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### Readability revisited? The implications of text complexity

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## Readability revisited? The implications of text complexity

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The concept of readability has had a variable history, moving from a position where it was considered as a very important topic for those responsible for producing texts and matching those texts to the abilities and needs of learners, to its current declining visibility in the education literature. Some important work has been coming from the USA over the past few years, however, which makes it clear that a closer look at the text dimension of the reader–text interface is somewhat overdue. The issue has been redefined as one of text complexity, and there are some significant implications within it for the teaching and development of reading at all phases of learning. In this paper, we try to review some of these implications and suggest their relevance to the UK situation.

Keywords: readability; text complexity; literacy; cross-curriculum

### Introduction

The concept of readability has had a variable history, moving from a position where it was considered as a very important topic for those responsible for producing texts and matching those texts to the abilities and needs of learners, to its current declining visibility in the education literature. In the JSTOR academic publication database, for example, readability featured as a research topic in almost 1600 papers published between 1980 and 1995. In the subsequent 15 years (1995–2010), however, this had decreased to fewer than 600 papers. Elsewhere, we have tried to chart the shifting interest in this topic, and to advance an explanation for the receding interest in readability (Janan, Wray, & Pope, 2010). This has paralleled changes in the ways the process of reading has been viewed theoretically, which have moved from describing a process of getting meaning from a text to describing one of creating meaning through interaction with a text. This paradigm shift in views of reading has appeared

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to make established views of readability, generally conceived as focusing on the perceived difficulties within texts, less adequate as a means of exploring the matching of text to reader.

There is a sense that we may be at a point now, however, where the pendulum is beginning to swing back, with text once more at the centre of concerns. Some important work has been coming from the USA over the past few years which makes it clear that a closer look at the text dimension of the reader–text interface is somewhat overdue. The issue has been redefined as one of text complexity, and there are some significant implications within it for the teaching and development of reading at all phases of learning.

### The importance of text complexity

Let us look first at some of the background to these developments. In 2006 an important report was published by ACT (formerly known as American College Testing) which reported on the testing of American high school students for their readiness to embark on study at college and university level (ACT, 2006). The rather surprising outcome of this report was that what differentiated the success of the students tested did not seem to be located in what are usually referred to as comprehension skills – looking for the main idea, making inferences, drawing conclusions from evidence, etc. The difference, rather, appeared to lie in the abilities of students to successfully read and respond to harder, more complex texts – that is, to apply the comprehension skills and strategies they had been taught to increasingly more complex texts. Those students who could read complex texts were more likely to be ready for college entry. Those who could not read complex texts were less likely to be ready for college. Performance on complex texts was the clearest differentiator in reading between these groups of students.

One of the reasons for the surprise with which this finding was greeted in the USA was the fact that for decades a virtual industry had grown up in US high schools focused on the teaching of ‘content area reading’, in other words the teaching of students to use a range of strategies to comprehend the texts they encountered within their subject lessons. A similar concern and focus on reading strategies was evident in the secondary literacy strategy launched in the UK in the early 2000s (e.g. DfEE, 2001), which drew heavily upon our own development work (e.g. Wray & Lewis, 1997). The message of the ACT (2006) report was not that this work on developing reading strategies was redundant – but, rather, that it was only a part of what really engendered student success across the curriculum. This, it was argued, was being exposed to and taught with a range of increasingly challenging texts across the curriculum.

### Developments in text complexity

There was a further dimension to the argument put forward in the ACT (2006) report. This was reviewed in the Common Core State Standards English Language Arts document (Common Core State Standards Initiative, 2010) and drew heavily upon a research review carried out by Adams (2010–2011). It revealed the clear and alarming picture that, while the reading demands of college/university study, of workforce training and generally of being a good citizen had held steady or risen over the previous 50 years or so, the texts used to teach subjects in American high schools had moved the other way, that is, they had become less complex and less demanding.

