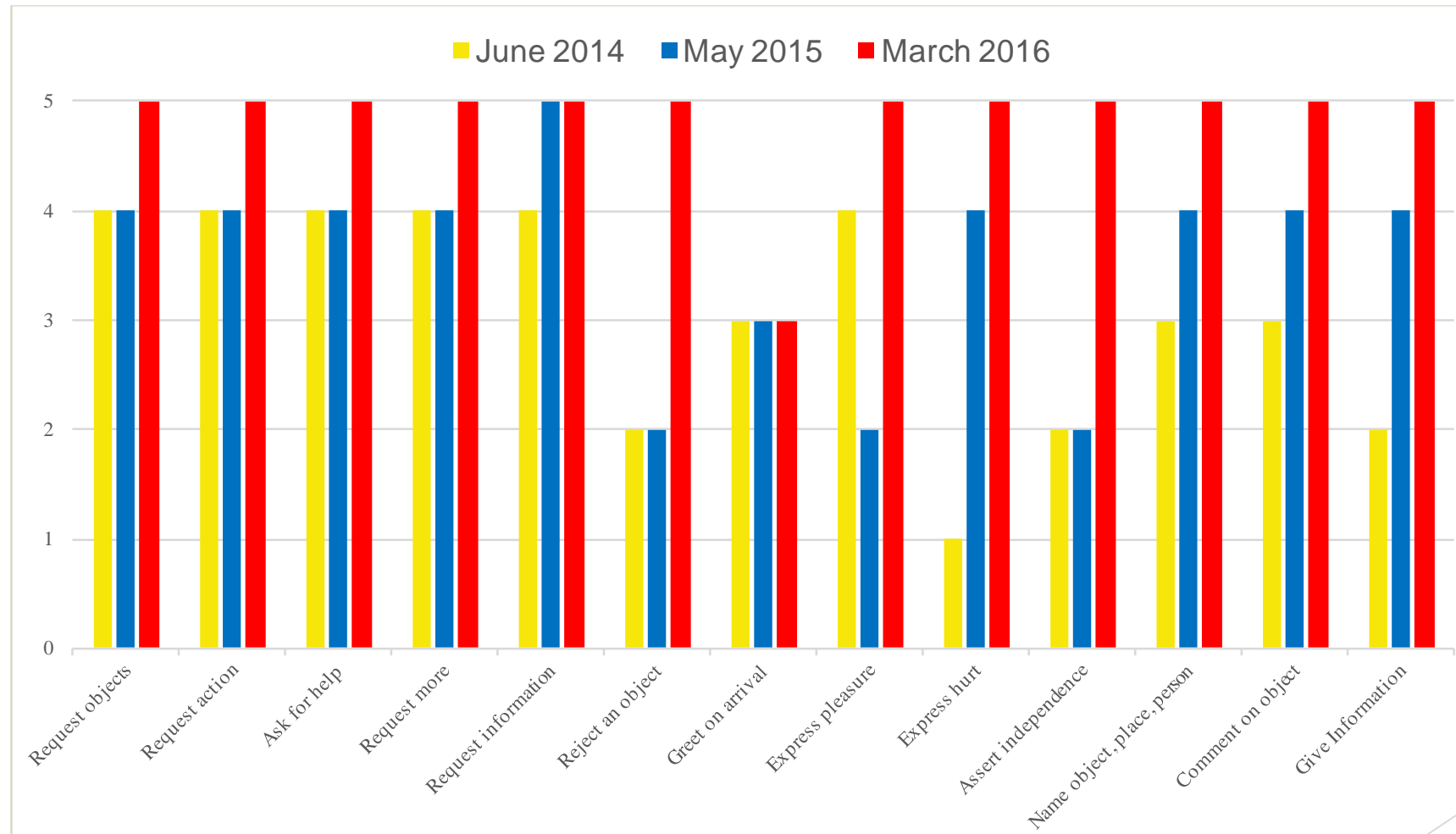
- ▶ Introduction of a Dynavox T10 device with PODD page set
- ▶ Ongoing natural Aided Language Stimulation using light-tech and high-tech modes
- ▶ Modelling of operational skills in electronic page set
- ▶ Encouraging spontaneity but utilising prompts and cues to support operational skill development

Observations:

