Exploring Australia's Potential Towards Optimising Language, Learning and Life

Dr Susan Galletly

SEPLA-CON 2023 National Conference
Change, Challenge and Choice
Sydney, Tuesday 18 July, 2023

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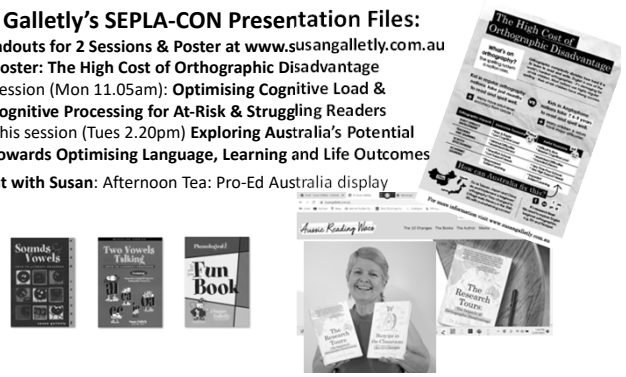
Dr Galletly's SEPLA-CON Presentation Files:
Handouts for 2 Sessions & Poster at www.susangalletly.com.au
1. Poster: The High Cost of Orthographic Disadvantage
2. Session (Mon 11.05am): **Optimising Cognitive Load & Cognitive Processing for At-Risk & Struggling Readers**
3. This session (Tues 2.20pm) **Exploring Australia's Potential Towards Optimising Language, Learning and Life Outcomes**
Chat with Susan: Afternoon Tea: Pro-Ed Australia display



2

Conference Poster – We've Severe Orthographic Disadvantage

Check out the video of the poster at susangalletly.com.au

Download its handout.

3

Q: Why is it so hard for so many Aussie children to master reading & writing?

It's all about cognitive load vs cognitive processing

A: We're hit with a massive 'cognitive load crash' of the high cognitive load of learning to read against the low cognitive processing skills of young Aussies, especially those with major risk factors!

- English's complex orthography (26 letters, 44 sounds, >>560 spelling patterns) means learning to read words (a) has VERY high cognitive load and (b) makes massive demands on our children's processing skills.

- We start teaching reading when our kids are very young: 4.5-5yrs.
- Processing capacity is v. small then, esp. if kids are anxious.
- Overwhelmed kids 'give up' (feel incapable), making learning harder.

4

Our children need strong cognitive-processing skills

- Because English is such a complex orthography, it places very high demands on children's cognitive-processing skills (working memory, etc).
- Most at-risk children (including children with disabilities) have weak cognitive-processing skills:
- They're greatly disadvantaged by this need for strong cognitive processing skills

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Let's briefly review this session's abstract

Why does Australia have
*1. An **epidemic** of language-skills and literacy weakness, and*
*2. Continuing **low literacy outcomes**?*

*Why do **children** with major communication and learning disabilities so often **miss out** on optimally funded school and NDIS supports?*

6

… this session's abstract

While many factors are involved,
*little **attention** has been paid to*
1. The very major impacts of
*English **orthographic complexity**, and*
*2. The weak **cognitive-processing** skills of*
children aged 4.5 to 5.0 years,
*on **early-literacy development**,*
***teaching pressure** and*
difficulties achieving improvement.

7

… this session's abstract

***Nations differ** in orthographic complexity (spelling regularity), & thus **ease of learning** to read and write.*

*Many nations, e.g., Finland, use **highly-regular** orthographies.*

*Learning to read and write is **rapid** and easy, and word-reading and spelling difficulties are **minimal**.*

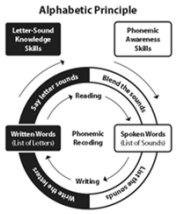
8

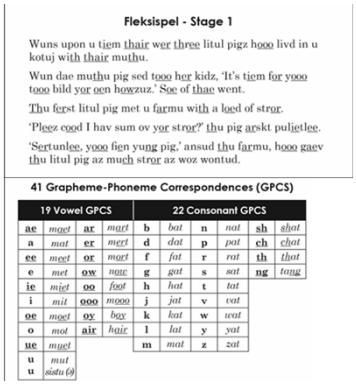
What's an orthography?

A spelling system!
Nations choose the orthographies they use.
Ours is excessively complex; other nations use highly-regular orthographies.

9

Regular orthographies have 1:1 matching of letters and sounds, so there's very little to master to learn to read and write





Fleksispel - Stage 1

Wuns upon u tiem thair wer three litul pigz hooo livd in u kotuj with thair muthu.

Wun dae muthu pig sed tooo her kidz, 'It's tiem for yooo tooo bild yor oen howzuz.' Soe of thae went.

Thu ferst litul pig met u farmu with a loed of stror.

'Pleez cood I hav sum ov yor stror?' thu pig arskt pulietlee.

'Sertunlee, yooo fien yung pig,' ansud thu farmu, hooo gaev thu litul pig az much stror az woz wontud.

41 Grapheme-Phoneme Correspondences (GPCS)

19 Vowel GPCS				22 Consonant GPCS					
ae	*maet*	ar	*mart*	b	*bat*	n	*nat*	sh	*shat*
a	*mat*	er	*mert*	d	*dat*	p	*pat*	ch	*chat*
ee	*meet*	or	*mort*	f	*fat*	r	*rat*	th	*that*
e	*met*	ow	*now*	g	*gat*	s	*sat*	ng	*tong*
ie	*miet*	oo	*foot*	h	*hat*	t	*tat*		
i	*mit*	ooo	*mooo*	j	*jat*	v	*vat*		
oe	*moet*	oy	*boy*	k	*kat*	w	*wat*		
o	*mot*	air	*hair*	l	*lat*	y	*yat*		
ue	*muet*			m	*mat*	z	*zat*		
u	*mut*								
u	*sistu (ɵ)*								

10

Most nations use regular orthographies.
English spelling is so complex that researchers consider it an outlier on the continuum of orthographic complexity.

	No of letters	No of sounds	No of Spelling Patterns (GPCs)
English	26	44	>>560 - >1100
Finnish	23	23	23
Italian	22	25	33
Korean	24	24	~24
Welsh	29	29	~29

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Taiwan, Japan & China use a regular orthography first, with massive success!

- Their main orthography is hugely complex, but they succeed brilliantly, by using 2-Stage early literacy.
- We do 2-Stage handwriting: first printing, then cursive.
- They do it for reading & writing! It works brilliantly:
  - Super low cognitive load for earliest reading & writing.
  - Children build strong cognitive-processing, skills and confidence, self-teaching to read & write new words.
  - They then transition very effectively to reading & writing their complex orthography.

Taiwan, Japan & China are great role models!

