Tertiary education of journalists and the readability of Australian newspapers

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Abstract

Have rising standards of education had an impact on Australian newsrooms? This study compares contemporary news writing styles with those of 15 and 30 years ago. The research considers the language of hard news and editorials by examining a national, a state-based and a regional newspaper over three one-week periods across the three decades. The study found that the average complexity of language evident in all three newspapers has been consistently high.

Introduction

Over the past 30 years there has been a transition in Australian newspaper recruitment. Journalists with university-level education have moved from being an oddity in most newsrooms to being the norm. Hudson (in Henningham, 1993, pp. 77-78) found only 5 per cent of metropolitan daily journalists who were members of the journalists' union (the then Australian Journalists' Association) had university degrees. That number rose, at least in Brisbane, to 9 per cent over the next few years, according to Hart (in Henningham, 1993, pp. 77-78). A decade later, Black and Masterton (in Henningham, 1993, p. 81) found a third of journalists working in Australian newsrooms either had a degree upon entering the profession or had undertaken a degree since becoming a journalist. Henningham (1993, p. 79) surveyed more than 1000 journalists from Australian newsrooms in 1992 and found 60 per cent of those working in metropolitan newspapers had begun or completed tertiary study, with almost 40 per cent of these having already attained undergraduate and/or postgraduate qualifications. According to Shelley (2003), 70 per cent of staff working for the country's largest newspaper group, News Limited, held university degrees.
The educational profile of the wider Australian community improved concurrently, with more people completing high school and obtaining post-school qualifications today than in the 1970s. Recent OECD data confirms the trend for an increasing number of Australians aged 25 to 34 to continue with their education, rising from 23 per cent completing tertiary education in 1991 to 34 per cent in 2001 (OECD, n.d.). However, OECD figures indicate that Australians are under international means in the three youngest of five age bands for tertiary qualifications. In 1996, the Australian Bureau of Statistics also mapped the literacy capacity of Australians aged 15 to 74 years (Australian Bureau of Statistics, 1996). This research found nearly half the population had significant to major difficulties using printed materials encountered in daily life.

While the range of comprehension in this mostly adult population in Australia varies, it is possible to pinpoint from recent OECD figures (illustrated below) that the average level of educational attainment for Australians (expressed as years of schooling) is still only 11.8 years.

Chart 1: Educational attainment of Australians

Data presented here elicited from Table A.2 in Educational attainment of the population (1999). Therefore, average educational level attained = 11.7586 years

The OECD figures suggest just over 73 per cent of Australians have only a high school education. More recent ABS data from 2001 shows the 25-44 age bracket has the greatest number of people attaining all year levels except Year 10 or below and Certificate I/II (equivalent to 12 years of schooling), where the less well educated 45-64 age bracket predominates (Australian Bureau of Statistics, 2001). In 1997, the ABS found that 40 per cent of 15- to 64-year-olds indicated they had a post-school qualification.

Almost 44 per cent of 15-64 year olds in 1996 had poor or very poor prose literacy skills (in English) and could be expected to experience some or considerable difficulties in using many of the printed materials encountered in daily life. (Australian Bureau of Statistics, 1997a)

The ability of audiences to comprehend the news being communicated—that is, the language used in news publications—should be of potential concern to Australian newsrooms. One way of quantifying this is to apply one or more
readability measures to published news items. At the same time, while education and literacy levels are slowly improving inside and outside Australian newsrooms, critics accuse the news media of “dumbing down” public debate (Steggall, 2001, p. 18; Haran, 1999; McGuinness, 1999, p. 34; Melloy, 1998, p. 40; McLean, 1997, p. 3). Analysis of the language used in our print media may help clarify this issue.

