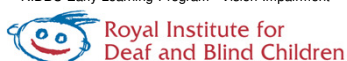


Journeying Toward Independent Communication for Individuals with Vision Impairment and Physical Disability – A Case Study

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Overview

- A framework for guiding decisions about AAC options – AAC System Considerations
- AAC system development for a student with significant vision impairment and additional disabilities – Case Study

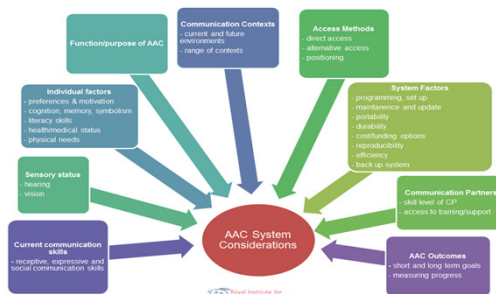


Meet Rita

- Beginning formal schooling (kindergarten)
- 5 years of age
- Lives with parents and younger sister



AAC System Considerations



Current Communication Skills



- Receptive
- Expressive
- Social



Current Communication Skills - Rita

At school age:

- Symbolic, predominantly non-verbal communicator
- Using some word approximations and vocalisations eg. 'hmm' = food, 'mama' = mum 'aba' = dad
- Demonstrates some understanding of simple conversational speech e.g. lifts head up when asked 'Head up'; stops crying when offered a 'walk outside'.
- Significant gap between receptive and expressive skills
- Highly motivated, assertive, seeks out social interactions



Sensory Status

Sensory status
- hearing
- vision

- Does the student have a hearing impairment?
 - Is the student aided?
 - What can the student hear?
- Does the student have a vision impairment?
 - Is the student aided?
 - Recommended font size/ font type/ symbol size

Sensory Status - Rita

- Cortical Visual Impairment - severe
- Fluctuating vision, difficulty focusing on visual information at the same time as other cognitive tasks, preference for auditory sense
- Normal hearing



Individual Factors

Individual factors
- preferences & motivation
- cognition, memory, symbolism
- literacy skills
- health/medical status
- physical needs

- Consider preferences and motivation
- Take into account cognition, memory and level of symbolism
- Consider current and possible future literacy skills
- Health/medical status and how this may impact
- Physical needs and access

Individual Factors - Rita

- NESB (Arabic)
- Intellectual ability not able to be assessed
- Difficulty separating from home environment - did not tolerate less familiar communication partners
- Spastic Quadriplegic Cerebral Palsy - tone (Medication - Baclofen)

Individual Factors - Rita

- Seating/head position a challenge
- Switch location difficult to establish and timing skills impacted by physical disability
- Attention and concentration a relative strength
- Vocalisation encouraged for all responses – verbal communication a family goal

Function/ Purpose of AAC

Function/purpose of AAC

- Social closeness is a main purpose of communication (Light, 1988)
- AAC provides individuals with ways to greet others, ask questions, gain information from others, engage in socially appropriate / expected exchanges (“how are you?”), comment, tell jokes and stories, recall past events, express feelings

Function/Purpose of AAC- Rita

- Independent expressive communication
- Express feelings
- Answer questions (develop a reliable yes/no response)
- Make choices
- Comment
- Opportunity to communicate with a variety of communication partners

Communication Contexts



- Home
- School
- Community
- Workplace
- Familiar vs unfamiliar communication partners

Communication Contexts - Rita

- School
- Home

Access Methods

- Consider whether the client will be able directly access or if alternative access may be needed (both low and high tech systems)
- Positioning may also be important



Access Methods - Rita

- Switch access
- Direct (hand - Big Mack) but inaccurate timing
- Switch placement (head - iTalk 2, Talking Brix, GridPad)
- Switch skill development (Switch Skill Hierarchy)
- Needs optimal positioning in wheelchair

System Factors

- Programming, set up
- Maintenance and updates
- Portability
- Durability
- Cost/Funding Options
- Efficiency
- Back up system



System Factors - Rita

- Provide auditory scanning
- In built switch access
- Additional speakers for noisy environments
- Able to be wheelchair mounted
- Environmental control
- Low tech backup

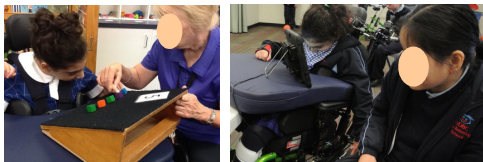
Communication Partners

- Taking into account the skill level of the Communication Partner
- Considering the Communication Partner's capacity to access training and ongoing support