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… this session's abstract (continued)…

*In strong contrast, high orthographic complexity **impedes** English early-literacy development, making it extremely **slow**, with **difficulties** far more frequent and far more severe.*

***Regular-orthography** delayed word-readers **catch-up**, while Anglophone children, schools, and education in general, **struggle**.*

13

… this session's abstract

*This session explores **research** showing the impressive **ease** of regular-orthography early literacy, and Anglophone nations' **struggles**, e.g.,*

- ***Far slower** reading and writing development, e.g., **31%** vs 90-98% word-reading accuracy at end-Grade 1 for **English** vs regular-orthography children of ten European nations (Seymour et al., 2023).*

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… this session's abstract

- *Intellectual disability having **minor** vs major impacts on **regular-orthography** vs English readers' word-reading (Cossu et al., 1993; Poskiparta et al., 1999).*
- ***Impressive effectiveness** of regular-orthography early-literacy **intervention** (Hanley et al., 2004; Landerl et al., 1997; Poskiparta et al., 1999), vs **low effectiveness** of English interventions (e.g., Torgesen et al., 1997).*

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… this session's abstract

- ***Markedly low** ranges and standard deviations in **regular-orthography** cohorts of word-reading studies, **contrasting** with **particularly high** English ranges and standard deviations, with indications regular-orthography **'weaker' readers** read better than **at least half** of English readers.*

16

… this session's abstract

*The session also explores the relevance and potential of Galletly's (2022, 2023, In press) **10 Changes**:*

17

1

Understand how orthographies matter: English spelling is dragging us down.

18

2

Own our struggling reader woes: End hypocrisy and pretence.

19

3

Weigh workload: Our children and teachers are working far too hard.

20

4

One-size education does not fit all: Teach to the decidedly different instructional needs of upper-third and lower-third readers.

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5

End our data deficiency: Build strong knowledge on word-reading levels.

22

6

Enrich every child: Ensure effective supportive tailored education.

23

7

Insist on easy literacy development: Reach regular-orthography nations' achievement levels.

24

8

Investigate the potential of fully-regular beginners' orthographies: They're winners.

25

9

Play to learn first: Start Standard English word-reading instruction from mid-Year 2.

26

10

Build needed research knowledge as quickly as possible: Use collaborative school-based research.

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Research is needed!

- If you've ever thought on doing Masters or Doctoral studies, please consider potential studies in this area.
- It's a neglected area, so there are a myriad of easy studies which can be done.
- *100 Research Questions* is the final chapter of *The Research Tours*, and those 100 are just examples of potential studies.

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… this session's abstract (Conclusion)

*We are a **nation***
***in need** of major improvement.*

***Fortunately**,*
working strategically,
*we are **also** a nation*
*with **excellent potential***
for improvement.

End of abstract

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The future is bright. Let's move there!

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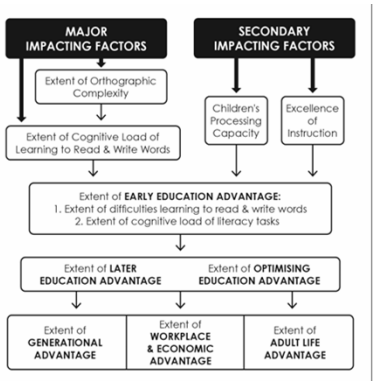
Orthographic Advantage & Disadvantage impact the child, teacher, school & nation.



Knight, Galletly, & Gargett. (2019). **Orthographic Advantage Theory: National advantage and disadvantage due to orthographic differences**. *Asia Pacific Journal of Developmental Differences, 6*(1, January), 5-29.

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Q: So why is it so hard for so many Aussie children to master reading & writing?

It's all about cognitive load vs cognitive processing

A: We're hit with a massive 'cognitive load crash' of the high cognitive load of learning to read against the low cognitive processing skills of young Aussies, especially those with major risk factors!

Q: Who are most disadvantaged?

A: Our most vulnerable Aussies: our children & adults with weakest cognitive processing skills, e.g., those with intellectual disability, language disorder, autism, AD/HD.

Q: Is this fair? Is it ethical? **A**: ? ? ? ?

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Learning to read English has too high cognitive load & cognitive-processing demands

- **Cognitive load = the amount we have to think on and process at any one time, and over time.**
- **Cognitive-processing = the skills we use in thinking about and processing information.**
- **Cognitive load and cognitive processing work in tandem:**
  - **Easy learning creates low demands for efficient cognitive processing.**
  - **Complex learning creates high demands.**
- **The Cognitive Load Rule = For learning to be effective,**
  - **Content Load + Task Load < Children's Processing Capacity (their working memory & cognitive processing efficiency)**

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Let's now consider useful research studies.

Read more about these studies and lots more in

- The handout for this presentation: it includes these slides, additional slides, plus I've attached the handout of a keynote I did for an American organisation.
- My recently released book, *The Research Tours: The Impacts of Orthographic Disadvantage.*
- Download Knight, Galletly & Gargett (2017a) *Managing cognitive load as the key to literacy development: Research directions suggested by crosslinguistic research and research on Initial Teaching Alphabet (i.t.a.)* from ResearchGate.
- Watch my 2021 keynote presentation exploring research & its implications at **itafoundation.org/conferences/**

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Seymour, Aro, & Erskine (2003). *Foundation literacy acquisition in European orthographies.*

1	Regular-Orthography Cohorts	Standard English Cohorts
Word-Reading in 14 European Nations - Tour 1	**Children in 10 nations:** 90-98% accuracy at End-Grade-1 (and probably much earlier)	**UK cohorts:** Only 31% accuracy End-Grade-1 Only 69% accuracy End-Grade-2

Word-Reading in 14 European Nations (Seymour et al., 2003)

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Seymour, P. H. K., Aro, M., & Erskine, J. M. (2003). Foundation literacy acquisition in European orthographies. *British Journal of Psychology, 94*(2), 143-174.

The study is discussed in

- Knight, B. A., & Galletly, S. A. (2017). Effective literacy instruction for all students: A time for change. *International Journal of Innovation, Creativity and Change., 3*(1), 65-86.

& in Tour 1 of

- Galletly, S. A. (2022a) The Research Tours: The Impacts of Orthographic Disadvantage. Vol. 2. *Aussie Reading Woes.* Mackay, Qld, Australia: Literacy Plus.

Nation	Orthographic Regularity	Word-Reading Results			Age Levels	
		All Words	Frequent Real Words	Unfamiliar Words	Age	Age Gap UK Yr1
Finland	Extremely Regular	**96.7%**	98.3%	95.0%	**7.9**	2.3
Greece		**94.8%**	97.6%	92.1%	**6.8**	1.2
Italy		**92.4%**	95.3%	89.4%	**6.9**	1.3
Spain		**91.8%**	94.7%	88.8%	**6.8**	1.2
Austria		**94.7%**	97.5%	91.9%	**7.6**	2.0
Germany		**96.0%**	97.7%	94.4%	**7.4**	1.8
Norway		**91.3%**	91.8%	90.8%	**7.9**	2.3
Iceland		**90.3%**	94.1%	86.5%	**6.9**	1.3
Portugal	Highly Regular	**73.2%**	73.5%	76.9%	**7.0**	1.4
Sweden		**91.4%**	95.1%	87.7%	**7.5**	1.9
Netherlands		**88.8%**	95.4%	82.2%	**7.0**	1.4
Denmark Yr1	Moderately Regular	**62.4%**	71.1%	53.7%	**7.7**	2.1
Denmark Yr2		**86.9%**	92.6%	81.3%	**8.6**	3.0
France Yr1		**82.0%**	79.1%	84.9%	**6.7**	1.1
France Yr2		**98.3%**	99.2%	97.4%	**7.9**	2.3
UK Yr1	Highly Complex	**31.6 %**	33.9%	29.3%	**5.6**	--
UK Yr2		**70.0%**	76.4%	63.5%	**6.6**	--

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Spencer & Hanley's studies of Welsh & English cohorts, all aged 5 years in Grade 1.

