



Jane Farrall
CONSULTING
Literacy - AAC - Assistive Technology

LANGUAGE, COMMUNICATION & AAC

Why are ALDs not enough?

WHAT IS “BEGINNING” AAC?

Frequently, families or professionals new to AAC hear the phrase “beginning” AAC system

Or, they are told that their individual with Complex Communication Needs requires a simple system because “they are a beginning communicator”

“BEGINNING” AAC

Unfortunately, the phrase “beginning” AAC often seems to be a euphemism for poor practice in AAC.

These systems often:

- only have a small number of words;
- have a heavy emphasis on nouns;
- use clip art or photographs;
- have fringe vocabulary arranged in categories;
- have limited options for expansion or customisation.

eat



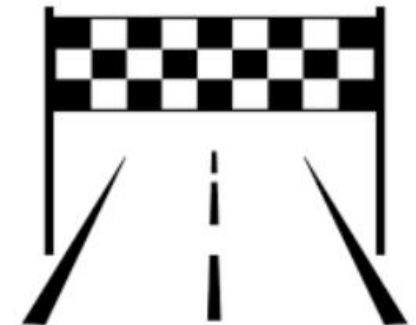
drink



toilet



finish



THIS IS NOT BEGINNING AAC

This does NOT promote language and communication development

This assumes prerequisites

This assumes lack of competence

This is NOT evidence based practice



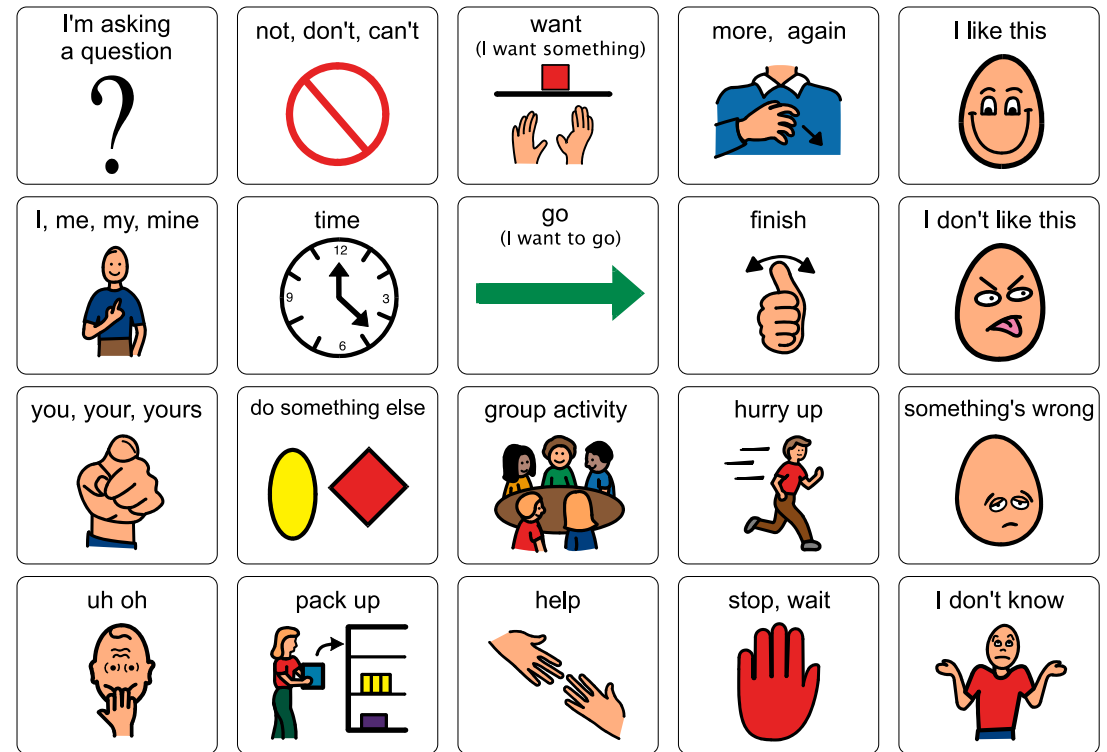
**always
always
always
always
presume
competence**

AAC

There are no basic prerequisites to communication beyond being conscious.
Likewise, there are no prerequisites to AAC.

(Augmentative Communication and Early Intervention. Myths and Realities, Ronski and Sevcik 2005)

WHAT IS BEGINNING AAC?



general interactive display

SYMBOLS

There is no evidence that the often referred to “symbol hierarchy” has any relevance in AAC implementation – or even that it operates as some people think it do (and as I was introduced to it in my speech pathology degree nearly 30 years ago).

Romski and Sevcik (2005) refer to this as one of the myths of “Augmentative Communication and Early Intervention”.

They summarise this myth with the statement “during early phases of development, it may not matter if the child uses abstract or iconic symbols because to the child they all function the same.”

Porter and Burkhart (2010) greatly expand on this, putting the case very strongly in terms of us needing to do aided language stimulation to help an individual learn what a symbol means.