**Literature review**

The complexity of written language, or readability, has been measured periodically in newspapers around the world since the 1940s using a variety of formulae or indices. The results tend to be expressed as numbers of years of formal schooling required to comprehend a particular piece of written material. Three of the most commonly used readability measures applied to newspaper stories by researchers have been Gunning’s FOG Index, the Flesch-Kincaid (Grade Level) Formula and the Flesch Reading Ease Formula. The first two provide an estimate of the reading level, by grade level, calculated from elements including the number of words, syllables for each word, average sentence length and number of sentences. The third, also known as the Flesch RE score, indicates the percentage of average readers likely to be able to comprehend the material (a high value indicates the material would be readily understood; a low value indicates fewer people would comprehend it). All three give an understanding of the relative difficulty of written material, although resulting grade levels from the Flesch and Gunning indexes often differ by several grades. Other readability measures include the Dale-Chall Readability Formula, the Cloze Procedure, the SMOG Readability Formula (whose abbreviation stands for “Simple Measure Of Gobbledegook”), the Powers-Sumner-Kearl Formula, and the FORCAST Formula, as well as the lesser-known Fry Graph and Spache Formula.

The Dale-Chall Readability Formula uses a list of 3000 words commonly known by fourth-grade children and average sentence length to determine how readily understandable a text is. The Cloze Procedure is another readability formula in which every fifth word is deleted and the reader’s ability to fill in the blanks becomes the measure of the text’s readability. (University of Minnesota Library, n.d.)

The Dale-Chall formula – “designed for use in assessing upper elementary and secondary level materials” (Micro Power & Light Co., 2002) – is based on fourth-grade US education standards that might not equate to Australian education standards. For these reasons, this formula was not used in this study. Similarly, the Cloze Procedure was set aside as a tool best applied in an ethnographic research setting. Other formulae considered and set aside included:

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• The SMOG Formula, because it is known to rely "solely on the number of words containing three or more syllables" and can deliver grade levels higher than the most commonly used measures;
• The Powers-Sumner-Kearl Formula, which is used to assess primary school-level materials and does not score materials above Year 7;
• The FORCAST Formula, which focuses on young adult functional literacy;
• The Fry Graph, primarily because it is a visual tool; and
• The Spache Formula, because—like Dale-Chall—it has a prescribed word list and is designed for lower primary school grade levels. (Micro Power & Light Co., 2002)

A number of researchers have used the Gunning and Flesch formulae to calculate readability measures for news materials over the past six decades. Fusaro and Conover's 1983 comparison of readability between and within two tabloids (New York Daily News and New York Post) with two broadsheets (The New York Times and Wall Street Journal) not only looked at raw readability results, but also compared the levels of news stories with editorials, as earlier studies had done (Stempel, 1981, pp. 34-38; Curtis & Shaver, 1979, p. 267; Moznette & Rarick, 1968, pp. 320-321). According to Fusaro and Conover (1983, p. 144), all three studies agreed:

• The readability level of the broadsheets was higher (average college freshman or 13 years of formal education) than the readability level of the tabloids (typical high school sophomore or nine years of schooling); and
• That lead news stories scored higher than lead editorials and that readability differences were minimal within the tabloid and broadsheet categories themselves.

Analysis of editorials (or “leaders” as they are sometimes referred to in Australian newsrooms) may produce different results in this country because not only do they tend to be written by more senior, experienced writers, but they also appear—at least on the surface—to be squarely aimed at business, community and opinion leaders.

In the mid-1960s, the University of Queensland Department of Education's J. Anderson measured readability scores using Flesch's readability formula on nine daily and five Sunday newspapers from across Australia and found "a wide range of reading difficulty between and within papers"—a range of difficulty from "7th or 8th grade" to "high school and some college" (Anderson, 1966, pp. 80-83). Anderson found that morning newspapers were more difficult reading than evening papers and that certain categories of news were more difficult than others. He concluded that "the reading of most Australian newspapers requires some high school and even some University education".
Stapler (1985, pp. 17-19) found the one-sentence lead writing habit was to blame "for reducing readability". In recapping the history of readability studies to the mid-1980s, Stapler noted that 1980s studies showed earlier attention paid to readability levels had lapsed. Sentence length is a factor in most readability formulas and Stapler restated Gunning's point that "average sentence length is the key, not maximum sentence length" (1952). Stapler (1985, p. 19) noted that US newswire service Associated Press had hired Flesch to analyse its performance in terms of readability, while its competitor UP had hired Gunning. As a result, AP ended up cutting the average length of its sentences from 27 words to 23, and UP simplified its style to be suitable for readers with 11.7 years of education, where previously it had been 16.7 years. Stapler noted that Gunning urged writers to keep their average sentence length under 20 words while Flesch suggested an average of not more than 19 words a sentence.

