



MELBOURNE GRADUATE
SCHOOL OF EDUCATION

TEACHING VOCABULARY AND READING COMPREHENSION TO STUDENTS WITH DISABILITIES

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Overview

- Common Terms & Disabilities
- The Reading Gap
- Importance of Vocabulary
- My Study Design
- My Results
- Recommendations
- Survey & Resources www.clarkburt.com

Common Terms

- Disability
 - reduced cognitive capacity, which has a global impact on learning and daily functioning
 - the difficulty continues to exist, despite appropriate instruction and intervention
- Difficulty
 - Specific Learning Difficulty (SLD) - significant difficulty in one academic area while coping well, or even excelling, in other areas
 - e.g. dyslexia

<https://dsf.net.au/what-are-learning-disabilities/>

http://www.education.act.gov.au/_data/assets/pdf_file/0020/714332/Learning-Difficulties-Factsheet-1.pdf

ADHD

- Attention-Deficit/Hyperactivity Disorder –
“A developmental disorder that can affect a person’s self-control, ability to sustain attention and ability to regulate one’s activity level” (Hyde, et al., 2014, p.154)
- Two basic areas:
 - Inattention
 - Hyperactivity/ Impulsivity

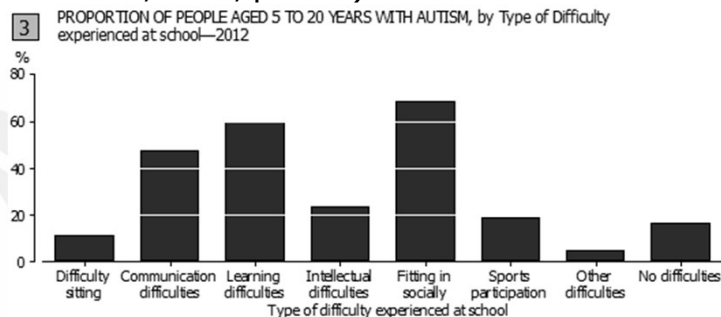
Intellectual Disabilities (ID)

- DSM-5 diagnoses ID on three domains, conceptual, social, and practical
- “an inability to think as quickly, reason as deeply, remember as easily, or adapt as rapidly to new situations” (Westwood, 2002, p. 21)
- 2.9% of the Australian population has an intellectual disability (Australian Bureau of Statistics, 2014, para. 2).

<http://www.abs.gov.au/ausstats/abs@.nsf/0/437CAC7624D4150CCA257D0400129092?Opendocument>

Autism Spectrum Disorder

- “86% [of students] reported ‘having difficulty’ at school, the majority of whom had difficulty with fitting in socially, learning and communication” (Australian Bureau of Statistics, 2012, para. 2).



Source: ABS Survey of Disability, Ageing and Carers

<http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4428.0Main%20Features52012?opendocument&tabname=Summary&prodno=4428.0&issue=2012&num=&view=>

Australian Prevalence

- Students 0-19 years:

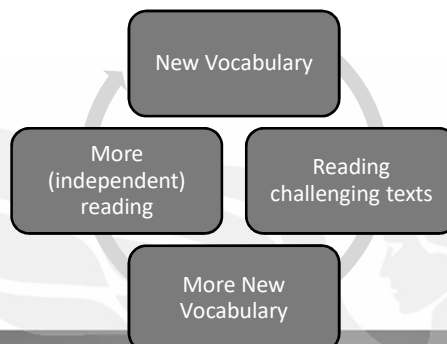
With ASD	59,492
With LD	594,920
With ADHD	404,649
Total	951,871 children and young people

(Every Day with ADHD, 2015)