There are, of course, some caveats to put forward here. First, it is possible to question the evidence concerning the difficulty levels of texts. As Janan (2011) has shown, assessing the difficulty of texts, without reference to the readers who interact with them, is fraught with problems. Traditionally, measures of ‘readability’ have focused entirely on features within texts, such as the length of sentences and the familiarity of vocabulary items, and have attempted to measure these using readability formulae of various kinds. The failure of such formulae to predict accurately the level of reading difficulty of particular texts for all readers has led to a number of powerful critiques of the formulae approach, from Klare (1963) to Redish (2000). Janan’s (2011) research has established instead that ‘readability’ is in fact a product of reader, context AND text. Janan studied texts selected for or selected by 32 children aged from 6 to 11, assessing them using a range of linguistic indices. She then made a number of assessments of the ways the participant children approached the reading of these texts (through error analysis, think aloud protocols, reflective interviews and analysis of retellings). Janan was able to establish that these texts varied in difficulty not simply in terms of their linguistic features but also because of factors within the readers (prior knowledge, gender, motivation, etc.) and the context in which they were read.

It is also the case that the evidence available on changing levels of text complexity over time relates only to the USA at the moment. We have very little comparable evidence about the situation in the UK as yet. The nearest we can get to this is the claim, in the DfEE Literacy across the Curriculum document (2001), that:

Modern textbook pages contain a plethora of presentational devices: flow-charts, drawings, colour coding, bullet points, bold type, explanation, labels, symbols and questions. The written text is condensed and difficult to follow without diagrams. The emphasis on the visual is typical of many modern school textbooks. (p. 50)

This suggests that one of the features of ‘modern textbook pages’ may well have been a simplification in terms of text complexity, alongside the increased use of presentational devices to convey meaning.

Although rigorous UK research in this area has not yet been carried out, one can intuitively recognise that there might be some truth and wider applicability in the problems identified here. In the key UK document (DfEE, 2001), *Literacy across the Curriculum*, there is constant reference to the need for teachers to scaffold and support secondary students as they interact with texts in their subjects. This is good, of course, but nowhere in that document does it suggest that one of the tasks of the subject teacher is deliberately to introduce students to more and more complex texts with the aim, ultimately, of enabling them to cope unproblematically with the transition to college/university/workplace texts. This is exactly what the Common Core State Standards Initiative (2010) in the USA has proposed.

It is also the case, and has been for some time (Lewis & Wray, 1999), that many secondary school subject teachers, confronted with the problem that some of their students find it hard to learn subject content from, say, textbooks, resort to presenting this content through self-produced worksheets and PowerPoints. This, again, bypasses the problem of text and it is doubtful that it will, in itself, assist these students in dealing successfully with more complex texts.

It is the case, however, that the argument is not yet proven. What the Common Core State Standards Initiative has done is to make an almost classic error when dealing with statistics, that is, argued from a correlation to a cause–effect relationship. The argument made is that students’ experience of successfully reading complex texts correlates positively with their readiness for college/university. Therefore, it continues, if students are given more of this experience, then they will be more ready for college/university. Notwithstanding this faulty logic, the argument does seem plausible that for students to deal successfully with the complex texts they encounter in college, university and the workplace, it would be beneficial for them to be taught at school how to engage with and respond to such texts.

### The implications of text complexity

Let us assume that there may be some truth in the argument that school students need to be introduced to more complex texts than they currently are. A number of implications then follow for schools in the UK. Chief amongst these is the fairly obvious thought that we really can no longer afford to give such little attention to the teaching and development of reading in secondary schools.