Both Gunning and Flesch related the number of words in the sentence to the number of years of the reader's education: those with more education could read longer sentences. Gunning figured that reading difficulty increased by one grade level each time two words were added to sentence length. Flesch figured that was true in grades 5-8, but he specified that reading difficulty went up with each three-word increase in grades 5-8, and one word in grade 13 and above.

After Gunning's consultancy, Stapler (1985, pp. 18-19) noted that UP issued the following "easy guide" for its writers in bureaux around the world:

<table>
<thead>
<tr>
<th>Average sentence length</th>
<th>Readability</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 words or less</td>
<td>Very easy to read</td>
</tr>
<tr>
<td>11 words</td>
<td>Easy to read</td>
</tr>
<tr>
<td>14 words</td>
<td>Fairly easy to read</td>
</tr>
<tr>
<td>17 words</td>
<td>Standard</td>
</tr>
<tr>
<td>21 words</td>
<td>Fairly difficult to read</td>
</tr>
<tr>
<td>25 words</td>
<td>Difficult to read</td>
</tr>
<tr>
<td>29 words or more</td>
<td>Very difficult to read</td>
</tr>
</tbody>
</table>

Another writer, Quesinberry (2002a), notes the significant (colloquial) points on the Gunning FOG index are:

• 18+ Reading level of a PhD (federal tax returns, insurance policies, legal documents);
• 16 Bachelor's Degree (technical writing for industry, military or research);
• 13+ First year of college (usually ignored and/or misunderstood by most adults);

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A 1981 study by Judee Burgoon, Michael Burgoon and Miriam Wilkinson, reported in Stapler (1985, p. 20), "concluded, in part, that a positive relationship existed between the ease of reading and the image of the newspaper as competent and trustworthy". Stapler’s own research found:

1. The mean length of sentences in the lead paragraph was 26.1 words and the median 28.1. Both figures are in Flesch and Gunning’s “difficult to read” range.
2. The mean and median lengths of sentences in paragraphs 2 through 4 were about two grade levels easier to understand, based on Flesch and Gunning’s research, than those in lead paragraphs. The mean length was 21.7 words; the median length 23.1. These figures are only a little above figures Flesch and Gunning recommended for readable newspaper copy.
3. In lead paragraphs, writers are almost twice as likely to use only one sentence as they are in the next three paragraphs. This habit creates hard-to-read leads and in some cases may discourage further reading. (1985, p. 24)

Porter and Stephens (1989, pp. 87-92) noted that: "Journalists and researchers seem to have paid little attention to readability in recent years." They tested how accurately newspaper editors could estimate readability and found managing editors from five of Utah’s six dailies rated the stories 4.2 grade levels easier than the measured Flesch readability scores, raising questions about editors’ understanding of how audiences perceive content. In every instance, Porter and Stephens reported, newspaper editors estimated that the news stories were easier to read than their Flesch scores indicated. Their best estimate was 1.3 grade levels low. The worst was 7.3 grade levels low.