	Regular-Orthography Cohorts	Standard English Cohorts
2 **Welsh vs English Word-Reading Development** - Tour 2	**Learned to read Welsh:** Much stronger word-reading in Grades 1, 2 & 5. Strong phonemic awareness from Grade 1. Very few weak readers.	**Learning to read English:** At-risk readers developed severe word-reading difficulties. Phonemic awareness still weak in Grade 5. Most v. weak reading unfamiliar words

(Spencer & Hanley, 2003, 2004, Hanley et al., 2004)

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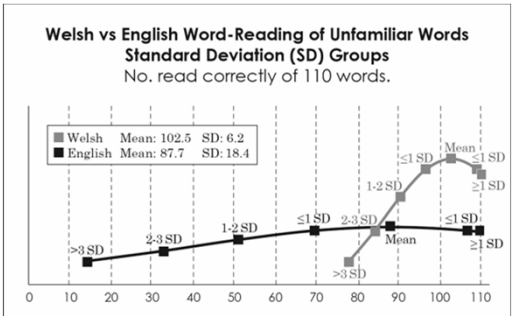
2 Grade 5 word-reading in Hanley et al. (2004)

Alarming spread of English weak readers: our long sad tail!

Very few weak Welsh readers



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Italian Vs English Readers with Down syndrome

	Regular-Orthography Cohorts	Standard English Cohorts
3 **Italian Vs English Readers with Down Syndrome** - Tour 4	High word-reading accuracy: 94% real words, 88% unfamiliar words. Difficulty finding subjects who weren't already highly accurate	One child reading well. Most at low level, and 30% of control group omitted, as unable to score on tests. Lists other studies showing similarly.

(Cossu et al., 1993; Groen et al., 2006)

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3 Italian Vs English Readers with Down syndrome

From Tour 3 of *The Research Tours*:

'Giuseppe Cossu and his team show this gentle, easy word-reading development in their research on Italian children with Down Syndrome learning to read (Cossu et al.,1993, Cossu, 1999).

The children they studied had severe intellectual disability (mean IQ of 44 and IQ range of 40 to 56), but mastered word-reading relatively easily, correctly reading 93.8 % of real words, and 88% of pseudowords, which were used to test reading of unfamiliar words.

Speaking with Professor Cossu when our CQU team visited researchers and schools in Italy, one big challenge in setting up the study was finding children with Down Syndrome who weren't yet reading well, because word-reading development happens quite easily for Italian children with intellectual disability.'

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German Vs English Weak Word-Readers

	Regular-Orthography Cohorts	Standard English Cohorts
4 **German Vs English Weak Word-Readers** - Tour 13	Highly accurate reading of both real words and unfamiliar words. Read 3-syll pseudowords (*quaduktrisch, miktanie)* highly accurately, better than the English cohort could read 1-syll pseudowords (*foo, bish*).	Severely weak word-reading, with many at very low levels. Major weakness on real words and pseudowords. Major weakness on vowels: 16 times more vowel errors (342:20 errors).

(Landerl, Wimmer & Frith, 1997)

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Finnish Vs English Response to Intervention

	Regular-Orthography Cohorts	Standard English Cohorts
5 **Word-Reading Interventions Finnish Vs English Readers** - Tour 14	Weakest word-readers catch up to adult level with relatively minimal intervention (e.g., GraphoGame): most children by/in Grade 2, those with more severe difficulties by Grade 5 .	Even with highly intensive, ongoing intervention, most children make gains, but not to age-level, and an appreciable number make very limited progress.

(Lyytinen, 2023, Lyytinen et al., 2021; Torgesen et al., 1997)

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Initial Teaching Alphabet Vs Standard English Cohorts

	Regular-Orthography Cohorts	Standard English Cohorts
6 **Word-Reading Development ITA vs Standard-English Cohorts** - Tour 5	Results very much in keeping with more recent studies of children in regular-orthography nations. Reading & writing developing much faster & more easily. Transitioning done easily. Very few weak word-readers. Teacher workload lowered, as children were confident independent readers.	Results very much in keeping with more recent studies: Much slower early literacy development. Large numbers of struggling readers, many with severe difficulties. Teachers very busy supporting children's reading & writing.

(Downing, 1969a, 1969b; Mazurkiewicz, 1971, 1973; Warburton & Southgate, 1969).

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There is MASSES!!!! of ITA Research,
e.g., visit https://eric.ed.gov/ & google Initial Teaching Alphabet.

Dig deeper when you see articles criticizing ITA. You'll find hearsay, with no exploring of the ITA research.

Let's explore one giant ITA study of American children

- Mazurkiewicz (1971, 1973) reports on the 11 year study of 14,000 Pennsylvania children, half in ITA classes and half in Standard-English classes.
- The findings are highly in keeping with other ITA studies (e.g., Block & ITA Foundation, 1968; Downing, 1969a; Warburton & Southgate, 1969).

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ITA was highly effective with at-risk children

Mazurkeiwicz (1971) discusses

- Three times more Standard-English children repeating a year-level due to low achievement.
- Twice as many Standard-English children receiving remedial intervention, and
- Definite differences in remedial needs, with
  - ITA children needing support only with comprehension but not word-reading, but
  - Standard-English children needing intervention in both areas.

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ITA children were much stronger readers

- Eight months into Grade 1, only 6% of the Standard-English cohort were reading above grade level, e.g., reading Grade 2 or 3 reading materials.
- The ITA cohort were far ahead:
  - The top 25% of children were reading Grade 3 reading materials.
  - The middle 50% of children were reading Grade 2 reading materials.
- 15% were reading Grade 1 (grade-level) reading materials.
- Some delayed readers: 11% reading below Grade 1 level.

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ITA children were much stronger writers

"The most dramatic flowering of all is evident in the large numbers of free, self-expressive, six-year-old writers.

They write more abundantly and about many more subjects than do children learning the traditional alphabet.

They write alone, without help or editing from teachers, sounding-out their own spellings and using any words they feel like using in any sentence pattern that occurs to them."

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Workload was reduced & teaching empowered

- *Other observations indicate that the first-grade teacher's complaint about "what to do with the other children when working with one group" seems no longer to be a problem in ITA classes….*
- *While learning may start with whole class activity, this disappears in a short time in favor of individualized activity based on the rates of learning of individual children.*
- *The range of ability begins to show itself and the teacher finds himself working with individuals within groups.*
- *The teacher with many years' experience in first grade feels that an ITA approach answers the first-grade teacher's cry [that] "there must be an easier way of teaching reading."*

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The facts are in: We're mismanaging English orthographic complexity rather badly

- The problem is not English orthographic complexity.
- It's how we manage that complexity for beginning readers.
- By Taiwanese, Japanese and Chinese standards, we mismanage it appallingly.
- In times past they had excessive struggling readers and illiterate adults.
- Then they added in ITOs: Taiwan's Zhuyin Fuhao, Japan's Hiragana & China's Pinyin.
- Now they have very few struggling readers and widespread high literacy.
- That evidence has been there since the 1950s: The ITA research grew out of awareness of the major progress Asian nations were achieving.

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ITA and Sadly-Missed Opportunities!!!

- The ITA research ended when Whole Language swept the world, with meaningful reading planned to end our reading struggles.
- How tragic it is that Whole Language didn't embrace ITA.
- After all, struggling word readers and time pressure are the big rocks Whole Language crashed against.
- Whole Language + ITA would have been a winning combination:
  - Few word-reading and spelling difficulties.
  - Rapid easy early literacy development.
  - Schools time-rich and teacher workloads very manageable.
  - Ample time for great literacy and learning enrichment.