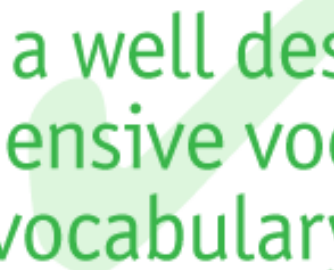
DaFonte et al (2008) agree that “there does not seem to be a hierarchy of aided-visual symbols” and add that “experience plays a significant role in learning aided-visual symbols and generalizing their usage”.



BEGINNING AAC

There is absolutely no need to limit ourselves to an AAC system that can manage objects or photographs when making AAC decisions – and those people that state that there is are subscribing to a myth

AMOUNT OF VOCABULARY



Do use a well designed,
comprehensive vocabulary
e.g. core vocabulary or POKD



Don't provide an AAC system
with only a handful of choices

REALLY?

“WE USED TO THINK: Start with just a few (4-6) picture symbols and add a few more at a time, as the student with ASD shows that he or she can communicate appropriately with them usually by requesting.”

“NOW WE THINK: Really? Where is the research that defends this practice? This is certainly not how other kids learn new words and acquire language”

Professor Pat Mirenda, ISAAC Portugal 2014

ROBUST VOCABULARY

For individuals to learn language, we need to provide not just a few picture symbols – but a wide range of symbols that:

- represent a robust vocabulary that supports them to learn how to put words together
- supports them to contribute in every situation and supports them to develop into an autonomous communicator.

This vocabulary needs to consist of a range of parts of speech – they need adjectives, verbs, adverbs, pronouns, prepositions, conjunctions, interjections, determiners and even some nouns (but go easy on the nouns).





BEGINNING AAC

There is no evidence to support starting with only a few symbols –and those people that state that there is are supporting a myth

COMMUNICATION

Occurs all day, every day, in every aspect of our life

Impacts greatly on our quality of life

It is fundamental in literacy development and for participation in education

And, most importantly, it is a human right (United Nations Universal Declaration of Human Rights, 1994)

AMOUNT OF VOCABULARY

For individuals to learn language, we need to provide not just a few picture symbols – but a wide range of symbols that represent a robust vocabulary that supports them to learn how to put words together, supports them to contribute in every situation and supports them to develop into an autonomous communicator.

This vocabulary needs to consist of a range of parts of speech – they need adjectives, verbs, adverbs, pronouns, prepositions, conjunctions, interjections, determiners and even some nouns. Try using a well designed core vocabulary system or Pragmatically Organised Dynamic Display (PODD)