<http://www.everydaywithadhd.com.au/FAQRetrieve.aspx?ID=41495>

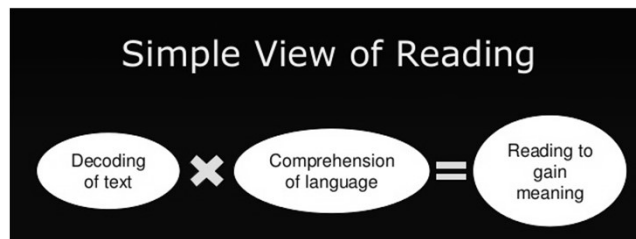
The Gap

- Students with an ID have know fewer words and thus reading is challenging for them, they read less



Vocabulary

Simple View of Reading



(Hoover & Gough, 1990)

Background

- The National Reading Panel (NRP) report in 2000 and subsequent follow up meta-analyses of research (Langenberg, 2000; Jitendra and et al., 2004; Elleman, et al., 2009) highlight a need for:
 - Explicit vocabulary intervention for struggling readers
 - Multiple exposures to words in a variety of contexts
 - 'Rich' vocabulary instruction
 - Use of computer technology
 - More classroom-based research with control groups

Vocabulary Instruction

- Teachers need to explicitly teach new vocabulary to ID students as they will less likely learn incidentally.
- ID/ASD students will struggle to learn from context clues

Vocabulary

- No one single right method, combine:
 - Whole words: Teaching word knowledge (direct instruction)
 - Phonics: Teaching how to decipher new words (ability to decode word parts)
(Langenberg, 2000)
- Strategies include: mnemonic strategy (e.g. keyword method), cognitive strategies, activity-based methods and computer-assisted/games-based learning.

Research Design

Each trial:

6 weeks, 4 new words each week taught either using traditional or ICT-based methods twice a week for 30 minutes each session

Year 1

Initial teacher interview and training and pre-testing of students' general vocabulary

Six-week Pilot trial where students are:

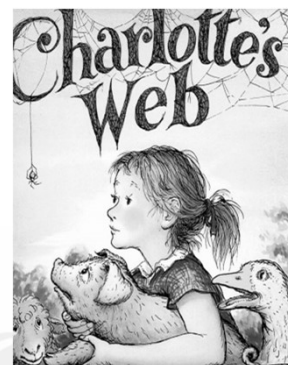
1. pre-tested for the 24 new words
2. taught four new words each week
3. post-tested for the 24 words

The six-week intervention program will then be repeated with 24 new words each trial once per term for Terms 2, 3, and 4 (if possible).

Student focus groups, teacher follow-up interviews, and post-testing of general vocabulary

WHAT WORDS TO TEACH?

- Two methods:
 - Word Lists: Fry's 1,000 Words list (Fry, 1980) or New General Service List (Browne, Culligan & Phillips, 2013)
 - Choose words (2nd tier words) from a text you plan to teach with (Beck, McKowen & Kucan, 2003)



PILOT STUDY

The Story Part 1

When Mr. Apple returned to the house half an hour later, he carried a carton under his arm. Felt was sitting, changing her costume.

Now answer the following questions:

In this story, what **scratched** the inside of the box to get out?

☐ Mr. Apple
☐ The pig
☐ Fern
☐ The box

Check

Please draw a line from each vocabulary word to the picture that best matches it:

Shone Scratching Carton Wobbled






Answer these questions:

Which of the following words are related to **empty**?

☐ Useless
☐ Large
☐ Bored
☐ Not filled
☐ To remove something
☐ To pass through
☐ Container

Check

My assessment

'Knowing a word' Levels:	Beck (2012) Levels:
0 Points – No or minimal understanding or guessing	Unknown
1 Point – Basic understanding of common uses of the word	Acquainted
2 Points – Common associations – likely understood in contexts	
3 Points – Developed understanding of nuances of the word	Established
4 Points – Deep Understanding – likely to apply in multiple contexts	

'Knowing a word' Levels:	Beck (2012) Levels:
3 Points – Developed understanding of nuances of the word	Established

Which of the following words are related to remark?