  (Galletly, 2022b)

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Beginners' orthographies are a strong solution

- Children cope vastly better using two orthographies when the first is fully-regular, than they do, learning a single, highly-complex orthography.

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Few children have word-reading difficulties and most difficulties are minor by Anglophone standards

Levels of word-reading and writing difficulties in Japanese children (Uno et al., 2009):

- Hiragana: 0.2% with reading difficulties, 1.6% with writing difficulties.
- Katakana: 1.4% with reading difficulties, 3.8% with writing difficulties.
- Kanji: 6.9% with reading difficulties, 6% with writing difficulties.

We'd love those low numbers!

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We don't need spelling reform but we'd benefit hugely by using a beginners' orthography before Standard English

- We'd use Taiwan, Japan & China as role-models for 2-Stage early literacy.
- e.g., Fleksispel: my free-to-use fully-regular English beginners' orthography.
- Very low content load & cognitive load for beginners and struggling readers.
- Available free for non-commercial use to educators & researchers.

Fleksispel - Stage 1

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a	*mat*	**er**	*mert*	**d**	*dat*	**p**	*pat*	**ch**	*chat*
ee	*meet*	**or**	*mort*	**f**	*fat*	**r**	*rat*	**th**	*that*
e	*met*	**ow**	*now*	**g**	*gat*	**s**	*sat*	**ng**	*tang*
ie	*miet*	**oo**	*foot*	**h**	*hat*	**t**	*tat*		
i	*mit*	**ooo**	*mooo*	**j**	*jat*	**v**	*vat*		
oe	*moet*	**oy**	*boy*	**k**	*kat*	**w**	*wat*		
o	*mot*	**air**	*hair*	**l**	*lat*	**y**	*yat*		
ue	*muet*			**m**	*mat*	**z**	*zat*		
u	*mut*								
u	*sistu (ə)*								

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'*Change, Challenge and Choice*':

a provocative conference title!

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'*Change, Challenge & Choice*' is a provocative title!

- ***The Challenge: To build reading & writing in beginning readers as quickly as many other nations do! To manage cognitive load well!***
- **An Ethical & Instructional Challenge:** Children in so many other nations develop reading and writing skills so much more easily and rapidly than our children do, by using only highly-regular spelling when children first learn to read and write.
- **Taiwan, Japan, China & Korea are our role models**: They added in beginners' orthographies in the 1940s-50s, e.g., Pinyin &Hiragana.
- **They optimise cognitive load and cognitive processing magnificently for their at-risk and struggling readers.**
- **Our best efforts don't come close!**
- **Is that fair? Is it ethical? Are our children entitled to easier learning?**

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The Challenge for Change: Should Australia Move to 2-Stage Early Literacy? Research is needed!

- **We do 2-Stage early-literacy for handwriting: Printing → Cursive.**
- **We probably should also do it for reading and writing.**
- **Taiwan, Japan, China & Korea are our role models, for:**

1. 2-Stage early literacy: used for >6 decades, with outstanding success.

2. Showing the enormous power of
(a) lowering cognitive load, and
(b) reducing demands for strong cognitive-processing skills.

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Let's Research 10 Changes areas

Change 1. *Understand how orthographies matter: English spelling is dragging us down.*

Change 2. *Own our struggling reader woes: End hypocrisy and pretence.*

Change 3. *Weigh workload: Our children and teachers are working far too hard.*

Change 4. *One-size education does not fit all: Teach to the decidedly different instructional needs of upper-third and lower-third readers.*

Change 5. *End our data deficiency: Build strong knowledge on word-reading levels.*

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Let's Research the 10 Changes!

Change 6. *Enrich every child: Ensure effective, supportive, tailored education.*

Change 7. *Insist on easier early-literacy development: Reach regular-orthography nations' achievement levels.*

Change 8. *Investigate the potential of fully-regular beginners' orthographies: Research shows they're key.*

Change 9. *First, play to learn: Start Standard English word-reading instruction from mid-Year 2.*

Change 10. *Build needed research knowledge as quickly as possible: Use collaborative school-based research.*

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For more on that challenge: www.susangalletly.com.au

- Handouts for SEPLA-CON sessions & poster.
- Galletly & Knight research publications:
  - Download free from ResearchGate.
- Poster:
  - *The High Cost of Orthographic Disadvantage.*
  - *See video & slides at susangalletly.com.au.*
- Books:
  - *Bunyips in the Classroom: The 10 Changes*
  - *The Research Tours: The Impacts of Orthographic Disadvantage*

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The 10 Changes

"That child development and education across Australia might be eased and enhanced."

- **Dr Susan Galletly**

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Long Abstract for Dr Susan Galletly's presentation at the 2023 SEPLA-CON conference

Anglophone nations experience severe orthographic disadvantage, precipitated by the complex learning and high cognitive load English orthographic complexity creates for children learning to read and write, and action literacy tasks.

Nations differ in orthographic complexity (spelling regularity). This impacts ease and speed of reading and writing development, numbers and extent of risk factors, child and teacher workload, and the complexity, efficiency and effectiveness of teaching, learning, and SLP intervention for school-aged children.

Most Finnish children read and write with adult-level accuracy by mid-Grade 1 (Eklund et al., 2016), children with mild weakness catch-up by Grade 2, and children with severe difficulties catch-up by Grade 4 (Lyytinen et al., 2021). In contrast, English-orthographic-complexity severely impedes early-literacy development, instruction and intervention (Galletly, 2023; Knight et al., 2017).

Cognitive load and cognitive-processing efficiency underlie crosslinguistic differences (Knight & Galletly, 2020). Regular orthographies exemplify simple, unimpeded, logical learning, with low cognitive load across early literacy (Cossu et al., 1993; Poskiparta et al., 1999). Anglophone difficulties build from complex learning demands and high cognitive load impacting 5-year-olds' immature cognitive-processing skills.

Importantly, orthographic disadvantage impacts vulnerable Anglophone children most severely, e.g., those with language-skills weakness, intellectual disability or strong family history of literacy difficulties (Galletly, 2011a; Galletly & Knight, 2011a).

Orthographic disadvantage is expensive, with costs currently paid in the written-communication and learning struggles of Anglophone children. Innovative solutions are needed.

Considerable research shows word-reading and spelling, and independent reading and writing develop markedly more slowly in children who learn to read and write English than in children of nations that use regular orthographies, e.g., Finland, Estonia, Taiwan, Poland, Iceland, Italy, China, Japan, Korea and Taiwan (Galletly, 2023; Knight et al., 2017; Seymour et al., 2003).

While high-achieving English readers read well, Anglophone nations have embarrassingly large numbers of weak readers (Wanzek et al., 2018). Overwhelmingly, speech-language-pathologists' caseloads are weak in language skills, word reading and spelling, or both areas.