Since the most common measure of newspaper readability seems to be the editors’ intuitive estimates, this study was conducted to measure how accurate editors’ readability estimates might be. The common claim that reporters write front-page stories at an eighth-grade level is a myth. Sports writing and soft news may score close to an eighth-grade level, but not hard news. (Porter & Stephens, 1989)

According to Porter and Stephens, the tendency for journalists to write above their audiences was documented in 1973 by Huskins, who measured the readability of one day’s output of AP and UPI wire copy. He found that the largest group of stories (44 per cent of AP and 50 per cent of UPI) were written at the 13th to 16th grade level. Sixteen per cent of AP stories and 5 per cent of UPI stories were at the eighth and ninth grade levels. Thirty-three per cent of AP copy was at the 10th and 11th grade levels, compared with 11 per cent of the UPI sample (Porter & Stephens, 1989).
Porter and Stephens also quote a 1984 comparison of readability formulas — Flesch, SMOG, Dale-Chall and Gunning's FOG index — by Smith and Smith which found readability estimates differed by as much as five grade levels, and that the Flesch formula produced the highest reading-difficulty estimates and the SMOG formula the lowest. The publishers of the Readability Calculations software say of the FOG index: “Most experts feel when using FOG, no technical publication should score higher than 14, no general business publication higher than 12, and no clerical publication higher than 8.” (Micro Power & Light Co., 2002)

Finally, the tendency for journalists to write for themselves more than for readers was highlighted in 1990 by readability researcher Catalano (1990, p. 97) after he reviewed the output of six large US news wire services. With today’s Australian newsrooms filled with journalists who have completed at least 15 years of formal education — just over three years more than today’s average Australian and juxtaposed to an estimated average 10-12 years of schooling in newsrooms of the early 1970s — any tendency to “write for themselves” could be a significant factor in dwindling readerships.

Research questions

With education standards rising inside and outside newsrooms in this country, do newspaper readability scores indicate Australian journalists are meeting the comprehension abilities of their readers? Indeed, as educational attainment levels have risen in newsrooms over the past three decades, have readability scores risen as well? Are Australia’s editorials easier or harder to comprehend than hard news stories? And, finally, who has been writing this news?

The researchers approached this study with two hypotheses:

• That readability results of Australian newspapers will be influenced by higher levels of education among journalists; and

• Because the most experienced and qualified journalists write the editorials published by Australian newspapers, comprehension levels will be especially affected by education levels.

Methodology

As the reviewed literature attests, evaluating the difficulty or otherwise of news stories is best done by applying standard readability and basic language measures to a robust cross-section of news output (published news stories). A cross-section of material spanning a 30-year period was put together for this study. The page lead news story — from each of the first five news pages — was taken from the main edition of three morning daily newspapers (the national broadsheet newspaper, The Australian; the Queensland broadsheet newspaper, The Courier-Mail; and the regional tabloid daily, Queensland Times) for five years.

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consecutive days in the same time period, three times across three decades (the third week of October in 1972, 1987 and 2002). Editorials from each of the newspapers were also analysed for each of the dates. Together these hard news stories and editorials provided 270 items as the basis of this study. This particular survey week was chosen because there were no obvious major news events, such as imminent elections, dominating news pages in any of these years that were likely to complicate a readability analysis of the news writing under review. Where there were full-page advertisements in these early general news (EGN) pages, later EGN pages were included. In selecting the page lead story from EGN pages the authors of this study chose to concentrate on the analysis of “hard” news.

Both researchers participated in the collection, checking and analysis of data for this research and created a substantial bank of longitudinal data. Each story in this sample was located, copied and then digitised as a .txt file by (a) optical character recognition scanning; (b) dictation with voice-recognition software (Dragon Naturally Speaking V5); or (c) manual input. Care was taken to ensure spelling, grammar, typographic errors and style elements were replicated as they appeared, because these factors could impact on readability. Where stories “spilled” on to subsequent pages, the entire story was collected. Accompanying “sidebar” stories, however, were not included. Headline, sub-head and byline information was not included in this study. Extensive quality checks were made to eliminate errors in optical scanning and voice-recognition systems.