- ☒ Comment
- ☒ Something somebody said
- ☐ Delight
- ☒ ~~More of something~~
- ☒ Say
- ☐ Sunlight
- ☒ Talk

(3)

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(0)

Results

- Both Non-ICT and ICT groups had a 20% increase in knowledge of 24 target words
- Biggest increases came in weeks 4 & 3:



Week 4 words: wander, swollen, radiant, remark
Week 3 words: eagerly, furiously, dreadfully, thread

Dual Coding Theory

- Games allow for an alternate, multisensory, and repetitive way to teach a topic.
- Use of video and multimedia supported by Dual Coding Theory (Paivio)

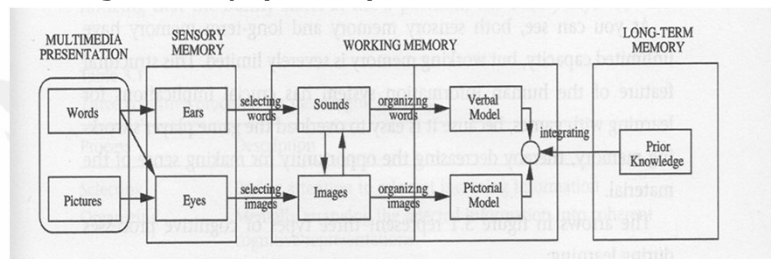


Figure: A cognitive theory of multimedia learning (Mayer, 2014 p. 51).

Episodic Memory

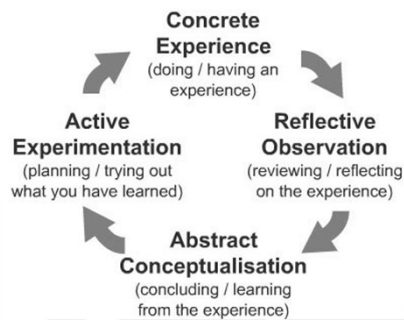
- Episodic memory is sensation, events, and episodes (Tulving, 1983, p. 35).
- Typically developing children aged 7 through 11 are in the Concrete Operational Stage (can't think abstractly)
- Students with lower cognitive functioning may still be thinking 'concretely' in high school.

NOW THINK ABOUT YOUR CLASSROOM

- Do you have lessons that (could) have these components:
 - Direct Instruction (teacher talking)
 - Visuals (diagrams, videos)
 - Handwriting tasks (worksheets, drawing)
 - Classroom activities (hands-on experimentation, cutting/folding, building)
 - Interactive ICT-based activities (iPad apps, games, drills, online assessments)

With a partner or small group, discuss a lesson where you could include all of the above things.

Experiential Learning (Kolb)

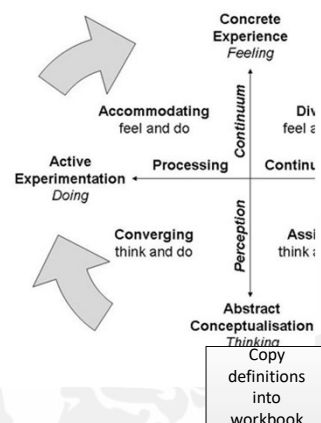


How I structured the first activity:

1. Abstract Conceptualization – direct instruction of new terms
(but wait.. How is that 'concluding'??)
2. Active Experimentation – workbook activities
3. Concrete Experience – playing a game, requires movement/input, physical doing a task, interacting, collaborating
4. Reflective Observation – what can you do with the new knowledge you have learned?

YOUR TURN

- You are going to plan (part of) a lesson where you are explicitly teaching new vocabulary
- At the top of your paper, write down the topic, grade level, and two – three vocabulary words
- Draw the Experiential Learning model and start writing tasks & activities in the appropriate quadrant



Want to know more?