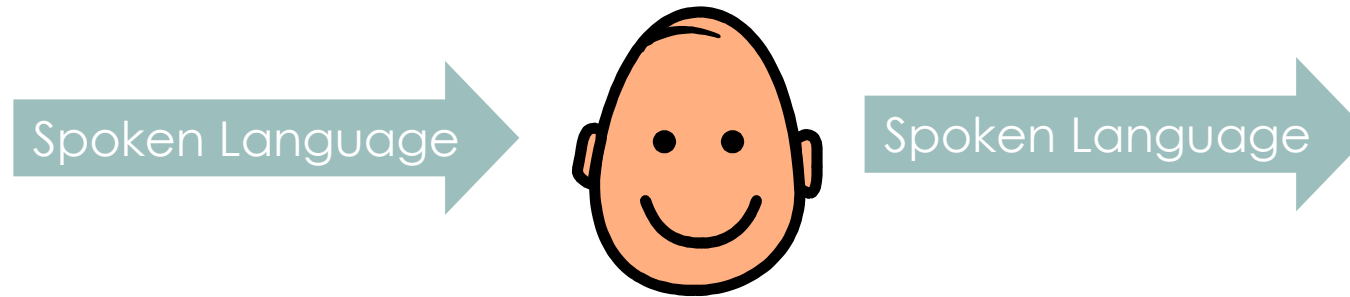
AIDED LANGUAGE

Important tool in AAC development – as well as receptive language development

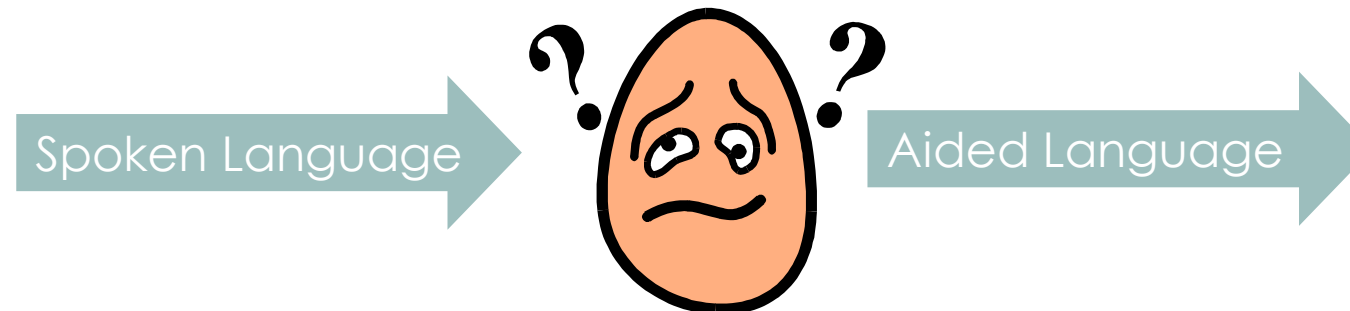
Input

Output

Spoken language development



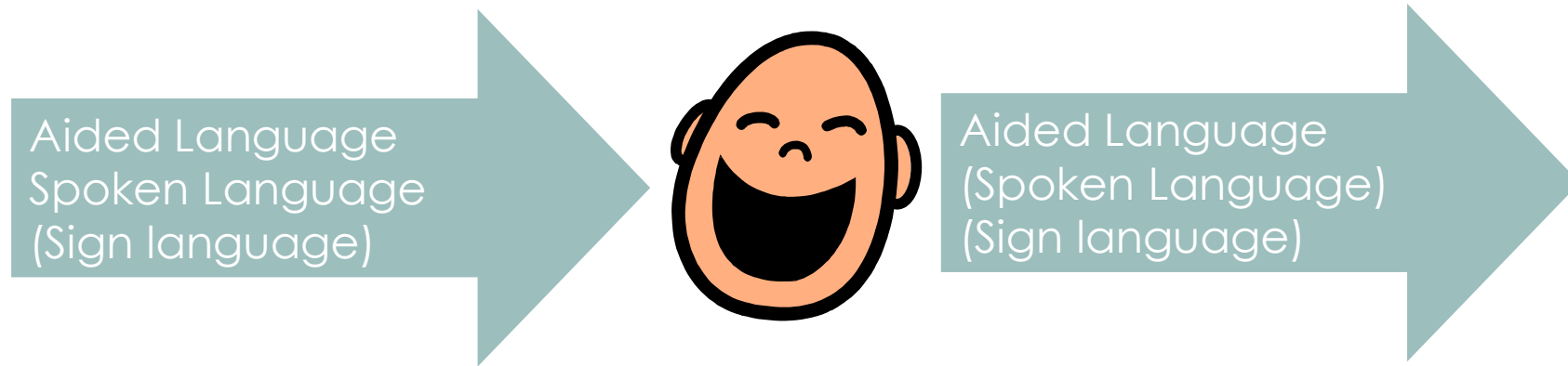
Child learning aided symbols



Input

Output

Child learning aided symbols



RATIONALE/ADVANTAGES OF AIDED LANGUAGE INPUT

Serves as a communication opportunity

Helps communication partners slow language down - Gives the learner a little longer to process and see the language as they learn it.

Helps communication partners to become competent with AAC system.

There is a solid research base showing its effectiveness and that it can be implemented by parents and educational assistants.

Helps show the importance of using the AAC System.

Helps teach language.



Binger & Light (2007)

Binger, Kent-Walsh, Ewing, & Taylor (2010)

Dada & Alant (2009)

Drager, Postal, Carrollus, Gagilano, & Glynn (2006)

Harris & Reichle (2004)

Kent-Walsh, Binger, & Hasham (2010)

Kent-Walsh, Binger, & Buchanan (2015)

RESEARCH EXAMPLES

RANGE OF OUTCOMES

Increases in:

the number of communicative turns (Kent-Walsh et al., 2010; Rosa-Lugo & Kent-Walsh, 2008)

the number of semantic concepts expressed (Kent-Walsh et al., 2010; Rosa-Lugo & Kent-Walsh), and

the number of multisymbol utterances produced (Binger et al., 2008; 2010).

Ability to ask inverted yes/no questions (Binger et al., 2015).



Sennott, S.C., Light, J., & McNaughton, D. (2016). AAC modeling intervention research review. *Research and Practice for Persons with Severe Disabilities*, 41, 101–15.

Allen, A. A., Schlosser, R. W., Brock, K. L., & Shane, H. C. (2017) The effectiveness of aided augmented input techniques for persons with developmental disabilities: A systematic review. *Augmentative and Alternative Communication*, 33(3), 149-159.

SYSTEMATIC REVIEWS

AIDED LANGUAGE DISPLAYS

Single page displays for use in a single situation or on a single topic

(Occasionally, generic displays for use across topics)

Based on the premise that we need to “talk with AAC” to help individuals with complex communication needs learn to use it

Began to be heavily used in the early 1990s



waterplay

AIDED LANGUAGE STIMULATION

Prospective users must be provided with frequent examples of interactive, generative use to acquire any semblance or proficiency.

No-one would dispute the fact that it would be very difficult to become a fluent speaker of French, if you instructor seldom used French in your presence.

Likewise, it is difficult for a person who uses AAC to become proficient if other people never model interactive use of their system during all aspects of the day.

AIDED LANGUAGE DISPLAYS

These are a much better beginning point than many other systems called “beginning”

Goossens', Crain and Elder (1988) laid down a number of rules for developing aided language displays, including making sure that there is a range of vocabulary on each display and that the vocabulary can be used

They should allow us to model AAC including multiple turns within a situation

They are visually simple and easy to engineer within the environment

WELL DESIGNED AIDED LANGUAGE DISPLAYS

Riding in the Car



Yes. 	Buckle up! 	Louder, please. 	I'm hot. 	Let's get out of here. 	Have to turn on some music.
No. 	Need to change the station. 	Too loud. 	I'm cold. 	Okay. 	My life is in your hands.
Thanks. 	Let's just drive around. 	Going too fast. 	Better be careful. 	Let's roll the windows up. 	There's a policeman.
Stop. 	Let's get something to eat. 	Slow down. 	I'm easy. 	Let's roll the windows down. 	What a maniac.
Look at that. 	Are we lost? 	Got to turn right. 	Hurry up. 	We're here! 	Back seat driver.
Let's go... 	Where are we going? 	Got to turn left. 	Are we late? 	There it is. 	What time is it?