Each file was manually proofed and opened in Microsoft Word to double-check for residual grammar/spelling errors that were a mismatch with the original versions. Once inputs were checked, Micro Power & Light’s Readability Calculations software was used to analyse each story. The researchers found that while this software “ignores” most punctuation, it does take into account all full stops other than those in figures (whether they were used as periods or as ellipses) which, in turn, affects sentence length and complexity results. A heavy use of full stops within sentences (abbreviations and names with initials) in 1972 stories skewed that portion of the sample’s results initially and required manual stripping and recalculation.

Of the range of empirical results, this study specifically chose to measure each story in terms of its:

- Flesch Grade Level readability score;
- Gunning FOG index;
- Total number of words;
- Syllables per word;
- Average words per sentence;
- Number of paragraphs.
Other information collected from each story in this sample included its Flesch Reading Ease Score (where the percentage result reflects number of population likely to understand the piece of writing), the gender (where it was obvious from any byline) of its author/s and its headline. Each story was also coded by news category – in order to give context to the news stories analysed – and this data is presented in Table 2. There were slight variations in categories of news stories found over the three time periods but not so great as to render comparisons invalid.

Table 2: News categories apparent in sample

<table>
<thead>
<tr>
<th>Type of story</th>
<th>Number of each reported across sample week, by year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>'72</td>
</tr>
<tr>
<td>Business/finance</td>
<td>4</td>
</tr>
<tr>
<td>Community/social</td>
<td>1</td>
</tr>
<tr>
<td>Crime</td>
<td>3</td>
</tr>
<tr>
<td>Disaster/accident</td>
<td>-</td>
</tr>
<tr>
<td>Education</td>
<td>-</td>
</tr>
<tr>
<td>Entertainment/television</td>
<td>1</td>
</tr>
<tr>
<td>Foreign affairs/trade</td>
<td>5</td>
</tr>
<tr>
<td>Health/environment</td>
<td>4</td>
</tr>
<tr>
<td>History/archives</td>
<td>-</td>
</tr>
<tr>
<td>Indigenous affairs</td>
<td>1</td>
</tr>
<tr>
<td>Industrial relations</td>
<td>3</td>
</tr>
<tr>
<td>Military</td>
<td>-</td>
</tr>
<tr>
<td>Politics/government</td>
<td>5</td>
</tr>
<tr>
<td>Sport</td>
<td>-</td>
</tr>
<tr>
<td>Terrorism</td>
<td>-</td>
</tr>
<tr>
<td>Weather</td>
<td>1</td>
</tr>
<tr>
<td>Editorials</td>
<td>5</td>
</tr>
</tbody>
</table>

Only two news categories – politics/government (which produced the most stories in the time period on four separate occasions) and business/finance – appeared in all publications in all sample weeks. These “staples” of the news mix were surrounded by the less consistent, but sometimes dominant categories of crime, disaster/accident, industrial relations and terrorism.

Results were tabulated in Microsoft Excel spreadsheets before being statistically analysed. These analyses included surveying the descriptive statistics for each newspaper across each time period – principally examining the mean, median, range, minimum value and maximum value; and applying a single-factor analysis of variance to determine averages and variances within and between publications and time periods.

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Limitations

The University of Minnesota Library cautions those who use readability formulae that they “do not account for all possible variables” and cite Giles (1990, pp. 131-138), who noted that such formulae are limited because:

• They measure only prose. They do not account for charts or graphs and their relation to the text.
• Readability formulae do not account for grammar or other mechanical errors that might interfere with readability.
• Formulae that measure readability by sentence length can mislead writers into deleting words that are needed for clarity and connecting ideas to one another.
• Readability formulae can’t account for organisational problems.
• Readability formulae don’t measure the effects of layout or other design elements.

Kearl (1949, p. 348) also noted that because such formulae deal primarily with writing style, they omit potential impacts of such elements as content, format and organisation, each of which is important to readability. He cautioned: “Certain mechanical characteristics of the formulae – the advantage they give to conversational type material, their inflexible allowance for changes in style – demand that they be used with discretion.”