3PM today – Spark Talk – “*TEACHING CONSIDERATIONS FOR STUDENTS WITH INTELLECTUAL DISABILITIES*”

August 1st – Free Webinar “TEACHING THE DIGITAL TECHNOLOGIES CURRICULUM TO STUDENTS WITH DIVERSE LEARNING NEEDS” [HTTPS://DLTV.VIC.EDU.AU/EVENT-2589802](https://DLTV.VIC.EDU.AU/EVENT-2589802)

September 4th – All Day Workshop “**THE DIGITECH CURRICULUM FOR STUDENTS WITH DIVERSE LEARNING NEEDS**”

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: American Psychiatric Association.

Australian Bureau of Statistics (2014). *4433.0.55.003 - Intellectual Disability, Australia, 2014*. Retrieved July 26, 2017, from <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4433.0.55.003main+features102012>

Australian Bureau of Statistics (2012). *4433.0.55.003 – Autism in Australia, 2012*. Retrieved July 26, 2017, from <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4428.0Main%20Features52012?opendocument&tabname=Summary&prodno=4428.0&issue=2012&num=&view=>

Beck, I. L., McKeown, M. G., & Kucan, L. (2013). *Bringing words to life: Robust vocabulary instruction*. Guilford Press.

Browne, C., Culligan, B., & Phillips, J. (2013). The new general service list. Retrieved 26 July, 2017 <http://www.newgeneralservicelist.org/>

Bosseler, A., & Massaro, D. W. (2003). Development and evaluation of a computer-animated tutor for vocabulary and language learning in children with autism. *Journal of autism and developmental disorders*, 33(6), 653-672.

Elleman, A. M., Lindo, E. J., Morphy, P., & Compton, D. L. (2009). The impact of vocabulary instruction on passage-level comprehension of school-age children: A meta-analysis. *Journal of Research on Educational Effectiveness*, 2(1), 1-44.

Every Day With ADHD. (2015). How many kids in Australia have ADHD? Retrieved 23 July, 2017 from <http://www.everydaywithadhd.com.au/FAQRetrieve.aspx?ID=41495>

Fry, E. (1980). The new instant word list. *The Reading Teacher*, 34(3), 284-289.

Jitendra, A. K., Edwards, L. L., Sacks, G., & Jacobson, L. A. (2004). What research says about vocabulary instruction for students with learning disabilities. *Exceptional Children*, 70(3), 299-322.

Hyde, M., Carpenter, L., & Conway, R. (Eds.). (2014). *Diversity, inclusion and engagement* (2nd ed.). South Melbourne, Victoria: Oxford University Press.

Hoover, W. A., & Gough, P. B. (1990). The simple view of reading. *Reading and writing*, 2(2), 127-160.

Langenberg, D. (2000). Report of the National Reading Panel: Teaching children to read. National Institute of Child Health and Human Development.

Mayer, R. E. (2014). *Computer games for learning: An evidence-based approach*. MIT Press.

Nagy, W. E. (1988). *Teaching vocabulary to improve reading comprehension*. Urbana, IL: National Council of Teachers of English.

Rural Training. (2012). Difficult Student Behaviour and Savvy Ways to deal with it. Retrieved 23 July, 2017 from <http://www.marklemessurier.com.au/main/workshops/teacher/Rural%20Training%20worksheet.pdf>

Shire. (2017). Diagnosis of ADHD using DSM-5TM. Retrieved 23 July, 2017 from <http://adhd-institute.com/assessment-diagnosis/diagnosis/dsm-5/>

Tulving, E. (1983). *Elements of Episodic Memory*. Oxford, England: Oxford University Press.

West, M., & West, M. P. (Eds.). (1953). *A general service list of English words: with semantic frequencies and a supplementary word-list for the writing of popular science and technology*. Addison-Wesley Longman Limited.

Westwood, P. (2002). *Commonsense methods for children with special educational needs* (4th ed.). London: Routledge

www.selage.org

Vocabulary Research Project

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Research Project
Information

PLS and Consent Forms

Teachers who are new to this site, please [fill out the anonymous survey](#) and then [log in below](#).

Studies in Exceptional Learning and Gifted Learning

4 April 2017
Clark

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