Made with Boardmaker and the Picture Communication Symbols© 1981-2001
Mayer-Johnson, Inc. - P.O. Box 1579, Solana Beach, CA 92075 U.S.A. Phone (858) 550-0084
web site: www.mayer-johnson.com

Going to the Zoo



Looks like you. 	Follow me. 	Don't feed them. 	Gross! 	I'm excited. 	I love the zoo.
Yes. 	Phew! Smell. 	I like them best! 	They're beautiful! 	One, please. 	This is fun.
No. 	They might bite. 	I don't like them. 	Better be careful. 	Let's stay together. 	Let's get a ticket.
Thanks. 	Better not touch. 	They're silly. 	Noisy things! 	I need to use the restroom. 	Got your money?
Wow! 	Hey! Look at that. 	I'm tired. 	It's huge. 	Let's have a snack. 	Which way?
Just kidding. 	I want to see... 	Come here. 	So little. 	Oh! It's a baby! 	Let's take it home.

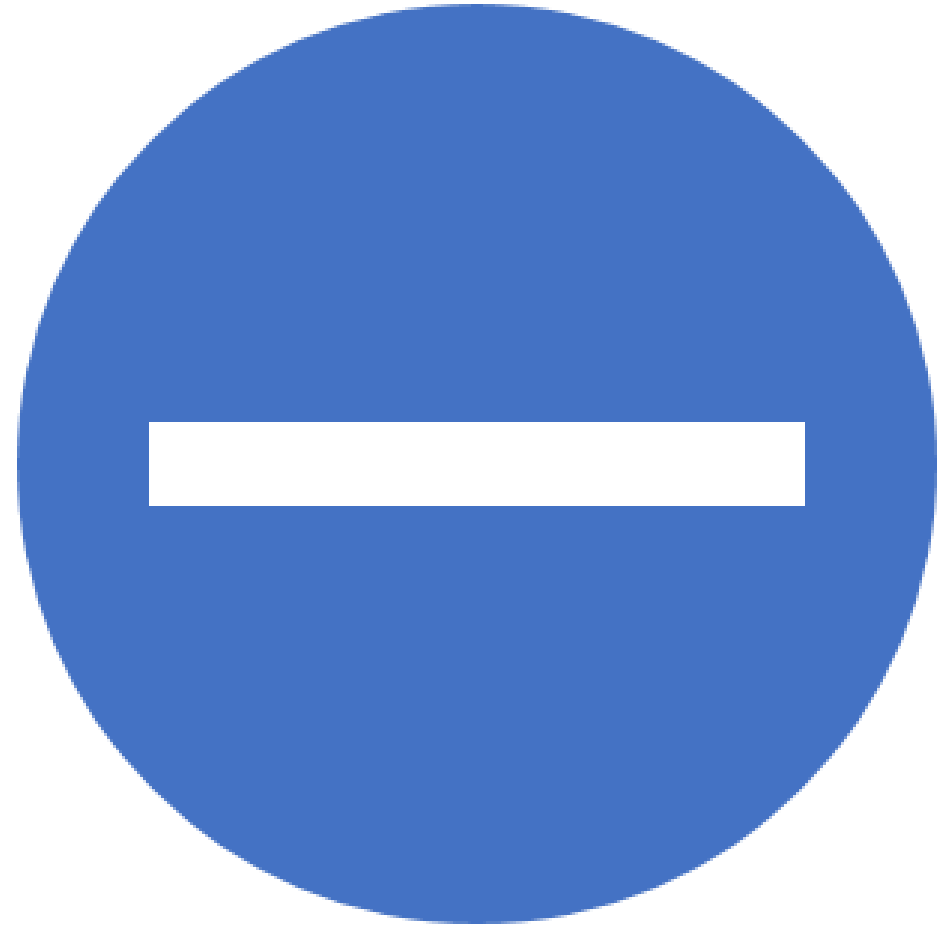
Made with Boardmaker and the Picture Communication Symbols© 1981-2001
Mayer-Johnson, Inc. - P.O. Box 1579, Solana Beach, CA 92075 U.S.A. Phone (858) 550-0084
web site: www.mayer-johnson.com

BEDTIME ALD



WELL DESIGNED ALDS

Even well designed ALDs
have their limitations



WELL DESIGNED ALDS

This well designed ALD doesn't let me communicate about anything except dining

I can't talk about the book we read at school

I can't talk about the lollipop I ate yesterday

I can't talk about something I'd prefer to do!