Within the last 40 years, secondary schools in England have experienced at least two high-level ‘pushes’ to develop reading for learning

across the curriculum. In the years following the publication of the Bullock Report (DES, 1975), 'language across the curriculum' became a salient feature in the lives of secondary school teachers. This led to a plethora of training conferences for teachers and the publication of numerous, positively toned books on the subject – Marland's *Language across the Curriculum* (1977), and the UKRA collection *Reading: Implementing the Bullock Report*, edited by Hunter-Grundin and Grundin (1978) being just two notable examples. One of Bullock's mantras was the claim that 'every teacher is a teacher of reading' (although this phrase was first coined by the American researcher William Gray in the 1920s [Anders & Guzzetti, 1996]). This slogan, popular on both sides of the Atlantic, was meant to affirm that the teaching of reading in his/her own subject area was the job of every subject teacher in the secondary school. Fisher and Ivey (2005) have reported, however, that the slogan has not been taken to heart by many secondary teachers internationally. They point out that, 'content [subject] teachers feel marginalized by this comment and question their capacity to teach students to read' (p. 9). The knowledge implications for secondary subject teachers have always been put forward as a stumbling block for language across the curriculum initiatives (Lewis & Wray, 1999).

Following the publication of the Bullock Report, a mere three years later, Minovi (1978) felt compelled to write:

What, then, have been the effects of the Bullock Report in secondary schools? Some are tangible, others are difficult to identify. Headmasters and many other teachers have been at least reminded that language is the means by which we learn, and some have learned it for the first time. ... Many English departments have been made to write down their aims and objectives, if not actually to think about and discuss them. By and large, I am forced to conclude that the effect of Bullock has so far been negligible. (p. 171)

Much promise, but little achievement would have to be the verdict on the effect of the Bullock Report's recommendation and language across the curriculum remained an aspiration rather than a reality.

By the mid-1990s, attention began to be given once more to the reading abilities of students at, and after, secondary school. A variety of sources of evidence emerged that literacy remained a problem for many adults in the UK. A report on adult literacy (DfEE, 1999) claimed that an estimated 'seven million adults in England cannot locate the page reference for plumbers in Yellow Pages'. Statistics produced by Ekinsmyth and Bynner (1994) and ALBSU (1995) broadly agreed that between one sixth and one eighth of adults in Britain had literacy problems. To this evidence could be added the comments of Her Majesty's Inspectorate recorded in

their 'Review of Secondary Education 1993–97' (DfEE, 1998). HMI found that nationwide:

standards of reading are good in six out of ten schools [but] they remain unsatisfactory in around one in seven. (para 2.5)

HMI specifically identified that 'many pupils have weak skills in using non-fiction' and that:

departments fail to provide tasks which challenge pupils as readers or offer reading experiences which enrich and extend the subject beyond the confines of the text book. Furthermore pupils are not taught how to make effective use of information from books, or the CD-ROM. (para 2.5)

The evidence seemed clear that secondary schools needed to give greater consideration to supporting the literacy development of their students. Consequently, it was not long before the National Literacy Strategy, launched in England in 1997 for primary schools, was extended into secondary schools. Official support documents (e.g. DfEE, 2001) and our own work (Lewis & Wray, 2000) had a strong impact when they were published.

Times change, however, and it is fair to say that the emphasis in the UK today in the teaching of reading is very much back once again on initial skills, and, given the forcefulness of the arguments surrounding how beginning reading should be taught, it is perhaps not surprising that attention to secondary school reading has waned once more. Yet this does not mean that the need to extend literacy skills has gone away. On the contrary, it could be argued that it may be precisely an over-emphasis on initial skills which might create some of the literacy problems that secondary teachers later have to deal with. We know that, for many youngsters, the problems they have with reading are related more to their engagement with it (or lack of) than to their potential to learn the requisite skills (Baker, Dreher, & Guthrie, 2000). One thing which is potentially extremely engaging for young people (particularly the boys, whose literacy achievement always seems to lag behind that of the girls) is using their reading to engage with a whole series of interesting facts and ideas – in other words the use of literacy to encounter, react to and record 'the stuff of the world', as Arthur Eddington (1928) termed it. Extending reading is essential, therefore, partly because it is a crucial way (and maybe for some the only way) of giving young people an insight into what reading is good for. It is also, of course, functionally essential, since the reading and writing that most of us do every day tends to occur in order to get something done. Reading our newspapers, our information manuals, our market reports, our computer screens and writing our notes, our letters of application, our complaints, our reports – all of these are vital to our working lives and accomplishing them successfully requires a lot more than simply a knowledge of phonic