Communication Partners
 - skill level of CP
 - access to training/support

Communication Partners-Rita

- Mum and Dad, younger sister
- Talks to Grandparents in Lebanon on the phone
- Teachers, peers and school staff



AAC Outcomes

- What are the short and long term goals?
- How will progress be measured?
- Equipment trials
- GAS goals
- Access goals (Switch Skill Hierarchy)

AAC Outcomes
 - short and long term goals
 - measuring progress

AAC Outcomes

Qualitative Indicators of Progress

- Increased consistency of response
- Increased independence of response/ decreased assistance required
- Increased frequency of response
- Increased duration of response
- Increased clarity of response
- Faster response time
- Partial participation in one step of a routine
- Ability to participate in an activity for longer periods of time
- Sustained attention to a task
- Increased stamina
- Improved strength or accuracy of a motor response

Qualitative Indicators of Progress are particularly useful for students who make gradual progress and are performing at early stages of communication development.

Rowland, C. (2009) *Assessing Communication and Learning in Young Children Who are Deafblind or Who Have Multiple Disabilities*. Portland, OR: Oregon Health & Science University

AAC Outcomes - Rita


- Example of GAS goal

GOAL 2: Rita will use the Grid 2 software on the Grid Pad PRO 11 to answer questions during class assembly.

	Predicted Level of Attainment	Date			
+2	Rita will answer questions with total independence including navigating pages and with no assistant present.				
+1	Rita will select responses with assistant present but with no prompting.				
0	Rita will use head switch to independently select responses with verbal prompting.				
-1	Rita will select responses with communication partner assistance to navigate to the correct page.				
-2	Rita will use body language and vocalisation to confirm the answer her communication partner selected.				


Timeline 5 years → Present

- Develop tolerance for non-family communication partners
- Develop English skills (second language)
- Promote purposeful use of facial expression, vocalisation and body language




Timeline 5 years → Present


- Communication Partners to present auditory information in a consistent manner
- Encourage consistent yes/no responses utilising natural communication (face, voice, body language)



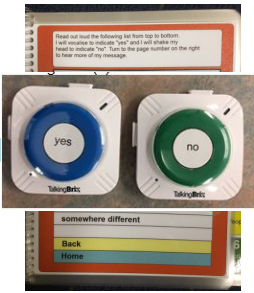
Timeline 5 years → Present




- More complex listening tasks incorporating timing with Big Mack, Step by Step



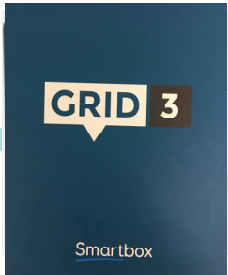
Timeline 5 years → Present




- Yes/No Talking Brix –head mounted
- Low tech book - Partner Assisted Auditory Scanning




Timeline 5 years → Present




- Mounting/ access decisions
- Funding applications
- Home and school implementation



Current System



- Grid Pad Pro 11
 - Auditory scanning
 - Speakers adequate for noisy situations
 - Wheelchair mounted plus head switch
 - Remote editing
 - Potential for environmental control



Current System

- Ongoing Communication Partner training to present choices/information in a format Rita can access
- Continued reinforcement of her natural yes/no response (vocalisation)
- Low tech partner assisted auditory scanning books
- Topic/ situation based vocab organisation

The Future

- Ongoing assessment and modification as needed
- Person centered – independence a goal
- Family needs/skills a priority – primary supports
- All AAC systems are valued equally regardless of the mode(s) used
- Multidisciplinary team a key
- Community access/ use across more environments

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References and Resources

- Rowland, C. (2009) *Assessing Communication and Learning in Young Children Who are Deafblind or Who Have Multiple Disabilities*. Portland, OR: Oregon Health & Science University
- SETT Framework:
<http://www.spectronics.com.au/blog/tools-and-resources/sett/>
- Information/FAQ about AAC
<http://www.novita.org.au/content.aspx?p=64>

References and Resources

- AAC Basics and Implementation: How to Teach Students who “Talk with Technology” This booklet can be downloaded from the following website:
<http://www.swaaac.com/files/assessandimp/aacbasicsandimplementationbook.pdf>
- Practical AAC – a website created by Carole Zangari for sharing information and resources relating to AAC
<http://practicalaac.org/>
- An overview of Speech generating devices – Spectronics
<http://www.spectronics.com.au/conference/2012/pdfs/handouts/Overview-of-communication-technologies.pdf>

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