Dining ... Cafeteria



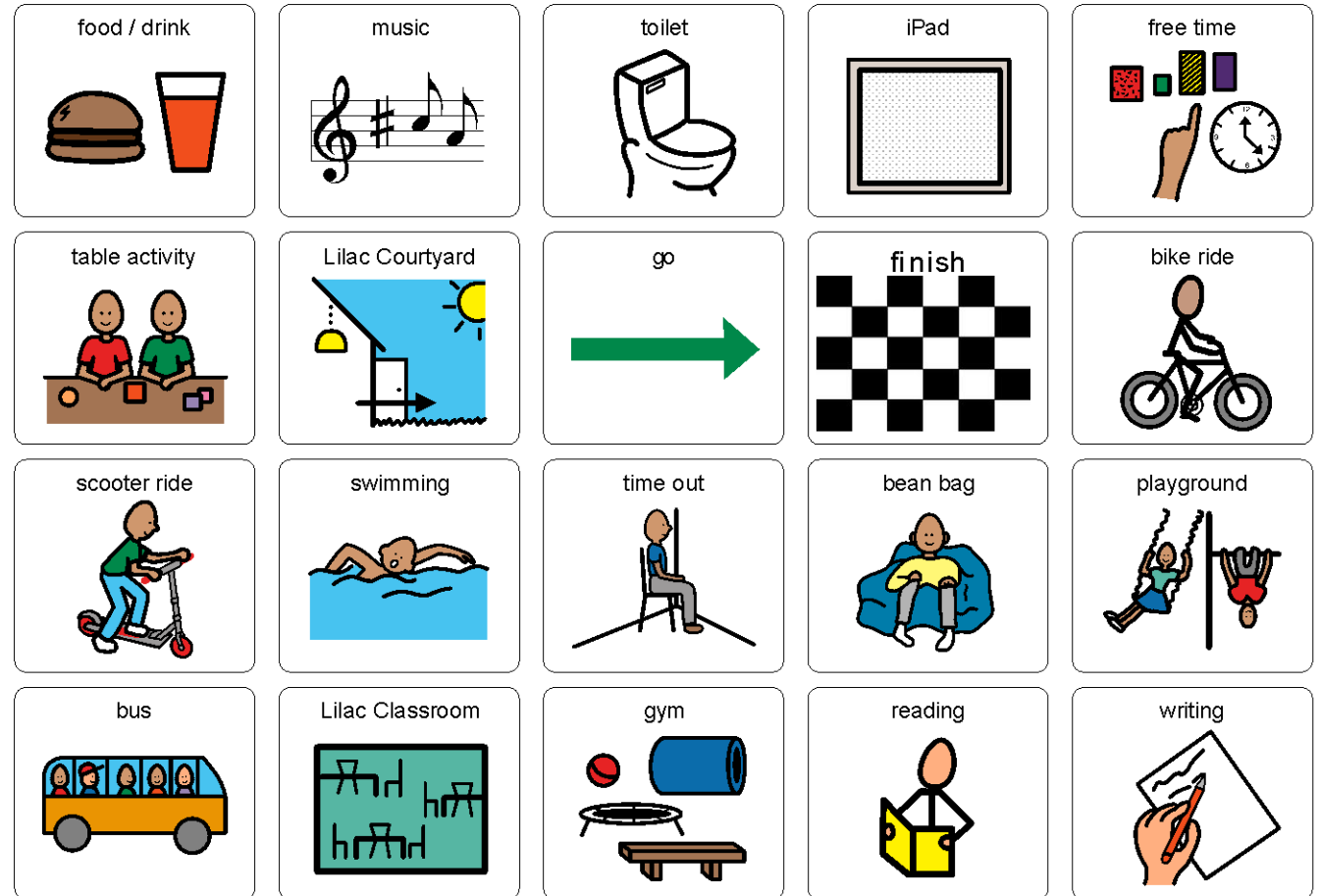
Made with Boardmaker and the Picture Communication Symbols® 1981-2001
Mayer-Johnson, Inc. - P.O. Box 1579, Solana Beach, CA 92075 U.S.A. Phone (858) 550-0084
web site: www.mayer-johnson.com

POORLY DESIGNED ALDS

Majority nouns

Often used for testing, not
teaching

Often used for control or
other person's agenda



POOR DESIGN OUTCOMES













Individual with CCN may learn that AAC is for “work” and/or to communicate according to other people’s agendas if:

- AAC is primarily used to answer questions or demonstrate knowledge (many single page displays are made for this purpose)
- Vocabulary is mostly designed for curriculum content
- Vocabulary is limited to nouns or choice making
- Vocabulary is limited to others’ agendas

WHY WOULD I WANT TO USE THIS?



WHAT ELSE CAN I USE THIS FOR?

1 apple 	2 pears 	3 plums 
4 strawberries 	5 oranges 	1 piece of cake 
1 ice cream cone 	1 pickle 	1 slice of swiss cheese 
1 sausage 	1 lollipop 	1 cherry pie 

Made with Boardmaker - Mayer-Johnson, Inc. - P.O. Box 1579, Solana Beach, CA 92075 U.S.A. Phone (858) 550-0084

A GOOD COMPREHENSIVE AAC SYSTEM

Has a range of language

Supports the user to develop linguistic competency

Can be used for aided language stimulation through the WHOLE day

Can be used to communicate through the day

Can be used for a range of communicative functions

Supports the user to develop communication autonomy

AIDED LANGUAGE

In evaluating any AAC system....

