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Information literacy: Did Alvin Toffler beat Paul Zurkowski to it?

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Abstract

Paul Zurkowski is often considered the “father” of the term, “information literacy” (IL). There were, however, other authors who, at a similar time, were writing about concepts we now consider fundamental to the nature of IL. A work of particular significance is Alvin Toffler’s *Future Shock*. In this classic text – better known beyond information science than within it – Toffler addresses major themes such as the importance of evaluating information, the need to construct sense from the material we access and the dangers of “information overload”. He is concerned, too, with the more general requirement that, increasingly, people must “learn how to learn”. Personal experience has shown this author that it is possible to create a tool for information users from the closely related ideas of Zurkowski and Toffler, and that each writer recognises independently that the skills associated with the traditional literacies are insufficient if an individual is to function effectively in modern society. Whilst Zurkowski is cited with greater frequency in discussions on IL, it may be Toffler who has done more to highlight to a wider readership the value of information skills in an ever-changing world. Perhaps Zurkowski’s biggest achievement lies in providing a memorable two-word summarising label to his field of interest; it is one that has endured and remains pertinent today, some fifty years on.

Keywords

information literacy; information literacy model; information literacy theory; library instruction; UK

1. Introduction

It is generally accepted that the first reference to “information literacy” (IL) was made by Paul Zurkowski, when President of the Information Industry Association (Zurkowski, 1974). His landmark paper featuring the earliest recorded use of the term is half a century old in 2024. Four years before its appearance, a book was published that is quoted much less frequently by information scientists than Zurkowski’s work, yet is equally significant in many of the issues it raises. In the world beyond Library and Information Science (LIS), Alvin Toffler’s *Future Shock* is regarded as a classic and ground-breaking volume, analysing and warning of the devastating effects of rapid change on those affected by it. A search of *Google Scholar* undertaken in May 2023 revealed that one edition alone had been cited nearly 13,000 times and the term, “future shock”, is now sufficiently mainstream to merit inclusion in authoritative dictionaries of the English language (see, for example, Pearsall, 1998; Brookes, 2006).

2. Key ideas

Although Toffler does not write of “Information Literacy” directly, he does so obliquely, and some of the matters he addresses fall squarely into the territory of IL as we know it today. Nevertheless, it goes uncited in the review of IL by Pinto, Cordon and Díaz (2010). In tracing the historical development of the field, they acknowledge the work of other writers who also

made noteworthy contributions in the 1970s – Burchinal, Hamelink and Owens – but any mention of Toffler is conspicuously absent.

The most relevant passage in *Future Shock* is that in which Toffler quotes the psychologist, Herbert Gerjuoy, of the Human Resources Research Organization, whom he interviews for the book. Gerjuoy stresses the need for modern education to instruct people in using information – classifying it, reclassifying it, evaluating it and moving between concrete and abstract ideas. Gerjuoy concludes, “Tomorrow’s illiterate will not be the man who can’t read; he will be the man who has not learned how to learn” (quoted by Toffler, 1971, p. 375). Ties between this argument and the ultimate aim of modern IL teaching are obvious. Indeed, *Harrod’s Librarians’ Glossary and Reference Book* regards IL as “an essential component in the acquisition of life-long learning” (Prytherch, 2005, p. 351).

At once, there are two major themes of interest in Gerjuoy’s words. The first is the need to question the calibre of information. This is a real priority today, when so much material is available from so many diverse sources and the accuracy of what we access cannot be taken for granted. Those concerned with information skills have long highlighted the need for source appraisal. Much of the original impetus for encouraging students to be critical of the items they consult came from the emphasis given to evaluation by Marland (1981) in his seminal “information skills curriculum”. Even his work, though, is preceded by Toffler’s book by over a decade. Here in 2023, Marland’s pioneering report from the pre-Web, paper-oriented days of the early 1980s is itself largely forgotten. Yet, at the time it was hugely significant. Writing some fifteen years after its publication, Herring (1996) mused, “The starting point for most information skills work in the UK remains the nine-step plan identified by Marland’s group in 1981” (p. 19). In words that echo Gerjuoy’s thoughts about what was needed for success in the modern Western world, Marland would later state, “The powerful person is the one who can formulate the question that is at the heart of the problem; search for sources of ideas, argument and information; select and reject these; organise the results; and present a report” (quoted by National Council for Educational Technology, 1993). Whilst the context may have changed, these generic skills remain critical even today.