None of these is a reason for discarding the formulae. They have an important place to fill. They are steadily being improved by new research in style. They do no violence to the old journalistic traditions of brevity, simplicity and consideration for the reader; and they give us a hint of how badly those traditions are sometimes observed. Bad readability scores can give a reasonably accurate warning of reading difficulty, although good scores are not a guarantee of good writing. (Kearl, 1949)

This study was limited in scope to the evaluation of observable readability data for a narrow sample of static news stories and editorials. It did not take into account important design and layout considerations that undoubtedly impact on the overall readability of individual stories/editorials. Nor was it possible to measure reader interest in topics presented, also a factor which would influence readers’ overall motivation to read – or read all of – individual stories.

Longer stories usually see readers progressively drop off after the first few paragraphs, but certain stories – because of their important content – are not as prone to this outcome. Nor did the study seek to compare the readability outcomes of “replaced” (later-edition) versions of individual stories, where breaking news could have resulted in considerable re-crafting or refinement of copy.

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Analysis – basic language measures

Gunning (1952) and Flesch (1962) recommend sentences should average 19 or 20 words. Both agree reading difficulty rises as words are added to a sentence's length, but they differ slightly on the rate of increment. For the purposes of this study, the researchers used a benchmark of 20 words per sentence and followed Gunning's simpler notion of a grade increment for each two extra words.

Readability scores – Gunning & Flesch

As Anderson (1966, pp. 82-83) found that Australian newspaper stories were "not equally difficult reading material", this study found substantial variations in the grade levels needed to comprehend stories in all three time-periods. When the three top- and bottom-scoring stories (in terms of FOG indices) were identified from each newspaper for each time period, the following results became evident:
### Table 3: Comparison of top- and bottom-scoring categories of news

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of times category appears in top three FOG scores*</th>
<th>No. of times category appears in bottom three FOG scores**</th>
</tr>
</thead>
<tbody>
<tr>
<td>politics/government</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>foreign affairs/trade</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>business/finance</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>health/environment</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>community/social</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>indigenous affairs</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>terrorism</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>industrial relations</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>education</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>disaster/accident</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>weather</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>history/archives</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>crime</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

* The "top three" FOG scores across all newspapers in all time periods varied from 15.6 years of schooling to 23.3 years of schooling.

** The "bottom three" FOG scores across all newspapers in all time periods varied from 8.1 years of schooling to 13.4 years of schooling.

The appearance at both extremes of seven out of 13 categories may dilute Anderson’s earlier finding that certain categories of news were more difficult than others. However, the size of the sample may be a factor and further research is needed to provide a more reliable analysis. This measure shows newspapers in all time periods published editorials or news stories that were, on average, above the ideal FOG index for the Australian population (11.8 years of schooling). Only in one time period did editorials in the sample actually better this ideal (The Courier-Mail and the Queensland Times scored 11.0 years in 1972). In all time periods, the lowest-ranked readability of news stories in the sample bettered the ideal (The Australian in 1987 with 23.3 years, 11.5 years above the mark).

With regards to editorials, the maximum by which the ideal FOG index was exceeded, on average, was 5.8 years of schooling (The Australian in 1972). The lowest average premium was 2.0 years (The Courier-Mail, 1972). The greatest range between lowest and highest years of schooling for editorials (the variability or range) was 11.4 years at the one newspaper. All papers in all time periods had minimum scores that bettered the ideal 11.8 years. The toughest news stories belonged to The Australian in 1987 (23.3 years, 11.5 years above the mark).
With news stories, the highest average was 4.6 years above the ideal, while the lowest average premium was 0.6 years. Variability of years of schooling required to comprehend news stories was greatest at The Australian in 1987 (where the range was 11.8 years between upper and lower scores).