If you (as a person proficient in language) cannot use a communication system or display throughout an interaction then how can you provide Aided Language Stimulation?

If you cannot use it, is it designed well?

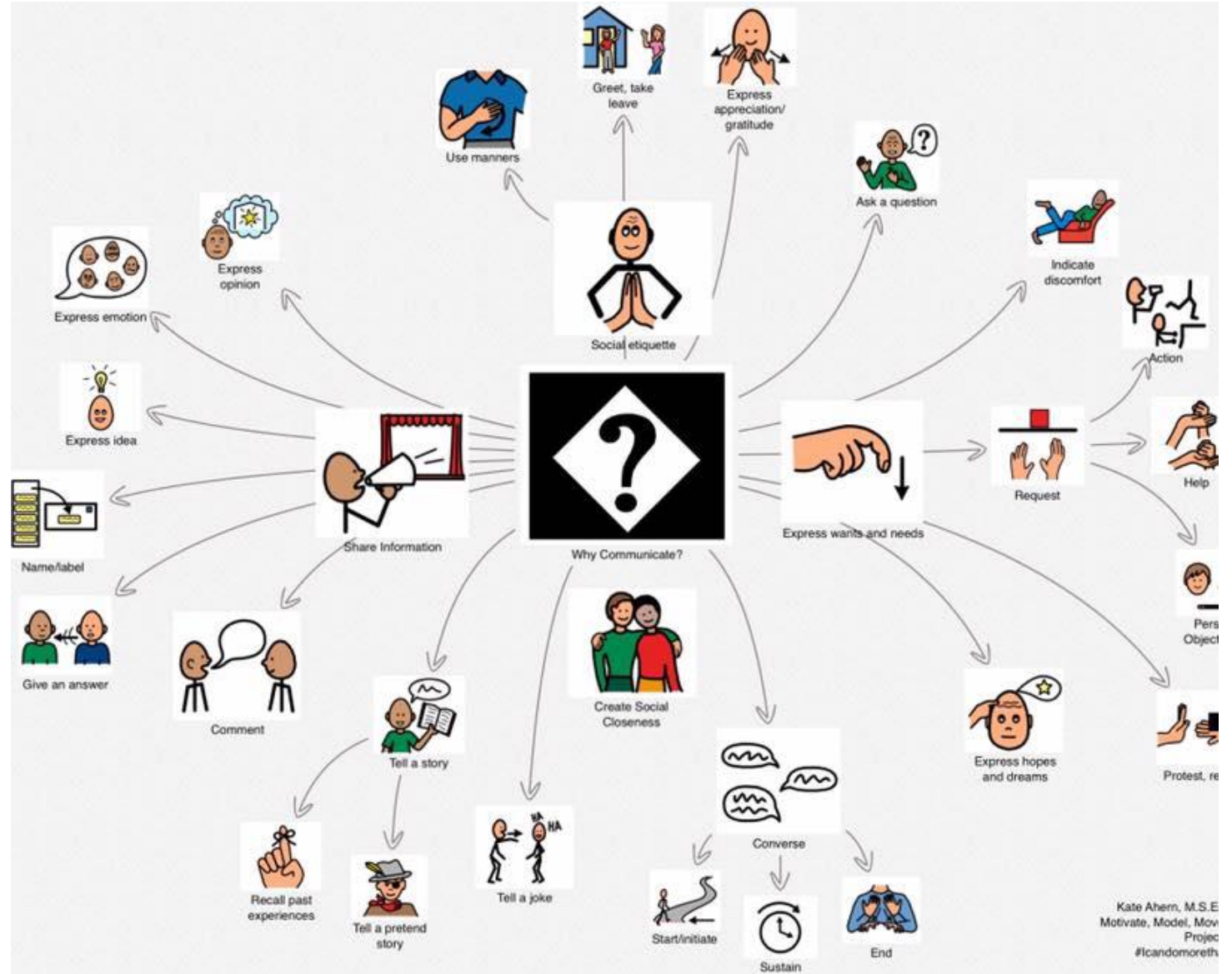
AUTONOMOUS COMMUNICATION

Lily Grace: I like this!

Me: Me, too, girlie. Oh so much. ❤️



SO MANY REASONS TO COMMUNICATE



COMMUNICATIVE COMPETENCE

Light (1989); Light & McNaughton (2014)

- Linguistic Competence (mastery of the linguistic code)
- Operational Competence (access methods, on/off)
- Social Competence
- Strategic Competence (make the most of the vocab they have)

See Kovach (2009) for an assessment based on this structure

LINGUISTIC COMPETENCE



Does the user know how to combine words to get their message across?



Does the AAC system have vocabulary that supports language input and language development?

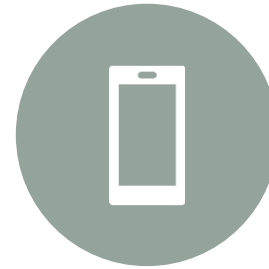
OPERATIONAL COMPETENCE



DOES THE USER KNOW
HOW TO TURN THEIR
DEVICE ON AND OFF?