cues. Indeed, there is plenty of emerging evidence concerning the differences between the texts commonly used in various subjects, and the effects of these differences on reader comprehension. Best, Floyd, and McNamara (2008), for example, found that primary school readers performed better on narrative than information/expository texts, a result they attributed partly to the differential content knowledge required by the two text types, but also to the less familiar structures of information texts. McNamara, Graesser, and Louwse (2012) explore the typical linguistic and structural distinctions between texts used in language arts, social studies and sciences. They found that word difficulty tends to be less in narrative texts, but sentence structure more complex. Social studies texts tend to have the worst of both worlds, having less familiar vocabulary and more complex sentence structure. There also appear to be differences in the use of cohesive devices between these text types, with science texts having more causal (because, so, after all, nevertheless, etc.) and clarification (that is to say, in other words, for example, etc.) connectives, whereas narratives have more additive (also, as well, furthermore, moreover, etc.) and temporal (before, after, next, until then, etc.) connectives.

It seems then that there is still a need to improve the reading of all secondary school students. This implies a need to strengthen the teaching of reading in secondary school subjects by incorporating complex reading materials into the subject content, and, crucially, by providing secondary school teachers of these subjects with guidance and support to teach the reading and use of more complex texts. The evidence from the USA is that reading is simply not taught much, if at all, during the secondary school years, not even in English courses (e.g. Ericson, 2001). There is also evidence that current standards, curriculum, and teaching practice have not done enough to foster the independent reading of complex texts which is so crucial for later college and university work, as well as for most adult careers, particularly in the case of information texts. In the UK, a recent report from the All-Party Parliamentary Group for Education (2011) raises concerns about the status and teaching of literacy at secondary school level. It has this to say:

Literacy is not just a primary school issue. There needs to be a focus by the Department for Education on post-primary school literacy issues. Head teachers should be responsible for the literacy levels of their students. Schools should be developing cross-departmental strategies to improve literacy, rather than working in departmental silos. . . . More prominence needs to be given to the transition between primary and secondary school to avoid what David Wray calls 'the retreat from print' that occurs at that time. (p. 4)

The report goes on to say that, in an accompanying survey, secondary school teachers identified 57% of their pupils as having weak or very weak literacy skills, but only 6% of these teachers wanted a change



in the extent to which literacy was incorporated into subject lessons. This suggests that it has been problematic for secondary schools to focus upon literacy as a distinct issue. Secondary school teachers are simply not used to teaching nor equipped to teach reading skills in their subjects. As the report says:

Curriculum pressures often mean that the day is divided into 40-minute units to teach individual subjects; the result is that teachers cannot focus long enough on problem areas to deal with them. (p. 8)

It seems, therefore, that there remain some major, seemingly intractable, obstacles in the way of achieving the goals articulated almost 40 years ago by the Bullock Report of whole school approaches to literacy development in the secondary years.

What next?

Although the obstacles are still present, it may just be that the new emphasis coming from the USA on the importance of complex texts can provide a renewed impetus for change in this area. The American Common Core State Standards Initiative (2010) argued that, if American high schools want students not just to encounter but to achieve mastery over the increasingly complex texts which they will encounter as they move through their lives, one first, crucial step surely has to be the establishment of a deliberate policy and strategy for introducing these students to progressively more complex texts. Retreating from print can no longer be a tenable option.

There also seems to be a need to focus on teaching secondary school students to make sense of these texts. And such teaching has to happen not just in English lessons, but in Chemistry, in Mathematics, in History lessons and so on. These issues have been given token acknowledgement for far too long. The challenge now is for us to do something about it.

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