These results indicate that Australian newspapers are consistently writing above the comprehension levels of the audiences they serve, especially in editorials, and sometimes alarmingly so. The newspapers with the most easily comprehended editorials, on average, were The Courier-Mail (1972 and 1987) and The Australian (2002). The newspaper shooting closest to the mark, on average, for news stories in 1972 and in 1987 was the state-based daily The Courier-Mail and in 2002 it was the regional daily the Queensland Times. The variability of scores was greater for news than for editorials.

A similar picture emerges if the Flesch-Kincaid Grade Level tool is applied to the same sample, although variations occur in results because the two formulae work slightly differently. (Both measures have been popularly applied, in tandem, by researchers analysing newspaper readability for several decades. Taken together, they allow results to be expressed on a sliding scale.) Using this readability tool, The Courier-Mail (in 1972 and 1987) managed to average scores for editorials and news stories that were below the ideal Flesch-Kincaid Grade Level for the Australian population (11.8 years of schooling), while news stories in the Queensland Times in 1987 and 2002 did likewise. The easiest editorials to comprehend using this measure belonged, on average, to the Queensland Times in 1972, while the toughest selection belonged to The Australian (1972). When it came to average editorials, the maximum by which the ideal Flesch-Kincaid Grade Level was exceeded was 2.6 grade levels (The Australian, 1972) and the two earlier average editorials for The Courier-Mail in 1972 and 1987 respectively were 1.0 and 0.7 years below the ideal grade level. The greatest range between lowest and highest grade levels required to comprehend editorials (the range or variability) using this measure was 9.8 grade levels at the Queensland Times in 1987.

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Results for this measure show all papers in all time periods had minimum scores that bettered the ideal 11.8 years. The toughest stories, on average, using this measure belonged to *The Australian* in 2002 (18.1 years, 6.3 grade levels above the mark). With news stories, the highest average was 1.6 years above the ideal, while averages for *The Courier-Mail* in 1972 (11.7 years) and 1987 (10.5 years) and the *Queenland Times* in 1987 (11.1) exceeded the ideal by 0.1, 1.3 and 0.7 years respectively. Variability of grade levels (range) required to comprehend news stories was greatest at *The Courier-Mail* in 1972, with 10.0 grade levels the difference between upper and lower scores across the sample week.

Results from applying this measure reflect the FOG index results for the same sample and, hence, suggest that Australian newspapers are mostly writing above the comprehension levels of the audiences they serve, especially in their editorials. The results for this measure confirm *The Courier-Mail*’s editorials were most easily comprehended in 1972 and 1987. It shows the newspaper shooting closest to the mark for news stories in 1972 was *The Courier-Mail*. In 1987, both *The Courier-Mail* and the *Queenland Times* did well, while in 2002 only the *Queenland Times* bettered the ideal.

It should be noted that Gunning’s FOG index scores for editorials and news stories in this sample typically came out at higher grade levels than the same editorials and news stories’ grade levels analysed under the Flesch-Kincaid Grade Level Formula. This contradicts earlier findings by Porter and Stephens (1989, p. 91).

It is clear to see from Chart 5 that *The Australian*’s editorials have become easier to comprehend, on average, while *The Courier-Mail*’s have become harder to comprehend. Averages for the *Queenland Times*’ editorials initially improved between 1972 and 1987, but rose again from the ideal 11.8 years in 2002. News stories initially became harder to read at *The Australian* before heading back towards the ideal in 2002. *The Courier-Mail*, while trending downwards between 1972 and 1987, rose sharply again in 2002, perhaps reflecting a change in editorship or at least editorial expectations. The only newspaper to consistently improve its news writing and drive even its FOG index near to the ideal of 11.8 years was the *Queenland Times*.

**Flesch Reading Ease Score**

This measure depicts comprehension of news stories and editorials by the general population, with higher scores depicting broader comprehension and lower ones depicting stories less well understood. Visual representation of averages for this measure shows clearly how many Australians understand newspaper content. Surely there is potential for newspapers to grow readerships if 40-55 per cent of today’s population find it difficult to comprehend their content.
Conclusions

This research confirms that, in a market where dwindling readership is a concern, the readability of key Australian daily newspapers – national, state and regional – deserves renewed attention. The number of years of schooling required to readily comprehend editorials and hard news published by three Australian newspapers is typically well above the average level of education in the general community. This has happened as journalists have attained higher average educational levels.