DO THEY KNOW HOW
TO CHANGE THE
VOLUME?



DO THEY KNOW HOW
TO OPEN THEIR AAC
APP?



DO THEY KNOW HOW
TO ASK YOU TO "TURN
THE PAGE"?

SOCIAL COMPETENCE



Does the user understand not just when it is appropriate to communicate, but what it is appropriate to communicate?



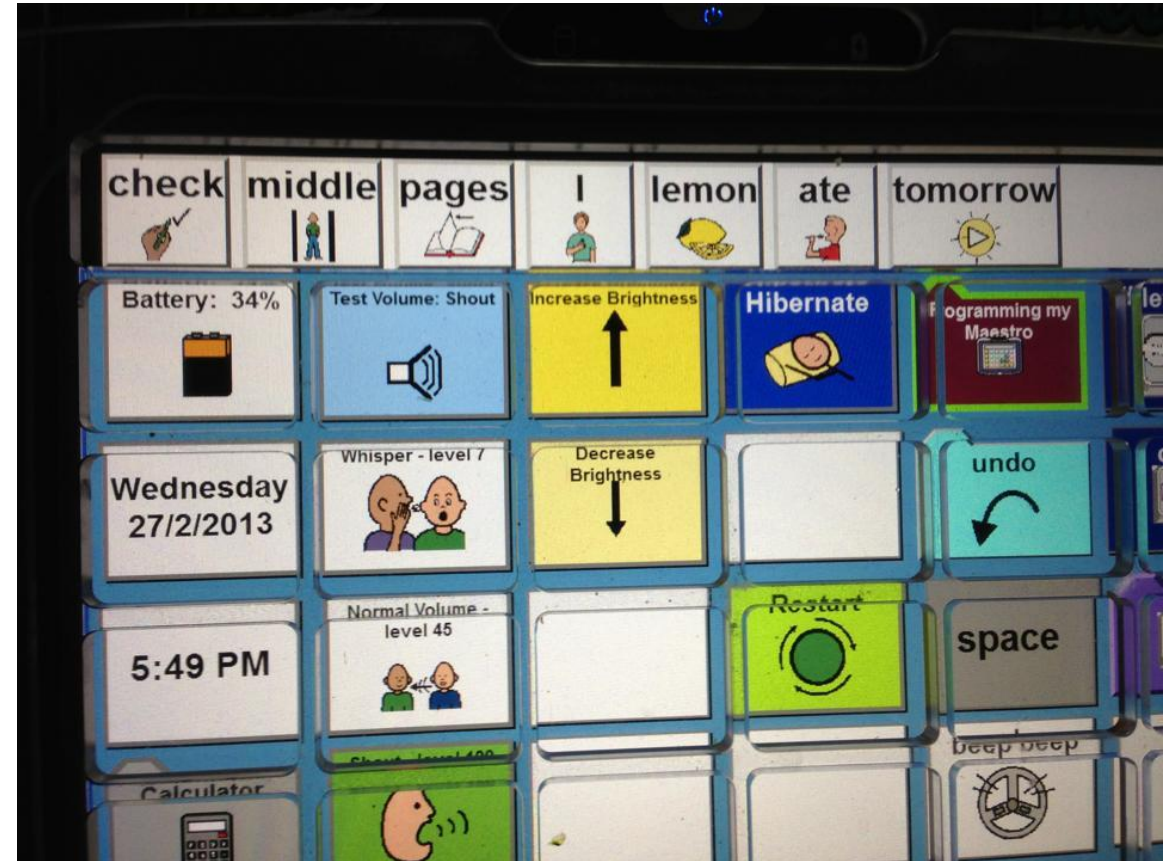
E.g. words we don't use at school.



E.g. small talk

STRATEGIC COMPETENCE

Making the best use of the
vocabulary they have



STRATEGIC COMPETENCE

I want like do do toilet

Things Furniture and fixtures

I	is	do	want	like	what?	where?	not	more	
you	it	have	get	put	bathtub	bean bag	bed	finished	
bookshelf	built in robe	chair	couch	cupboard	desk	door	drawer	dresser	
lamp	microwave	oven	refrigerator	shower	sink	stove	table	toilet	
washing machine	window	hammock	couch						More 2

AUTONOMOUS COMMUNICATION

Being able to say:
What I want to say
Where I want to say it
To whoever I want to say it



COMPREHENSIVE
COMMUNICATION
SYSTEMS ARE A
STEP TOWARDS
AUTONOMOUS
COMMUNICATION



Jules Whicher
4 May 2016 · 🕒 · 👥

Stayed on the actions page
preposition words.