Toffler is especially concerned with the dangers posed by outdated information. This, of course, remains a major element in many of the checklists used nowadays for evaluating sources and their contents. The modern frameworks, the Five Ws (Schrock, 2009), the CRAAP Test (California State University, 2010), RADAR (Mandalios, 2013) and IF I APPLY (Phillips, 2023) all stress the need for their readers to consider the currency of the information they encounter. Toffler (1971) comments, “Today’s ‘fact’ becomes tomorrow’s ‘misinformation’”, and urges that students “must learn how to discard old ideas, how and when to replace them” (p. 374). In updating our perspective on Toffler’s stance, we may say that in the twenty-first century the challenge lies as much in guarding against disinformation as misinformation.

The second striking issue is that of Gerjuoy noting the need to classify and reclassify information. For the National Council for Educational Technology (1993), grouping the material is integral to the wider process of making sense of what the individual has found during an information search. I, myself, have written previously how IL may involve the learner categorising sources in accordance with their themes and arguments. By uniting ideas within particular schools of thought, students can add another level to their analysis beyond simply appraising items for quality (Shenton, 2021). We perhaps associate the processes of classifying and reclassifying more frequently with the analysis of qualitative research data. Yet, a recurrent theme in various models of IL and discussions on the scope of IL is that the inherent skills should be applied to data *and* published material (see, for example, SCONUL Working Group on Information Literacy, 2011; Information Literacy Group, 2018). If we view the fundamental territory of IL, then, as being one of dealing competently and ethically with “evidence”, we may conclude that distinctions between

personally gathered data and published information are unnecessary. Zurkowski (1974) believes IL means being able “to find what is known or knowable on any subject” of interest (p. 23). The latter again implies first-hand investigation, even if his concluding recommendation that a national initiative is needed “to train all citizens in the use of the information tools now available” would suggest that his principal priority lies in the exploitation of existing material (Zurkowski, 1974, p. 27).

As reported by Toffler, Gerjuoy emphasises the importance of how to teach oneself and look at problems from different directions. These are, once more, recurrent themes in later thinking on IL. Paterson (1981), for example, in his “checklist of information skills”, urges learners not only to relate new information to their existing knowledge and experience but also to offer alternative explanations. There are parallels that may be drawn, too, between this advice and the concern of modern educators that their students should collect information from a range of sources to ensure open-mindedness and guard against confirmation bias. Byrne (2022) emphasises the crucial role libraries must play, especially with regard to helping individuals gain a soundly based knowledge of climate change and health-related matters, while I have highlighted that information professionals can enable people to recognise and confront their own prejudices (Shenton, 2023). More generally, well established frameworks for teaching IL, such as the Big6 Skills (Eisenberg & Berkowitz, 2003) and the ILPO approach (Ryan & Capra, 2001), have long encouraged students to seek a variety of materials when planning and implementing a search.

Toffler warns, too, of the dangers of “information overload” – a problem that emerges as a theme in an array of modern studies of information behaviour (Case & Given, 2016). His perspective is not, however, that of the information scientist, and he tends to equate information with sensory stimuli, rather than the published material that has traditionally been of interest to information professionals. Nevertheless, not all experts on Library and Information Science (LIS) today subscribe to the view that information should be equated with “the literature”. The definition of Case and Given (2016), who maintain that information “can be any difference you perceive, in your environment or within yourself” (p. 6), is fundamentally similar to Toffler’s take in that, for them too, information may not necessarily be messages purposely constructed to convey meaning to a recipient. We may say, then, that whenever the “differences” involved are overwhelming in number, a state of “information overload” has been reached. Case and Given’s (2016) definition is one more typically associated with biology and it is when writing about this field that Young (1951) conceives of information in high identical language. A more conventionally LIS-oriented view is taken by Zurkowski (1974). In introducing the need to achieve universal IL in the USA, he, also, though, recognises that, in general terms, an “overabundance of information” results when what is available “exceeds our capacity to evaluate it” (Zurkowski, 1974, p. 1).