Galletly (2023a) and Knight et al., (2017) discuss crosslinguistic research findings, e.g., of

- Far slower reading and writing development, e.g., 31% vs 90-98% word-reading accuracy at end-Grade 1 for UK vs regular-orthography children of ten European nations (Seymour et al., 2023).
- Intellectual disability having minor vs major impacts on regular-orthography vs English readers' word-reading (Cossu et al., 1993; Poskiparta et al., 1999).
- Impressive effectiveness of regular-orthography early-literacy intervention (Hanley et al., 2004; Landerl et al., 1997; Poskiparta et al., 1999), vs low effectiveness of English interventions (e.g., Torgesen et al., 1997).
- Markedly low ranges and standard deviations in regular-orthography cohorts of word-reading studies, contrasting with particularly high English ranges and standard deviations (Caravolas, 2018; Frith et al., 1998; Galletly, 2023; Hanley et al., 2004; Landerl et al., 1997), with indications regular-orthography 'weaker' readers read better than at least half of English readers.
- Healthy-progress English readers in later elementary and high school making large numbers of errors on vowels and unfamiliar words, particularly long multisyllabic words, in contrast to very few of these errors by regular-orthography children (Frith et al., 1998).

Anglophone nations may benefit from regular-orthography role models. Many European nations hold back formal instruction until age 7-8 years, when executive-function and learning skills are well-developed. Additionally, similar to Anglophone 2-Stage handwriting (children initially printing, then transitioning to cursive script), Asian nations introduced 2-Stage reading-writing development last century now initially using fully-regular beginners' orthographies, with strong advantaging experienced (Knight et al., 2017, 2019; Tseng, 2006).

The available research, while powerful, can be considered useful preliminary research. Innovative research on orthographic-complexity impacts is needed. Fortunately, we have availability of strategic solutions with potential to markedly reduce cognitive load and learning complexity, and heighten executive-function, statistical-learning, cognitive-processing and learning skills. There are many worthy areas for future research, e.g., Galletly (2023a) lists 100 research questions as examples.

Building from the research knowledge-base, Galletly, Knight and colleagues have developed multiple models, tools supporting reflection on crosslinguistic difficulties and means of achieving positive gains. Detailed in *The Research Tours: The Impacts of Orthographic Disadvantage* (Galletly, 2023?), they include *Orthographic Advantage Theory* (Knight, Galletly & Gargett, 2019), *Differential Disadvantage* (Galletly & Knight, 2011a), the *Transition from Early to Sophisticated Literacy (TESL)* model (Galletly & Knight, 2011b), the *Literacy Component Model* (Knight, Galletly & Aprile, 2021), and *The 10 Changes* (Galletly, 2022).

Galletly's (2023) book, *The Research Tours: The Impacts of Orthographic Disadvantage,* explores pertinent research on orthographic disadvantage and *The 10 Changes,* strategic, evidence-based changes. While including a particular focus on Australia, they have strong relevance for all Anglophone nations:

Change 1. Understand how orthographies matter: English spelling is dragging us down.
Change 2. Own our struggling reader woes: End (Australian) hypocrisy and pretence.
Change 3. Weigh workload: Our children and teachers are working far too hard.
Change 4. One-size education does not fit all: Teach to the decidedly different instructional needs of upper-third and lower-third readers.
Change 5. End our (Australian) data deficiency: Build strong knowledge on word-reading levels.
Change 6. Enrich every child: Ensure effective supportive tailored education.
Change 7. Insist on easy literacy development: Reach regular-orthography nations' achievement levels.
Change 8. Investigate the potential of fully-regular beginners' orthographies: Research shows they're key.
Change 9. Play to learn first: Start Standard English word-reading instruction from mid-Year 2.
Change 10. Build needed research knowledge as quickly as possible: Use collaborative school-based research.

Igniting innovation, awareness of crosslinguistic differences inspires research in diverse new directions (Galletly, 2023), e.g., on crosslinguistic differences in

1. The literacy and language-skill levels of children with
    a. Intellectual disability.
    b. Weakest word-reading and spelling skills, e.g., the weakest 10% of achievers.
2. Cognitive-load impacts across early-literacy development.
3. The differentially more severe disadvantage experienced by Anglophone children who start school with pre-existing language weakness experience.
4. The potential of 2-Stage early literacy development (*Change 8*), as Taiwan, Japan and China use.
5. The potential of commencing formal word-reading instruction at mid-Year 2, with schools' first 2.5 school years being language and learning enrichment (*Change 9*).
6. Ethical aspects of Anglophone children having far more risk factors and difficulties (*Change 7*).

<u>Useful Reading:</u>

(All references in the presentation are included in the reference list in Galletly (2023) *The Research Tours)*

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    - (2023) *The Research Tours: The Impacts of Orthographic Disadvantage* (Book 2).
    - (In press) *The 10 Changes: The Nitty Gritty* (Book 3).
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ITA Foundation 2021 Conference:

"Biliteracy: Learning to Read in Different Languages

Because Trucks Aren't Bicycles

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1

My 3 wonderings 1970s to 2001

- What are the big factors causing our children's and adults' reading and literacy difficulties?
- How can we reduce the suffering and struggling our poor children and adults with reading and literacy difficulties are going through?
- What are the ways we can do things better?

2

In 2001 I realised orthographies matter!

- Kher (2001) Time Magazine, "Deconstructing Dyslexia: Blame it on the Written Word"

"English has 1120 different ways of spelling its 40 phonemes, the sounds required to pronounce all its words. By contrast, Italian needs only 33 combinations of letters to spell out its 25 phonemes.... The reported rate of dyslexia in Italy is barely half that in the US where 15% are affected to varying degrees."

- The big question: WHY hadn't I heard earlier about orthographies having such big impacts???
- I now sought out the research on orthographic impacts & have followed it ever since.
- I've visited schools & researchers in regular-orthography nations, & deeply explored the research on orthographic impacts.

3

My 3 new wonderings 2001 to 2021:

1. Why do Traditional English at-risk children develop such severe word-reading and literacy difficulties while regular-orthography at-risk children have such minor difficulties?
2. To what extent are our word-readers' difficulties exacerbated by
   a. High cognitive load across early literacy development,
   b. Young age, immature cognitive processing & executive function skills, &
   c. Developing acquired helplessness thru too little success?
3. In what ways would a fully-regular beginners' orthography advantage our children?

4

Let's explore research and practice

- Findings from regular-orthography nations in recent decades.
- ITA school use and research in the 1960s.

5

Terms I'll use

- **Word-reading**: the reading of familiar and unfamiliar words and word parts in texts and as isolated words.
- **Reading**: reading comprehension, enjoying of reading, etc.
- **Struggling word-readers**: children who struggle with word-reading and thus also spelling, comprehension, independent reading and writing, etc.
- **Anglophone nations**: e.g., USA, UK, Australia.

6

Terms I'll use (cont)

- **Orthography**: a spelling system, e.g., Traditional Orthography.
- **Initial Teaching Alphabet (ITA)**: the highly-regular orthography used in 1960s research, and currently by ITA Foundation projects.
- **Initial Teaching Orthography (ITO)**: my term for other English highest-regularity beginners' orthographies, e.g., Fleksispel is an ITO I've developed for educators and researchers to play with and use.
- **Traditional Orthography (TO)** = Standard English Orthography
- **Regular-orthography nations**: nations that use highly-regular orthographies, including
  - Sole orthography nations, e.g., Finland, Estonia, Turkey.
  - Initial then complex orthography nations: Taiwan, Japan, China.