Readability levels shown in this study have risen faster than the level of reading skill in the community. While this might not be so for other areas of newspapers, this study examined only hard news and editorials. The researchers did not assume that readability scores would be consistent across different sections of the same newspaper. They also acknowledge that factors influencing circulation figures, overall, are more complex than canvassed here. However, that hard news regularly has readability scores above the average education level of the community is likely to choke comprehension, reader satisfaction and, potentially, market penetration.

When it comes to hard news stories, a regional newspaper, the *Queensland Times*, was the only title to improve its average readability results, progressively driving its norm down between 2.5 (Flesch-Kincaid Grade Level measure) to 3.0 (FOG index) grade levels from 1972 to 2002 and coming close to ideal levels. Despite this downward trend – over a sample of 75 news stories taken from three points in time over 30 years – this newspaper’s interval results demonstrate some of the biggest fluctuations in reading age required to fathom content.

At the state level, *The Courier-Mail*’s editorials have got progressively
harder, with a premium above the ideal 11.8 years, averaging 1.6 grade levels to 4.4 years of schooling. As for the early general news section of the state’s newspaper, it has more than reversed a downward trend in the readability of its news stories between 1972 and 1987 to now be, on average, at a premium of 2.7 years of schooling above the ideal.

The national newspaper, The Australian, has improved its editorials over the past three decades, but its news became harder to read initially and has since recovered to a point marginally above where it was in 1972 to be averaging 1.0 grade level to 3.9 years of schooling above the average reader’s comprehension levels, certainly above news comprehension levels for both the state and regional newspapers.

In examining who wrote this news, the authors acknowledge that their results, while potentially flagging issues for further study, should be treated with caution, as the publication of bylines in the sampled newspapers was not consistent across the three time periods. Of most concern then is the “language of leaders”, the editorials written by senior journalists, which appear to require an additional two years of education to that for hard news. Even though The Australian has steadily improved its performance over the past 30 years, it still demonstrates a premium of at least two grade levels above average. In other words, a higher-degree level of education is needed to understand the editorials of the statewide newspaper, The Courier-Mail, a situation that has worsened steadily over the past 30 years. The Queensland Times, which had shown an earlier downward trend in the complexity of its editorials between 1972 and 1987, had more than regained that ground by 2002.

While the results of this research do not rule out a direct causal relationship between the tertiary education levels of journalists and the overall readability of newspapers, neither do they prove it. Educational attainment levels have inched up both inside and outside the newsroom. So, too, have readability measures, especially in the area of editorials. It is here where the gap is most apparent between the level at which some editorials are written and the average educational attainment of the audiences for these editorials. Almost 18.6 years of formal education, on average, for one newspaper and a premium of 10.6 years over the ideal 11.8 years in another. This tends to support this study’s second hypothesis that because more experienced and qualified journalists write editorials in Australian newspapers, comprehension levels will be affected most.

Some people in industry and the academy would support the notion that editorials are written for business people and politicians, and not for the general public. Others would argue that editorials are a form of vox populi and are written to influence the entire community and not just its leaders. The authors believe newspapers take a deliberate public stance through their editorials in order to influence ideas and decision-making across the community. Australian Journalism Review
research is scant in this area and the results evident in this study contrast starkly with those from repeated research studies in the US where news stories have been found to be harder to read than editorials (Fusaro & Conover, 1983; Stempel, 1981; Curtis & Shaver, 1979; Moznette & Rarick, 1968).

With ready access to educational attainment data and decades of research quantifying optimum basic language and readability measures, there is little reason for Australian newspapers not to attend to readability more closely. This is an important area of functional literacy that facilitates access to business, social and democratic debate across the community.

Notes

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