- ▶ Quickly applied knowledge of light-tech PODD book to navigate through high-tech PODD page set
- ▶ Demonstrated understanding of the purpose of the message window, voice output and operational components (eg. delete, clear)
- ▶ Began to combine more words in his utterances
- ▶ Initiated communication with a wider variety of people

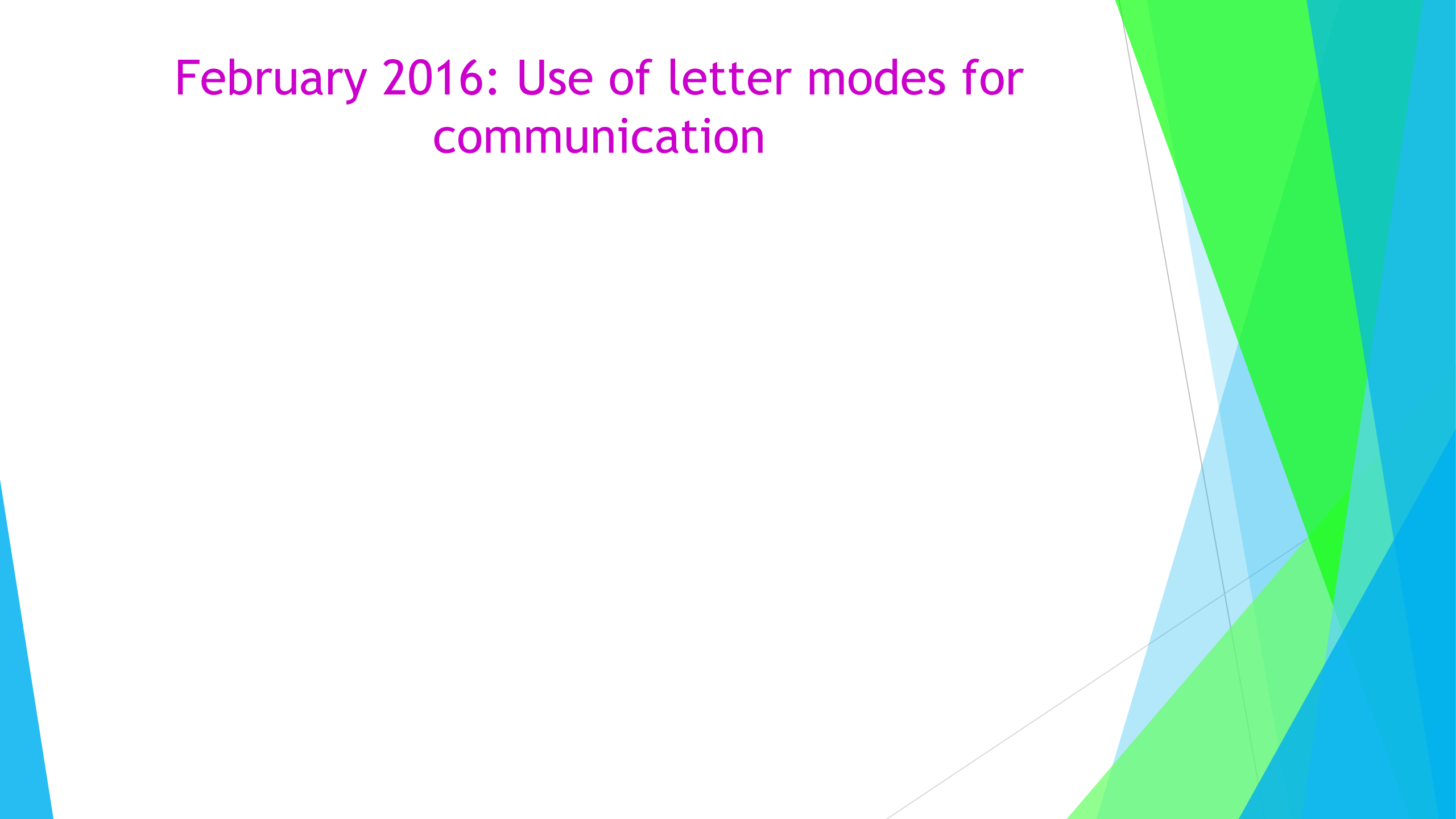
Communication Skills

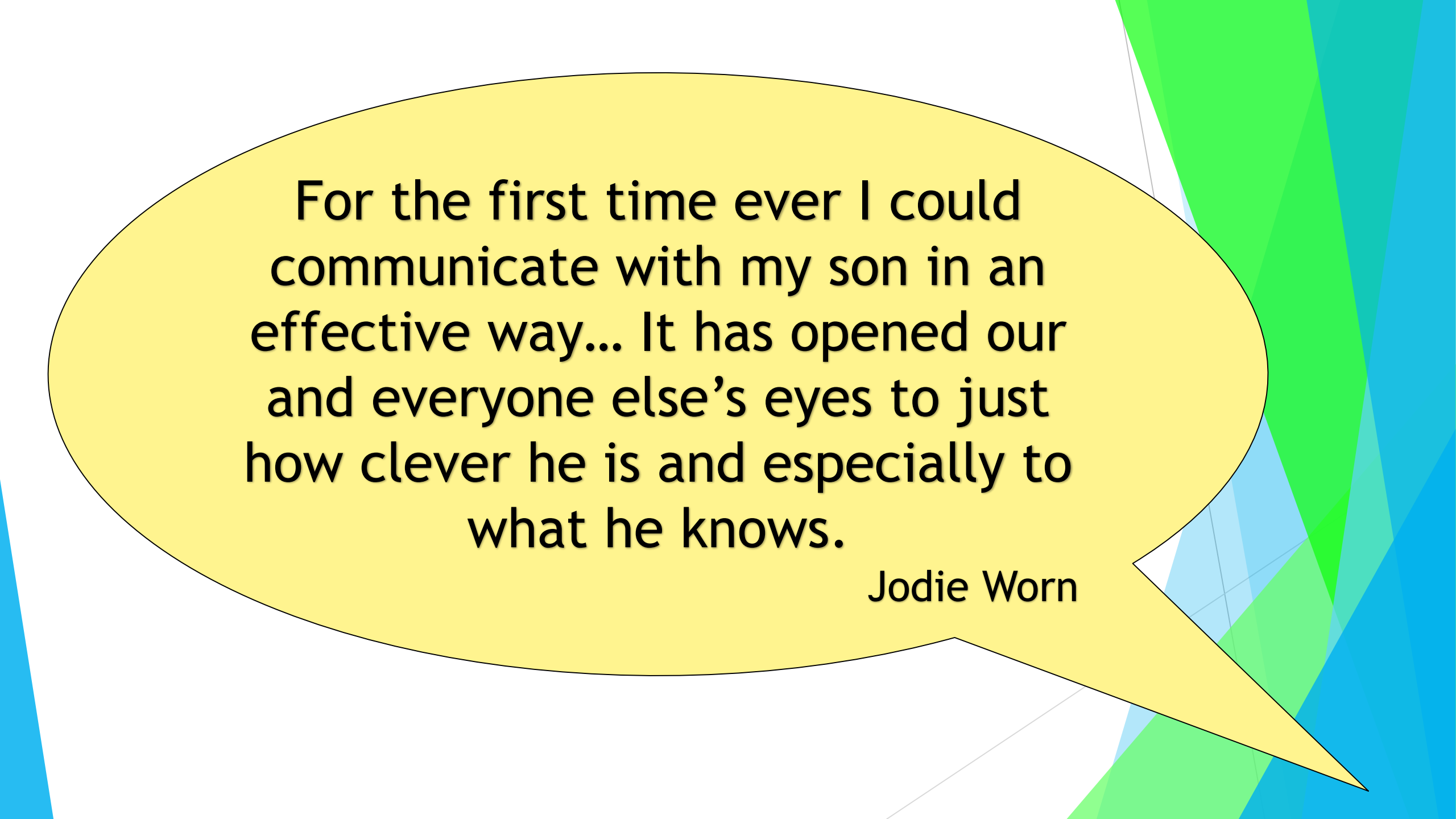
Dewart and Summers Pragmatics Profile



0. Function not observed. 1. Informal modes – not directed to partner. 2. Informal modes – directed to partner. 3. Conventional gesture. 4. Whole word modes. 5. Sound/letter modes

February 2016: Use of letter modes for communication





For the first time ever I could
communicate with my son in an
effective way... It has opened our
and everyone else's eyes to just
how clever he is and especially to
what he knows.

Jodie Worn



► haylee.parfett@gmail.com