Toffler (1971) and Zurkowski (1974) adopt different positions regarding the extent of the problem of information illiteracy. The former attaches no figures to the issue at all, whereas Zurkowski (1974) tentatively suggests – without citing any apparent evidence for doing so – that only “perhaps one-sixth [of Americans]... could be characterized as information literates” at the time of his writing (p. 7).

3. A tool for learners

Both Toffler (1971) and Zurkowski (1974) provide pertinent concepts for understanding the user’s situation and for many years in my own IL teaching, I have incorporated a tool inspired by both the former’s discussion of “man as channel” and the latter’s model of information publishing activity. Toffler (1971) begins by outlining how, in the eyes of psychologists and communication theorists, information enters an individual from outside. This is in marked contrast to the argument popularised by Dervin (1977) later in the same decade that information may also be constructed by individuals internally and subjectively. Nevertheless,

according to Toffler (1971), incoming information is processed and exits in the form of actions based on decisions. Zurkowski (1974), meanwhile, understands information publishing as a prism, which gathers “light” in terms of ideas and concepts, and performs “refractory” functions such as editing, arranging and printing so as to produce a “spectrum” of information products, services and systems in order to meet the needs of users (p. 2). These perspectives can be translated into a three-part model that represents what happens to a student when they undertake an independent learning assignment. Specifically, we can:

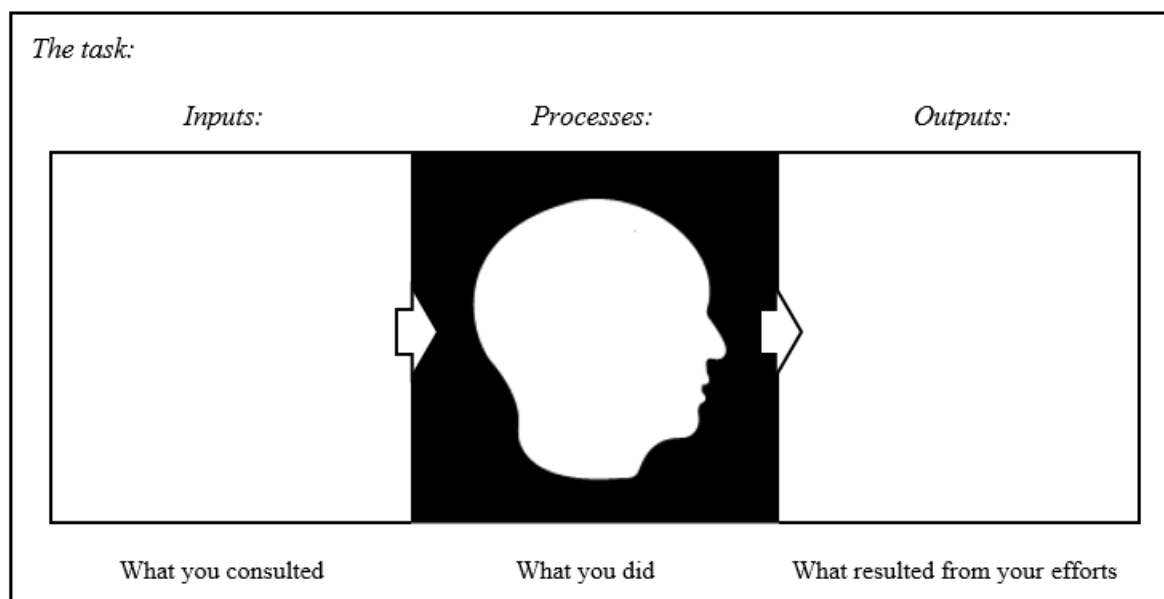
1. recast Zurkowski’s (1974) light or Toffler’s (1971) incoming information as material from sources that are accessed by the person. This will have particular characteristics with respect to its form, age, subject matter, complexity, etc.
2. reinterpret Zurkowski’s (1974) refracting or Toffler’s (1971) processing as the personal attitudes, skills and thinking brought to bear by the individual when interacting with the collected material. They may embrace source evaluation judgements, the use of material, the recording of bibliographical data via references, etc.
3. reconceptualise Zurkowski’s (1974) products/services/systems or Toffler’s (1971) decision-based actions as outcomes like enhanced knowledge or tangible work in which the information has been exploited. Reflection may be focused on the subject aspects addressed in the outcome, the treatment employed and the structure adopted.