 You and Ana Brito

 Like

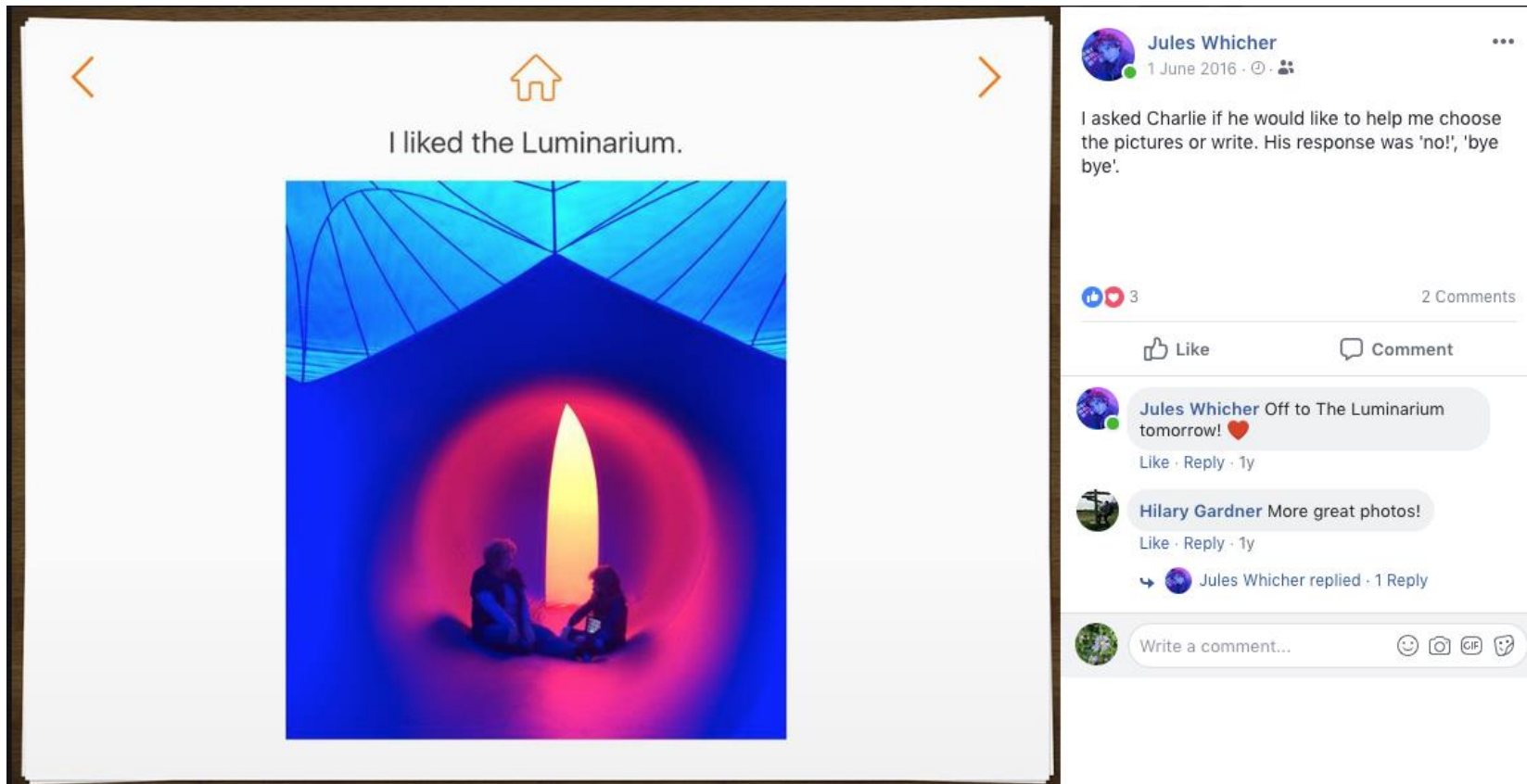
Write a comment...

Suggested Pages

 **Liberator Australia**
Leanne and 26 other

Like

SAY WHAT YOU WANT TO SAY



WHERE YOU WANT TO SAY IT



TO WHOEVER YOU WANT TO
SAY IT



AI-
AIDED
LANGUAGE
DISPLAYS
ARE NOT
ENOUGH!



We wanted a easy afternoon walk but Anna thought that's too boring. She was very happy we managed to get closer to the river. She said "love river, I'm happy" [#holidaytime](#)



More information on this topic at
<https://www.assistiveware.com/blog/overview-dos-and-donts-aac>

DO's and DON'Ts of AAC

- | | |
|---|---|
| ✓ Do use the AAC system to talk yourself | ✗ Don't expect the AAC user to communicate without you modelling how |
| ✓ Do aim high | ✗ Don't demand prerequisite skills |
| ✓ Do use a well designed, comprehensive vocabulary e.g. core vocabulary or PODD | ✗ Don't provide an AAC system with only a handful of choices |
| ✓ Do provide enough wait time | ✗ Don't do all the talking |
| ✓ Do ask open ended questions | ✗ Don't ask questions the AAC user knows you already know the answer to |
| ✓ Do focus on key words when modelling | ✗ Don't think you need to always model grammatically complete sentences |
| ✓ Do respect multi-modal communication | ✗ Don't say "And now say it on your talker" |
| ✓ Do allow exploration and access to the whole vocabulary | ✗ Don't create custom pages for specific activities |
| ✓ Do make sure AAC is available all day, every day | ✗ Don't limit access to the AAC system |
| ✓ Do describe what you want to say using core words | ✗ Don't focus on adding lots of vocabulary |

Learn more: www.assistiveware.com/aac-do-dont



Based on a presentation by Jane Farrall and David Niemelä, May 2015