7

ITA & Modern Crosslinguistic Research Agree: It's trucks vs. bikes

- Research from today's regular-orthography nations aligns perfectly with ITA research findings.
- They clearly show both our problems plus nice solutions.
- It's trucks vs. bicycles (Galletly & Knight, 2013):
  - Learning to read and write English (Traditional Orthography) is learning to drive a truck in confusing conditions and rough weather, with relatively low supports & encouragement.
  - Learning to read and write a regular-orthography is learning to ride a bike on a smooth path on a sunny day, with lots of support and encouragement.
  - Learning ITO then TO is learning to ride a bike

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- **Learning to drive a truck in confusing conditions is hard work: lots of kids end up struggling truck drivers (Aro, 2004):**
  "Studies investigating the effect of orthographic consistency have done so usually in comparison with the extreme, namely English. The 'transparency' of an orthography can be best thought of as a continuum. Whereas we might remain uncertain where on this continuum each orthography is objectively located, we can be certain of the extreme positions… English is one of the most irregular alphabetic orthographies, and Finnish is certainly one of the most regular."
- **Learning to ride a bike in ideal conditions, is easily achieved by all, including many kids with significant disabilities (Aro, 2004):**
  "A transparent orthography treats even a phonologically immature reader in a lenient manner. It helps in explicating the alphabetic principle, the correspondence between spoken and written language…it does not burden the beginning reader with a plethora of correspondence rules; and together with systematic phonics teaching it provides the beginning reader with a simple tool for successful word recognition."

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Recent crosslinguistic research shows strong advantaging from regular-orthographies

- Seymour et al.'s (2003) European Grade 1 word-reading.
- Spencer & Hanley's (2003, 2004) Welsh-English studies.
- Frith, Landerl & Wimmer's (1997,1998) studies comparing German and English healthy-progress & weak word-readers (Frith et al., 1998; Landerl et al., 1997).
- Aro's (2004) Finnish and Huang & Hanley's (1994,1997) studies of word-reading & phonemic awareness development.
- Studies of the weakest 10% of word-readers (Olofsson & Niedersoe, 1999; Poskiparta et al., 1999; Schneider et al., 1999, Torgesen et al., 1997, Torgesen, 2000, Vellutino et al., 1996; Vellutino, 2000).
- Cossu et al.'s study of Italian children with Down Syndrome (Cossu et al., 1993, Cossu, 1999).

10

Orthography impacts Word Reading & Spelling

- Highly-regular orthographies:
  - Italian Finnish Norwegian Dutch Icelandic Swedish Spanish Turkish German Greek
  - Word-reading at end Gr1 90-98%
- Slightly less-regular orthographies
  - French Danish Portuguese
  - Word-reading at end Gr1 >70%
- English is far more complex
  - 34% accuracy at end Gr1
  - 76% accuracy a year later

Seymour, Aro & Erskine (2003)

- Word-reading at the end of Grade 1 (& 2)
- The complexity of each nation's orthography dictates both
- 1. Speed & ease of learning to read & write, plus
- 2. Schools' extent of workload & time pressure

(Knight & Galletly, 2017)

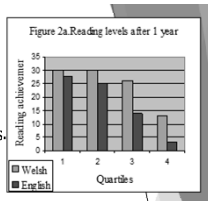
11

Traditional Orthography has damaging effects

Spencer & Hanley's studies of Welsh & English readers show how our long sad tail of struggling word-readers starts and continues.

- Welsh is a highly-regular orthography.
- Language of reading was virtually the only difference, e.g. same small town, parallel schools.
- Huge differences in rate of word reading development, especially in the lowest 25% of achievers.
- Differences still present in Gr 5: the lowest 25% continued to struggle severely.

(Spencer & Hanley, 2003, 2004; Hanley et al., 2004)



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On weak & healthy-progress word-readers

Landerl, Wimmer, & Frith's (1997) study of German & English weak word-readers:

- German weak word-readers read hardest words (e.g., *quaduktrisch, miktanie*) better than English weak word-readers read easiest words (e.g., *foo, bish*)
- 16 times more vowel errors: English 324, German 20.
- Major difficulty reading unfamiliar words: stronger on high frequency words vs. weak on unfamiliar low frequency words:
  - English: 10% vs 50% errors; German: no significant difference.
- The same differences happen in normal development, e.g., in Frith et al.'s (1998) study of healthy-progress readers, English 8 & 12yr olds made 44.5 times more vowel errors.

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Phonemic awareness & word-reading develop together

- Aro (2004) showed Finnish children take 4-weeks to develop accurate word-reading, and develop strong phonemic awareness at the same time.
- Huang & Hanley (1994,1997) showed Taiwanese children developed strong phonemic awareness in the 10 weeks they learned to read their fully-regular ZhuYin FuHao.
- It's likely children develop other cognitive processing skills as well.
- Reading and writing a regular orthography builds powerful reading and writing skills.
- Phonemic awareness for TO children starts at age 5 when word-reading instruction starts, but doesn't seem to finish until at least later primary school, because word-reading & spelling development are so slow (Hanley et al., 2004)

14

Intervention works extremely well.

Massive differences in progress by the lowest 10% of word-readers:

- Regular-orthography weakest word-readers make impressive progress, catching up to high word-reading accuracy and staying accurate (Olofsson & Niedersoe, 1999; Poskiparta et al., 1999; Schneider et al., 1999).
- Traditional orthography [English] weakest word-readers stay well behind, with a signiticant number making only minimal progress, and many losing skill levels after intervention ceases (Torgesen, 2000; Torgesen et al., 1997; Vellutino, 2000, Vellutino et al., 1996).

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Children with intellectual disability make powerful progress

Cossu et al.'s (1993) study of Italian developing readers with Down Syndrome (Mean IQ 44; IQ range 40-56):

- Correctly read 93.8 % of real words, 88% of nonwords.
- As accurately as neurotypical 7 year olds, i.e., highly accurate though not as fast as 11 year olds.
- Their biggest problem – finding kids not yet fully accurate.
- ***"General intelligence and working memory are largely irrelevant factors for the acquisition of reading accuracy."***
- Traditional Orthography studies of children with Down Syndrome show relatively minimal gains (e.g., Burgoyne et al., 2012; Lim et al., 2019).

16

All those studies show: Children need & thrive with an easy start

- So little to learn, such easy mastery.
- Strong success inoculation.
- Low cognitive load across early literacy.
- Risk factors hugely minimised.
- Rapid easy development of confident skilled reading and writing.
- Cognitive processing and executive function skills develop nicely.
- This expedites transitioning to Traditional Orthography.

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All beginners, and particularly at-risk readers need and thrive with an easy start

If we use 2-stage handwriting development:

- Initially just printing, making it easy for children to build confidence and skill using pencils & writing words, then
- Later, when children are confident word writers, we transition them also using cursive writing.

Why don't we similarly do 2-stage word-reading, spelling & early literacy development:

- Initially just ITO, so children build confidence and skill reading and writing, then
- Later, when confident readers and writers, transitioning them steadily to Traditional Orthography?

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Our Asian role model nations: Taiwan, Japan & China

- China and Taiwan's Hanzi, and Japan's Kanji are orthographies vastly more complex than English.
- Taiwan, Japan & China teach reading and writing of beginners' orthographies first.
- This rapidly builds reading and writing skills.
- It also builds phonemic awareness, orthographic awareness and executive function skills, i.e., strong learning skills.
- Confident literacy skills and learning skills then expedite transitioning and learning of their highly complex orthographies.

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Our Asian role model nations: Taiwan, Japan & China (cont.)

