

# Can literacy be made easier?

**A**S psychologists, we research the nature of literacy and literacy skills. We assess and address defects in failing learners. But is it time for more drastic action? Could psychologists investigate and advocate changes to the tasks themselves?

Being able to read and write remains fairly essential to modern civilisation, and the social and personal costs of failure remain unnecessarily high. Many branches of psychology – not just educational psychology, but neuropsychology, developmental psychology, cognitive psychology, social psychology and more – could research and reduce this serious problem.

As a clinical child psychologist in hospitals, schools, universities and the community, I worked in six fields to reduce the disadvantages that still unfairly prevent access to literacy for all. Four are traditional areas for psychologists:

- child-rearing practices that encourage language development;
- entertainment alternatives for the young with less noise, chaotic images and confused consciousness;
- ensuring easy-read print in children's books, which often takes a back seat to sales-appeal; and
- identifying common classroom practices that are barriers to literacy (Yule, 2005a), such as failing to provide ruled paper when children struggle to write legibly without it (Burnhill *et al.*, 1975).

The other two areas are more innovative and I would like to encourage other psychologists to investigate them.



**VALERIE YULE** argues for drastic action in the fight against reading problems.

## Gaps and confusions

Back in 1957, Vernon wrote: 'The basic cause of reading difficulty is confusion'. I find this is still true for most failing learners. After six months failing a government adult literacy course, one man exclaimed to me 'There are only 26 letters? I thought there were thousands!'

To prevent and clear up the most common confusions, I designed a half-hour overview of the English writing system using cartoon graphics, based on cognitive theory and research (Yule, 1996). A pilot video was made at Aberdeen University Department of Psychology in 1983, and further versions were made as audio-visual technology improved. The latest experimental versions 2006 are a half-hour DVD and a website at [www.ozreadandspell.com.au](http://www.ozreadandspell.com.au) where anyone, anywhere, can freely download and copy what meets their needs.

The video applies psychological principles such as advance organisers, mnemonics and chunking, over-learning, Keep-It-Simple, learning by doing, and learning under the learner's control. Such a simple introductory cartoon could be a first resource before remedial methods that cost more in money and learners' egos. My unfunded versions are far from the quality I dream of, that is now possible with more talent. Improved versions could be targeted to specific needs and cultural preferences, and psychologists could be at the forefront of this.

## Challenging assumptions

It is hard for anyone with advantages that enable them to become literate themselves to realise how unnecessarily difficult present spelling is for others. Compared

with more consistent spelling in other languages, the English writing system is hard to learn (see Seymour, 2003; Goswami, 2003.)

But we're stuck with it, right? Present English spelling was set in 1755, it is sacred. I don't agree. English is the only major modern language with no reform in the past 150 years, yet ideas of spelling reform are still at the same level of 'common sense' as assuming that human flight must be by flapping wings, not by applying aerodynamics. The design of

## WEBLINKS

Education & Skills Select Committee report on

teaching reading: [www.tinyurl.com/yw5yje](http://www.tinyurl.com/yw5yje)

Simplified Spelling Society: [www.spellingsociety.org](http://www.spellingsociety.org)

**Texting – spelling reform in action?**

English spelling to match needs and abilities is best not left to amateurs alone – it is a future field for psychologists' grant-aided research and development, based on advances in cognitive psychology (Yule, 1986).

Modern IT technologies facilitate inexpensive experiment and change, and public enthusiasm for spelling slang in texting and e-mails shows that change is in the air. Here I suggest some principles and strategies for experimental investigation into what improvement could be possible. I am not pushing any specific notation of my own – I use it only as illustration.

Science progresses by challenging assumptions. It is possible for present English spelling to be improved to better facilitate reading, spelling and learning, with only minor change to its current appearance, if common assumptions are challenged.

These assumptions include confusing the English language itself, which grows, regardless of what people try to ordain, with its spelling, which is only a tool to represent the language, and which can be deliberately improved like any other element of communications technology.

It is usually assumed that reform must mean radical change, argued out without

experiment. Yet cognitive psychologists know that an efficient writing system should facilitate reading and writing by 'eye and by ear' and learning that uses both. Improvement of present spelling to be more consistent can aim at better reconciliation of these needs.

Change need not be drastic and personally discomfoting. Reject the common assumption that reform must mean radical 'spelling as you speak'. We could make more consistent our present spelling's conventionalised representation of formal, not casual, speech, and how it shows units of meaning (morphemes) such as plural and verb endings (Yule, 2006a). Beginners could start with the alphabetic principle, also used for dictionary pronunciation guides, that letters represent sounds, and be rapidly introduced to using a consistent morphemically modified writing system. Minimal change from the appearance of present spelling could be maximised by the novel tactic that, since 100 common words make up around half of most running text, beginners could learn as a list of 'funny sight-words' the 30-odd that are irregularly spelled – such as *all almost always among are by my come some could should would half know of off one only once other pull push put as was*

## DISCUSS AND DEBATE

We have adapted to tremendous changes in the past 20 years. Why does a sensible but unfamiliar spelling upset us?

English is the world's lingua franca. Is an International English Spelling Commission needed, in line with other international cooperation in communications?

What future for psychologists, teachers and printed media if literacy and self-help are made easier?

What are the international issues in improving English spelling?

Have your say on these or other issues this article raises. E-mail 'Letters' on [psychologist@bps.org.uk](mailto:psychologist@bps.org.uk) or contribute to our forum via [www.thepsychologist.org.uk](http://www.thepsychologist.org.uk).

