

"Biliteracy: Learning to Read in Different Languages



Dr Susan Galletly PhD

Mackay, Qld,

Australia

Susan.galletly@hotmail.com



## 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 Aussie children and adults with reading and literacy difficulties are going through?
- ▶ What are the ways we can do things better?

## 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 and have followed it ever since.

#### 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 having too little success?
- 3. In what ways would using a fully-regular beginners' orthography first up advantage our at-risk and non-at-risk children?

In exploring these wonderings, I've visited schools and researchers in regular-orthography nations, and deeply explored the research on orthographic impacts.

## Let's explore research and practice

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

#### 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.

#### 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., China's Pinyin & Fleksispel 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.

## 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

- 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."

## Crosslinguistic studies we'll explore

- 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).

## **Orthography impacts Word Reading & Spelling**

- ► 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. Extent of workload & ➤ time pressure schools experience

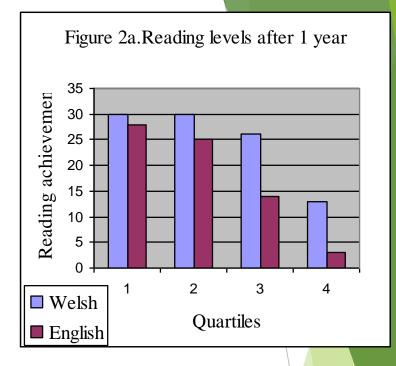
- Highly-regular orthographies:
  - ➤ Italian Finnish Norwegian
    Dutch Icelandic Swedish
    Spanish Turkish German Greek
  - ➤ Word-reading at end Gr1 90-98%
- Slightly less-regular orthographies
  - ➤ French Danish Portuguese
  - ➤ Word-reading at end Gr1 > 70%
  - English is far more complex
 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

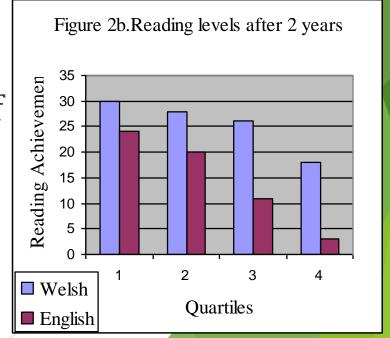
(Knight & Galletly, 2017) Seymour, Aro & Erskine (2003)

## Traditional Orthography has damaging effects

- Welsh is highly regular. Spencer & Hanley's studies of Welsh & English readers show how our long sad tail of struggling word-readers starts and continues.
- Language of reading was virtually the only difference between the two groups, e.g. all in same small town, attended 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% continue to struggle severely.

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





## The impact is strongly on word-reading

Landerl, Wimmer, & Frith's (1997) German English study Huge differences in averages, no overlap of means:

- ► 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 huge 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.

# Phonemic awareness develops alongside word-reading development.

- ► 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)

## 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).

## Powerful progress by children with intellectual disability

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).

## Children thrive with an easy start

- ► 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.

Using an ITO then Traditional Orthography works similarly:

- ► 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.

## Children thrive with an easy start (cont)

- 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.

## Our Asian role model nations: Taiwan, Japan & China

- ► Taiwan, Japan & China teach reading and writing of beginners' orthographies first (e.g., Japan's Hiragana).
- ► 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.

## 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.

## 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 Chinese, Taiwanese and Japanese standards, we mismanage it appallingly.
- China and Taiwan's Hanzi, and Japan's Kanji are orthographies vastly more complex than ours.
- In times past they had excessive struggling readers and illiterate adults.
- Now they have very few struggling readers and widespread high literacy.

## Beginners' orthographies empower learning

- ► Taiwan, Japan and China kept their highly complex orthographies.
- ► They added in fully-regular beginners' orthographies children use first: China's Pinyin, Japan's Hiragana and Taiwan's BoPoMoPho (Zhuyin Fuhao).
- ► This protects beginners from the potentially sad impacts of excessive orthographic complexity, plus builds strong cognitive processing skills.
- ► Children cope vastly better using two orthographies a fully-regular then a complex one than they do using just the single highly complex orthography.

## They now have minimal difficulties

Taiwan, Japan and China have extremely low numbers of children with word-reading and writing difficulties, and difficulties experienced seem relatively mild.

e.g., Uno et al., (2009) discussing Japanese children, consider these levels appropriate:

- ► 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 to have those low numbers!

#### 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.
- ► Healthy-progress word-readers achieve success inoculation.
- Struggling word-readers miss out:
  - ► They don't achieve success inoculation.
  - Instead they move into acquired helplessness, plus
  - Entrenched word-reading and literacy difficulties.