- In Taiwan, the regular orthography, ZhuYin FuHao, is taught in the first 10 weeks of Yr1. The children's strong phonemic awareness & other learning skills expedite their learning to read and write Chinese Hanzi, using ZhuYin FuHao (Huang & Hanley, 1994, 1997).
- Reading is fast and easy as new words are written in both orthographies - if one doesn't work, read the other.
- I loved listening to a Grade 1 Japanese child confidently reading "Anne of Green Gables" in Japanese.

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We're mismanaging English orthographic complexity rather badly

- The problem is not English orthographic complexity.
- It's how we manage that complexity for beginning readers.
- By Taiwanese, Japanese and Chinese standards, we mismanage it appallingly.
- In times past they had excessive struggling readers and illiterate adults.
- Then they added in ITOs: Taiwan's Zhuyin Fuhao, Japan's Hiragana & China's Pinyin.
- Now they have very few struggling readers and widespread high literacy.

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Beginners' orthographies are a strong solution

- Taiwan, Japan & China kept their highly complex orthographies.
- They added in fully-regular beginners' orthographies (ITOs).
- They thus protect beginners from the potentially sad impacts of excessive complexity, plus build strong literacy and learning skills.
- Children cope vastly better using two orthographies when the first is a fully-regular one, than they do learning a single highly complex orthography.

22

Few kids have word-reading difficulties and most difficulties are minor by Anglophone standards

Levels of word-reading and writing difficulties in Japanese children (Uno et al., 2009):

- Hiragana: 0.2% with reading difficulties, 1.6% with writing difficulties.
- Katakana: 1.4% with reading difficulties, 3.8% with writing difficulties.
- Kanji: 6.9% with reading difficulties, 6% with writing difficulties.

We'd love those low numbers!

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Our children struggle with too hard a start:

- So much to learn, such complex mastery.
- Too high cognitive load across early literacy.
- Too many risk factors heightened by high cognitive load and complex learning.
- Struggling word-readers have too little success, and move into acquired helplessness and entrenched word-reading and literacy difficulties.
- Schools too busy and thus too few supports.

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Orthographies are a time & workload issue

Using solely TO creates huge workload and time pressure:

- Learning to read & write TO takes mega-hundreds of hours.
- Supporting struggling readers takes mega-hundreds of hours.
- We still must fit in the subject-area learning all nations do.
- We thus have much higher child and teacher workload plus our "*Find The Learning Time Challenge*".

(Galletly, 2022a, 2022b; Knight et al., 2017b)

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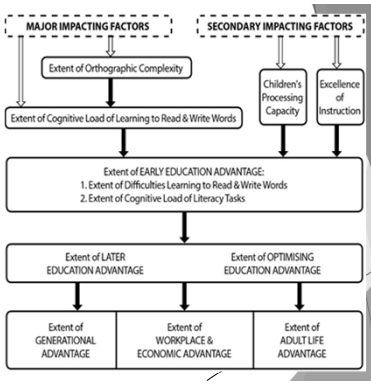
Orthographic Advantage Theory

Orthographies give nations Orthographic Advantage & Orthographic Disadvantage

(Knight, Galletly & Gargett, 2020)



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ITA: A stunning winner!

https://en.wikipedia.org/wiki/Initial_Teaching_Alphabet

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The ITA research showed ITA strongly achieved Primary Aims 1 to 3:

1. Preventing the very major word-reading and spelling difficulties struggling TO word-readers experience.
2. Easing and speeding early literacy development of all children.
3. Transitioning children effectively from ITA to Traditional Orthography.
4. Expediting later literacy, language and learning development, building from children's strong early literacy skills.

- Alas, the ITA research stopped before planned major projects focused on Primary Aim 4 were conducted.

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The ITA research findings

- Rapid easy reading, writing and literacy development for all children.
- Delightfully easy transitioning from ITA to Traditional Orthography.
- Powerful boosting of language, literacy & learning skills.
- Massive reduction of word-reading and writing difficulties.
- Strong advantaging of low SES and at-risk children.
- Strong effects in second language learning.
- Strong effects for special needs groups.

(Block & ITA Foundation, 1968; Downing, 1969a,b; Galletly, 2022a, b; Knight et al., 2017a; Mazurkiewicz, 1971, 1973; Warburton & Southgate, 1969)

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ITA was also extremely popular

Warburton & Southgate, 1969:

- Many schools in England adopted ITA after seeing its strong effects and ease of use in other schools:
  1500 schools in England were using ITA at its height in 1966.
- Parents were strongly positive re ITA and its effectiveness:
  - *Parents were pleased by the results, having observed that the children learned happily, easily and quickly.*
  - *No instance was reported of parents, whose child had learned to read by ITA, expressing disapproval of it.*
  - *In poor socio-economic areas, a number of parents of large families of low ability remarked on the fact that younger children taught by ITA liked reading, in contrast to older siblings who had failed to learn to read.*

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The ITA research and recent crosslinguistic research show the same findings

- Beginning readers benefit strongly from initially reading and writing a highly-regular orthography.
- At-risk readers benefit enormously, with word-reading and spelling difficulties hugely reduced.
- Mastering a complex orthography is vastly easier if children first read and write a highly-regular orthography.

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How much ITA research was there?

- Masses! Hundreds of research projects in England, USA & Canada.
- So many studies that some research articles summarized findings, e.g., of 40 to 70 individual studies.
- Different studies used different methodologies, e.g., in the big UK studies, no reading instruction method was prescribed – ITA was "*a medium not a method".*

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Useful reads from decades past

- Warburton & Southgate's (1969) report on their 1966 UK review of ITA usage.
- Albert J Mazurkiewicz's (1971,1973) writings on ITA studies in Pennsylvania schools, https://eric.ed.gov/.
- A treasure trove of studies on diverse ITA topics: Block, J. R., & Initial Teaching Alphabet Foundation (1968). *i.t.a as a language arts medium*: Proceedings of the 4th International i.t.a. Conference (Montreal, Quebec, Aug. 1967), London: England: Initial Teaching Alphabet Foundation, 426pp, https://eric.ed.gov/.
- Search ERIC (https://eric.ed.gov/)for ITA studies.

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Useful reads written recently, e.g.,

- Knight, B. A., Galletly, S. A., & Gargett, P. S. (2017a). Managing cognitive load as the key to literacy development: Research directions suggested by crosslinguistic research and research on Initial Teaching Alphabet (i.t.a.). In R. Nata (Ed.), *Progress in Education* (Vol. 45, pp. 61-150). New York: Nova Science Publishers.
- Books I'm writing now:
  - Less detail in Galletly (2022a) "*Koala Reading Woes: The Ten Changes*"
  - Much more detail in Galletly (2022b) "*Koala Reading Woes: The Nitty-Gritty*"

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Exploring one giant ITA study of American children

- Mazurkiewicz (1971, 1973) reports on the 11 year study of 14,000 Pennsylvania children, half in ITA classes and half in Traditional Orthography classes.
- The findings are hugely in keeping with those of the big UK studies and lots of other ITA studies (e.g., Block & ITA Foundation, 1968; Downing, 1969a; Warburton & Southgate, 1969).

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ITA children were much stronger readers

- Eight months into Grade 1, only 6% of the Traditional Orthography cohort were reading above grade level, e.g., reading Grade 2 or 3 reading materials.
- The ITA cohort were far ahead:
  - The top 25% of children were reading Grade 3 reading materials.
  - The middle 50% of children were reading Grade 2 reading materials.
- 15% were reading Grade 1 (grade-level) reading materials.
- Only 11% showed delayed reading, reading below Grade 1 level.