All the relevant processes take place in a particular context. In an education setting, this may be regarded as the task set by the teacher, although it could equally well be any activity where the location and use of information feature prominently. When reproduced as a handout, with space for details to be entered by the recipient, the model shown in Figure 1 can encourage students to summarise their independent learning in the circumstances under scrutiny.

The handout has been employed successfully with high ability students aged sixteen to eighteen who are studying for the Extended Project Qualification (EPQ) at my school. Sixth Formers taking this course plan and deliver a research project that results in their creation of a product – usually a 5,000-word evidence-based essay or report – and an oral presentation. They also document their research processes in a production log. Towards the end of their project, candidates are expected to reflect on what they have done and how they have done it. The model has formed a helpful tool for guiding the thinking of students when tackling this phase of the study.

Ironically, given Zurkowski’s (1974) explicit interest in IL, it is easier – and certainly less contrived – to transfer the ideas of Toffler (1971) to education and learning. His “man-as channel” orientation at once renders his focus more person-centred and less systems-oriented than that of Zurkowski (1974), whose ideas on light, refractory functions and information products are articulated in the context of his discussion on publishing activity. Still, we must remember that Zurkowski (1974) was writing in an age before conceptual thinking in LIS emphasised the information user to the extent it does today.

Figure 1: Proforma model of the information user's situation



4. Main implications

The essential messages underpinning the work of Toffler (1971) and Zurkowski (1974) are strikingly similar; both were aware that no longer could a person be considered literate if they could merely read and write. Society had reached a stage where other skills were now of comparable importance to the traditional literacies and an individual who had not acquired them would be seriously disadvantaged. The authors' understanding of what is required to cope with the modern world concentrates on the need to use information effectively, even if their emphasises differ. Whereas Zurkowski (1974) says that "information literates" have "learned techniques and skills for utilizing the wide range of information tools as well as primary sources in molding information solutions to their problems" (p. 6), for Toffler (1971) the key abilities are those recognised by his interviewee, Gerjuoy, and discussed above – namely classifying and reclassifying information, evaluating it, moving between concrete and abstract ideas and, more broadly, learning how to learn.

5. Overall importance

It is illuminating to take a moment to consider the relative impact of the work of Toffler (1971) and Zurkowski (1974). Despite its obvious relevance to the LIS disciplines of IL and information behaviour, Toffler's (1971) book is seldom quoted in these circles and it goes uncited in two of the most important textbooks in the latter field, that is, the collection of theories edited by Fisher, Erdelez and McKechnie (2006) and Case and Given's rigorous analysis of the territory, which is now in its fourth edition (Case & Given, 2016). In contrast, many information scientists unhesitatingly attribute the origin of the term, "Information Literacy", to Zurkowski, although one wonders how many have actually read his paper and how far understanding of his ideas on the part of academics and, especially, practitioners is second-hand and derived merely from sources that have referred to him. It should also be remembered that, whereas Toffler's (1971) treatise is packaged in a mass market book that has undergone many reprintings (including eight Pan paperback versions within three years), Zurkowski's (1974) thoughts are found not in a journal paper or monograph but in a relatively obscure report. Several years after *Future Shock*, Toffler's work would be the subject of more

public attention when ABBA's Björn Ulvaeus was photographed reading one of his subsequent books, *The Third Wave* (Hanser & Palm, 1999, p. 161). We cannot rule out the possibility that, for all Zurkowski's importance to information specialists, it may be Toffler who has done more to establish the need for information skills in the public consciousness, especially as an antidote to rapid technological change.

Perhaps Zurkowski's greatest achievement lies in applying a memorable label to information skills. As time has demonstrated, "IL" is a term that has endured. Nevertheless, ultimately, it would be unwise to attempt to attach the origins of concepts associated with IL, if not the words themselves, to one particular writer. In his timeline devoted to the progression from IL to inquiry, Callison (2014) first cites work by the American Association of School Librarians from as early as 1960, and he goes on to highlight several other documents of significance that pre-date Zurkowski's (1974) report. There were, moreover, commentators in the 1960s and early 1970s active in disciplines beyond information science – of whom Toffler and Gerjuoy are two – who were outlining the fundamental features of learning how to learn well before the term "Information Literacy" came into existence.

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7. Declarations

7.1 Ethics approval

Not applicable

7.2 Funding

Not applicable