*what want who to why*, and international word endings *-ion/-tion/-sion*. These are the very spellings that reformers usually go head-on wanting to change. To be able to read 'present spelling without traps', only a few concessions would then be needed, such as seven more alternative vowel spellings (not the present 219), the spelling *wr* and alternative pronunciations for *c* and *g*.

It is often asserted that present spelling is proven to be 'optimal' by Noam Chomsky's theory about how 'underlying phonology' is shown when word-families share similar spellings though the spoken vowels change (Chomsky & Halle, 1968; C. Chomsky, 1970). Chomsky himself disapproves this appropriation (personal communication) and checking the evidence of vocabulary shows that the principle only applies occasionally. However, two spelling problems specific to the English language – 'Chomskian' vowel changes within word families, and the 'long' vowels (pronounced A E I O U) – might be solved by spelling both 'long' and 'short' vowels with the five letters *a e i o u*, and where necessary, pronunciation of the long vowels indicated by diacritics, as in *national/nàtion, repetition/repèted, finish/final, impotent/pòtent, study/stùdent*. Such diacritics, now technically feasible, and mainly for learners, would be needed less often than the present dots on *i* and *j*.

*Beginners could start with the alphabetic principle, that letters represent sounds, also used for dictionary pronunciation guides, and be rapidly introduced to using a consistent morphemically modified writing system... To be àbl to*

read 'present spelling without traps', only a few concessions would then be needed, such as seven mor alternativ vowel spellings – not the present 219 – and alternativ pronunciations for c and g.

### Impediments to change

It is often assumed that the very idea of reform is eccentric, and unfamiliar spellings are a topic for comic ridicule until they become familiar. Yet thousands of the great and eminent have campaigned for spelling reform. Success was stymied because, lacking our present psychological knowledge about learning and literacy, they went for impracticable lists or 'phonetic' schemes, and they lacked the IT advances that make implementing reform practical.

It is also assumed that costs would be enormous and everything would need reprinting. Not if improvements are backward compatible, beginners' alphabetic start is rapidly modified morphemically in their reading books, and personal writing can take up changes in the

way that text messaging has been taken up.

What about the threat to our cultural heritage, which is treasured in our spelling? A hard look is needed at this notion of cultural heritage and how much it is used (Yule, 2005b). A handful of examples are trotted out about the value of irregular spellings, such as *bomb* to show the link with *bombard*, *sign* to show the link with *signal*. Testing shows that hardly anyone realises these spelling links, let alone uses them, any more than they link the spelling of *people* with *popular*. It is also assumed that irregular spellings give readers clues to meaning. Not often. Mostly the useful clues are in regularly spelled words, especially with Latin and Greek roots. Irregular spellings can reduce clues, as in *fly/flies/flight* and *speak/speech*.

Finally, some people believe that a system with around 80 per cent 'regular' spelling is good enough. For learners this is like a garden that has 20 per cent

landmines, in unpredictable places. Small changes for the able can make great differences for the disabled.

A long history could be collated of obscurely published experiments in learning 'easier' spellings, and of pilot studies in reading. There are misrepresentations in print and misattributions online to battle, and there is certainly more research to be done on how readers respond to spelling changes, both in the first instance and over time. Many other aspects to investigate include following up unpublished pilot experiments on 'designing the spelling you would like', the implications of 'spelling by recall and reading by recognition', current spelling trends, and whether readers have an idea of 'the form of the word' that might depend on how they learned to read (by phonics or whole word recognition), or on level of reading skill.

### Conclusion

Psychologists can apply human engineering to investigate and maximise the advantages of present spelling and reduce its disadvantages, retain backward compatibility and improve its representation of the richness of the English language. We can also understand how people can set mental boundaries to what they are prepared to consider possible. We have multiple tools for international research in spelling improvement and users' adjustment to it. I think that the benefits for English as the world's lingua franca and medium of education could be comparable with other wonders achieved by science.

■ Valerie Yule currently researches imagination, in Melbourne, Australia. E-mail: [vyule@labyrinth.net.au](mailto:vyule@labyrinth.net.au).

### References

- Burnhill, P., Hartley, J., Fraser, S. & Young M. (1975). Writing on lines: an exploratory study. *Programmed Learning & Educational Technology*, 11, 84–87.
- Chomsky, C. (1970). Reading, writing and phonology. *Harvard Educational Review*, 40, 287–309.
- Chomsky, N. & Halle, M. (1968). *The sound patterns of English*. New York: Harper and Row.
- Goswami, U. (2003). How to beat dyslexia. *The Psychologist*, 16, 462–465.
- Seymour, P., Ara, M. & Erskine, J. (2003). Foundation literacy acquisition in European orthographies. *British Journal of Psychology*, 94, 143–174.
- Vernon, M.D. (1957). *Backwardness in reading*. Cambridge, UK: Cambridge University Press.
- Yule, V. (1986). The design of spelling to match needs and abilities. *Harvard Educational Review*, 56, 278–297.
- Yule, V. (1996). Take-home video for adult literacy. *International Review of Education*, 42, 187–203.
- Yule, V. (2005a). Submission 144 to the National Inquiry into the Teaching of Literacy. [www.dest.gov.au/nitl/submissions/141-160.htm](http://www.dest.gov.au/nitl/submissions/141-160.htm)
- Yule, V. (2005b). *The book of spells and misspells*. Lewes: The Book Guild.
- Yule, V. (2006a). Spelling and spelling reform. <http://home.vicnet.net.au/~ozideas/spelling.htm>