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ITA children were much stronger writers

"The most dramatic flowering of all is evident in the large numbers of free, self-expressive, six-year-old writers.

They write more abundantly and about many more subjects than do children learning the traditional alphabet.

They write alone, without help or editing from teachers, sounding-out their own spellings and using any words they feel like using in any sentence pattern that occurs to them."

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Workload was reduced & teaching empowered

- *Other observations indicate that the first-grade teacher's complaint about "what to do with the other children when working with one group" seems no longer to be a problem in ITA classes….*
- *While learning may start with whole class activity, this disappears in a short time in favor of individualized activity based on the rates of learning of individual children.*
- *The range of ability begins to show itself and the teacher finds himself working with individuals within groups.*
- *The teacher with many years' experience in first grade feels that an ITA approach answers the first-grade teacher's cry [that] "there must be an easier way of teaching reading."*

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Strong effectiveness with at-risk children

Mazurkeiwicz (1971) discusses

- Three times more Traditional Orthography children repeating a year-level due to low achievement.
- Twice as many Traditional Orthography children receiving remedial intervention, and
- Definite differences in remedial needs, with
  - ITA children needing support only with comprehension but not word-reading, but
  - Traditional Orthography children needing intervention in both areas.

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Advantages galore

- Mazurkiewicz (1973)
- *"The advantages of i.t.a. are that it permits the child to:*
- *- advance more rapidly in reading and writing experience;*
- *- achieve significantly superior reading skills at an earlier time;*
- *- read more widely;*
- *- write more prolifically, more extensively, and with higher proficiency;*
- *- develop high spelling skills fairly early;*
- *- show a lack of the inhibitions in writing which are commonly found early in the first year; and*
- *- write more creatively in terms of the number of running words and the number of polysyllabic words used.*

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Life was so much easier

- Mazurkiewicz's (1971,1973) findings align strongly with UK findings (e.g., Downing, 1969a; Warburton & Southgate).
- As a teacher Warburton and Southgate (1969) interviewed commented,

"The long uphill grind has been cut out. Reading is more an ordinary part of childhood instead of a chore and so the children take it in their stride. They pick up a book in their free time as they would a paintbrush or jigsaw."

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ITA strongly built self esteem

Warburton & Southgate, 1969:

- *"The majority of teachers interviewed appeared to consider the change in children's attitudes to reading to be at least as important, or even more important, than the increased progress in reading."*
- *"One doesn't now find children in the middle of infant school who have, as it were, given up. Even if a child is going slowly, he feels he is making progress."*
- *"Children don't get blockages as they did with traditional orthography. Even the youngest, [least intelligent] child can have a go."*
- *"The shutters don't go down when the child meets a word he doesn't know. He'll try it."*

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ITA children loved reading & did lots of it

Warburton and Southgate (1969):

- *"Generally speaking, in ITA schools, almost regardless of the types of organisation, children want to read more than traditional orthography children, and spend a great proportion of all the odd minutes in a day doing so.*
- *Teachers' comments thus represented a general conclusion, which was confirmed by the investigators' observation in schools, that usually children who learn to read by ITA both want to, and do, spend more time on reading than children taught by traditional orthography.*
- *This conclusion refers to all ages and all intelligence levels of children, and covers lesson times, free times, break times and time at home.*

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The sad end of 1960s ITA research

- Alas, the ITA research ended,
- Seemingly abruptly,
- With little to no information on why it stopped, and
- With many planned studies not completed.
- Its many studies and their strong findings have been overwhelmingly ignored.
- The ITA end is our sad ongoing loss:
  We're perhaps six decades behind in optimising literacy development for all children, and particularly our at-risk children.

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Why was the ITA research cupboarded?

- Why was the ITA research cupboarded, a.k.a. dumped in a nasty cockroachy cupboard and left to rot?
- Now that's a very good question that we've had difficulty finding answers for.
- Quite likely, it was the ascendancy of Whole Language philosophy, which deemed word-reading rather irrelevant.

(Galletly, 2022a, 2022b; Knight et al., 2017a)

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Missed opportunities!!!

- How tragic it is that Whole Language didn't embrace ITA.
- After all, struggling word readers and time pressure are big rocks Whole Language crashed against.
- Whole Language + ITA would have been and still would be a winning combination:
  - Few word-reading and spelling difficulties.
  - Rapid easy early literacy development.
  - Schools time-rich and teacher workloads very manageable.
  - Ample time for great literacy and learning enrichment.

(Galletly, 2022b)

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The Upstream Downstream Challenge: Imagine a river (Galletly, 2022a, b)…

"An ounce of prevention is worth a pound of cure."

Benjamin Franklin

- Upstream: Using an ITO with beginning readers to expedite early literacy development and prevent word-reading and spelling difficulties.
- Downstream: using an ITO in remediating struggling word-readers.
- The research suggests Upstream ITO use beats Downstream ITO use.

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Upstream + Downstream: the winning combination

- Upstream ITO:
  - Expediting early literacy development and preventing word-reading and spelling difficulties.
  - Expediting second language learning.
- Downstream ITO:
  - Early intervention overcoming the relatively mild word-reading spelling, reading and writing difficulties of the weakest 10% and 20% of ITO readers, and
  - Intervention overcoming the very major word-reading, spelling, reading & writing difficulties of non-ITO child & adult struggling readers taught solely with TO.

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Into the future, we'd set strong goals

- "*If/when we investigate beginners' orthographies, we'd set our effectiveness priorities clearly, in 1 & 2 vs. 3 order:*
- *Highest Priority 1: To reduce to a minimum, both our numbers of children experiencing word-reading and spelling difficulties, and the extent of any such difficulties.*
- *Highest Priority 2: To ensure early literacy development is easy, gentle and non-stressful, and hopefully quite rapid.*
- *Priority 3: To achieve ongoing heightened literacy, language and learning development across primary and high school years, ensuring early-years advantage from a beginners' orthography is continued and extended."*

(Galletly, 2022b)

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ITA worked very very very well!!!!

- Downing (1969b): *'The unequivocal conclusion is that the traditional orthography of English is a seriously defective instrument for the early stages of reading and writing. As long as this traditional orthography is used in the early years of schooling in English-speaking countries, children's learning of reading and writing is bound to be much less efficient than it can be with a simplified and regularised writing-system such as the Initial Teaching Alphabet.'*
- Warburton & Southgate (1969): *"There is no evidence whatsoever for the belief that the best way to learn to read in traditional orthography is to learn to read in traditional orthography. It would appear rather that the best way to learn to read in traditional orthography is to learn to read in the initial teaching alphabet."*

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And may do so in the future…

Block & ITA Foundation (1968):

"Hope is expressed that educators will not disregard the opportunities that are offered by ITA."

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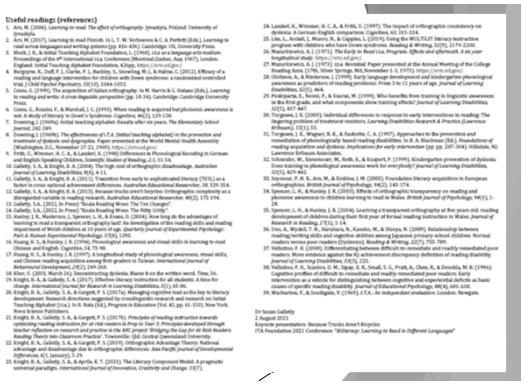
Useful readings



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