## Orthographies are a time & workload issue

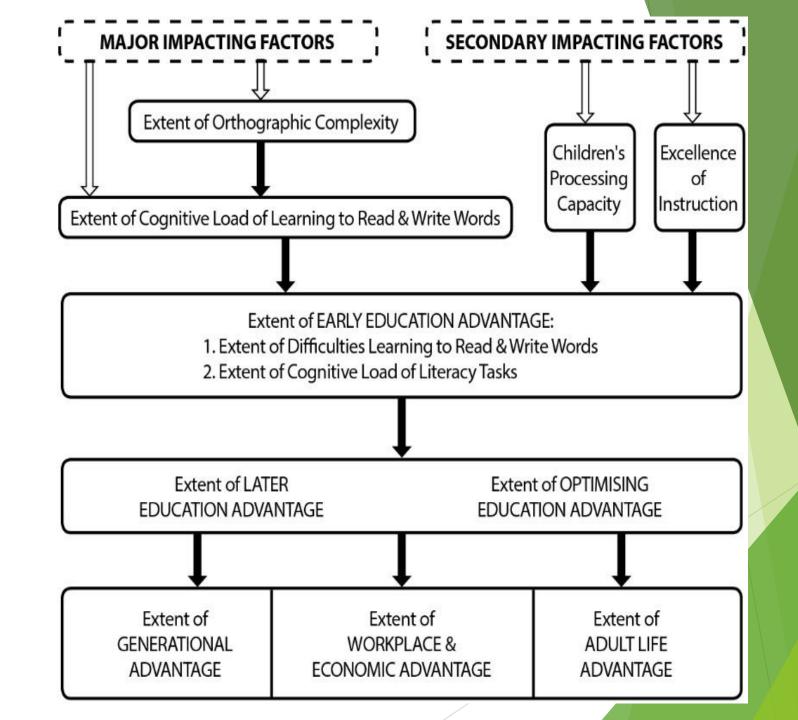
- Using solely Traditional Orthography creates huge workload, and time pressure:
- Learning to read and write Traditional Orthography takes mega-hundreds of hours.
- ► Supporting our struggling readers takes mega-hundreds of hours.
- ▶ We still must fit in the subject-area learning all nations do.
- ▶ We thus have much higher child and teacher workload and our "Find The Learning Time Challenge". (Knight et al., 2017b)

## 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.

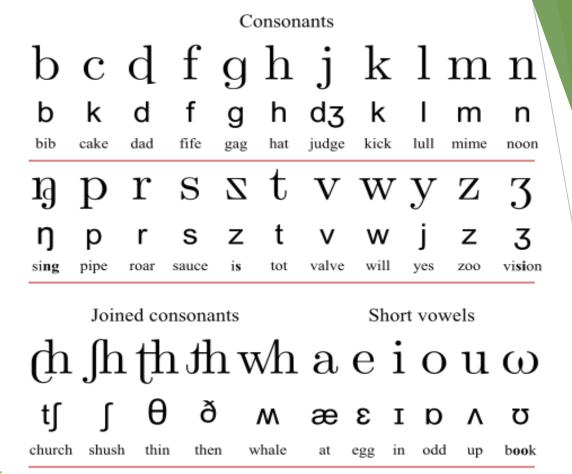
Orthographies produce
Orthographic
Advantage
&
Orthographic
Disadvantage

(Knight, Galletly & Gargett, 2020)

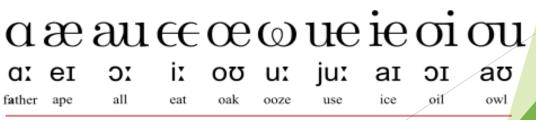


# ITA: A stunning winner!

https://en.wikipedia.org/wiki/Initial\_T
eaching Alphabet



Long vowels / diphthongs



Also, I is used following a vowel letter to write the sound in "earn" etc

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

- 1. Preventing the very major word-reading and spelling difficulties struggling 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.

#### 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.
- ► ITA highly advantaging 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)

#### ITA was also extremely popular

- ► Parents were strongly positive re ITA and its strong effectiveness.
- ► 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.

(Warburton & Southgate, 1969)

#### 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".

#### **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, L. (1968). *i.t.a as a language arts medium*: Proceedings of the 4<sup>th</sup> International i.t.a. Conference (Montreal,Quebec, Aug. 1967), London: England: Initial Teaching Alphabet Foundation, 426pp, <a href="https://eric.ed.gov/">https://eric.ed.gov/</a>.
- ► Search ERIC (<a href="https://eric.ed.gov/">https://eric.ed.gov/</a>) for ITA studies.

## 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"

## Exploring one giant ITA study: An 11yr study, involving 14,000 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 very much 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).

## 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 at or below primer level – no comment is made about their skills and confidence levels, or lack thereof).

## 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.

## Workload reduced, and 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 favour of individualised 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."

#### Mazurkiewicz's 7 conclusions

- 1. Traditional orthography is a significant source of difficulty.
- 2. Children can learn to read quickly, easily and with much less frustration with ITA.
- 3. ITA children write easily and expressively.
- 4. ITA Grade 1 classrooms run more smoothly because children are confident independent workers who are self-motivated.
- 5. Reading materials can be at individual ability levels, with children pursuing individual interests.
- Post-transition reading continued strongly.
- Post-transition spelling achievement equaled TO-taught children, with greater gains in Grade 2.

### 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, whilst Traditional Orthography children required intervention in both areas.

#### 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 wor<mark>ds and</mark> the number of polysyllabic words used.

#### Life is so much easier

- ► Mazurkiewicz's (1971,1973) findings are hugely in line with those of e.g., Warburton & Southgate's big UK review.
- ► 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."

#### Strong building of 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."

## 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.

## Parents really liked ITA

- ► (Warburton & Southgate, 1969):
- 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.

#### 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.

## 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)

## 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)

# 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.

# **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.

## 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)

### ITA worked 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."

## 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."

#### **Useful readings (references)**

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