

Specific Learning Needs: Implications for Educators

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Effects on Development

- Most children will have delayed development
- There is a very wide range of individual differences from mild delays to more severe levels of disability
- For most children, severity of disability cannot be predicted at birth or in early years



Effects on Development

- Research in the past 15 years has highlighted a profile of strengths and weaknesses
- Not all aspects of development are equally delayed
- We can use this information to be more effective in helping children reach their full potential – development is not fixed at birth



Specific Profile

Strengths

- Social understanding, empathy & social skills
- Self help & daily living skills
- Visual short term memory
- Visual learning
- Reading

Weaknesses

- Hearing & Vision
- Speech & Language
- Verbal short term memory
- Learning from listening is difficult
- Number



Specific Profile

- Good social interactive skills
- Good empathy and positive personalities
- Sensitive to failure and negative emotional cues
- May use social skills to distract/avoid difficult tasks



Specific Profile

- Good behaviour relative to mental ability and communication skills progress
- Good practical self-help/daily living skills over time
- Delayed motor development – affects early learning, play, games, self-help and handwriting



Specific Profile

- Significant risk of vision and hearing impairments
- Specific speech and language delays relative to non-verbal mental abilities
- Cognitive strengths and weaknesses
- Specific verbal short-term and working memory difficulties



Specific Profile

- Strengths in visual short-term memory and processing academic learning
- Strengths in reading – can be at age level (10%+)
- Number more difficult – often 2 years or more behind reading

Use profile as a checklist – remember individual differences



Language Underpins Cognitive and Social Development

- Words for knowledge – vocabulary size
- Language for remembering, thinking, reasoning
- Language for self-control and planning
- Language for dealing with emotions and worries
- Language for communicating with others

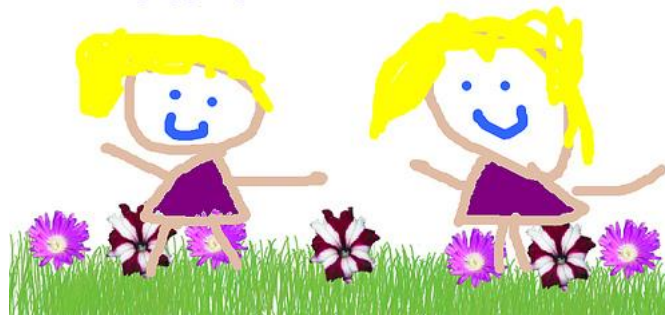


Language

- Language for friendships
- Any child with language delay will have cognitive delays Working memory deficits will affect all learning



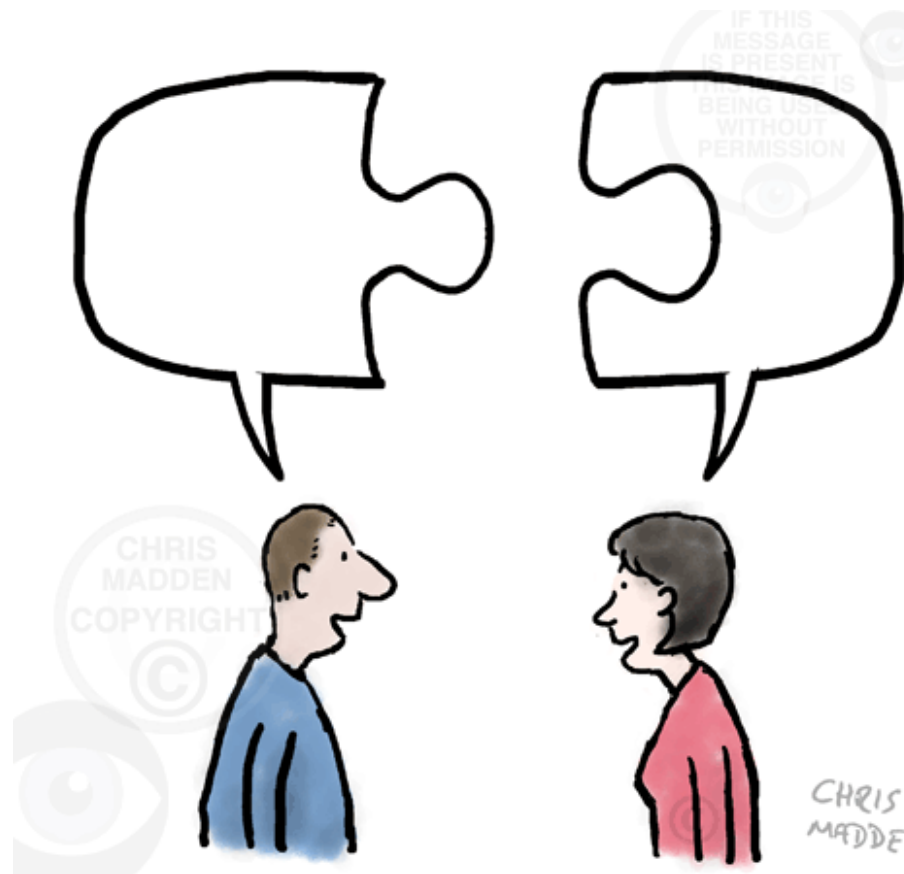
Giselle



Learning to Talk

Communication

- Non verbal
- Vocabulary
- Grammar
- Speech



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Vocabulary & Grammar

- Vocabulary size pushes along grammar development
- Children with Down Syndrome have a vocabulary delay
- 200-250 words are needed before grammar starts
- Understanding will be ahead of production



Vocabulary & Grammar

- 200-250 spoken words to begin to use grammar
- There will be many children with Down syndrome in primary schools who do not yet have 250 words in spontaneous spoken language (and some teenagers)



Working Memory

Working memory is the mental workplace in which information can be temporarily stored and manipulated during complex everyday activities:

- listening to another speaker
- decoding an unfamiliar word whilst holding the meaning of the previously decoded text in mind
- writing while formulating the next part of the text
- engaging in mental arithmetic
- Predicts academic progress better than IQ (Alloway)



Summary

- Children with Down Syndrome are visual learners-learning from listening is difficult
- This effects learning to talk and processing spoken language and instruction
- If we plan interventions to
 - focus on teaching spoken language
 - support all learning visually – especially with print to improve and compensate for working memory

Can we make a difference? Our data for teenagers taught in this way from preschool years suggests we can



We can change the profile

- We can make a difference
- Outcome data from a study of teenagers shows significant gains in spoken language as a result of comprehensive interventions from early years
 - Significantly better language and clearer speech
 - Significantly better reading skills
- Also linked to immersion in mainstream school & teaching to the profile of strengths and weaknesses



Acknowledgement

Effective Education for Children with Down Syndrome in School

Professor Sue Buckley OBE

Down Syndrome Education International

Discovering Potential Transforming Lives

