Should upskilling the workforce start at the top? Managers’ literacies and occupational orality

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Print Literacy Learning Support for Modern Apprentices in New Zealand workplaces

— Literacy Aotearoa providers were contracted from April 2008 to support MAs in automotive and light engineering, building and construction, with print literacy, language and numeracy (LLN) tutoring as part of their apprenticeship learning

— Our ALLR research group was contracted by the Department of Labour during 2009 to conduct a formative evaluation of how well this support seemed to be meeting the learners’ needs.

— In 14 case studies we interviewed MAs, LA tutors, employers, and MACs to get triangulated perspectives: total of 46 interviews

— Print literacy issues were the greatest challenge to completion of coursework, then in second and third place, problems around disparate communities of practice or different discourse communities: two different worlds of industry vs. literacy
Focusing on disparate communities of practice

The literature on communities of practice tends to follow Lave and Wenger’s (1991) thinking:

“the mastery of knowledge and skill requires newcomers to move towards full participation in the sociocultural practices of a community” (p. 29).

Lave and Wenger referred to “legitimate peripheral participation” but there are many barriers at the periphery. Our apprentices, though, were challenged by their trying to enter two communities (or discourses) simultaneously, trade and print literacy. They already had literacies of the body, of tools and materials, but lacked print and writing literacies.
Tensions between discourses

- Dominant discourses within trade COPs implicitly challenge and undermine the tacit assumptions within the LA print literacy discourse
- Apprentices were determined to enter their chosen trade, so their engagement with the print literacy discourse was purely a means to an end
- Employers, MACs and some LA tutors agreed that print literacy should not be privileged at the expense of other workplace literacies.
Sample comments

• It’s more practical than theory this job anyway (employer or MAC)

• I certainly wouldn’t want to be doing them (the print literacy lessons) (employer or MAC)

• Building is simple – they’re making something that’s simple, complicated, very technical (employer or MAC)

• You can have all the written stuff and theory that you like but at the end of the day it’s the job that they produce (employer or MAC)

• A skilled artisan is equally as important as a skilled literacy person; we need all types to make a complete world (tutor).
Sample comments

• Years ago ... all we did was put a string line up ... we just did it a manual way and it worked
• A lot of us old-school guys have a problem with trigonometry
• When I did my apprenticeship you could get by ... by doing your practical work
• Being a tradesman is practical, about having practical skills
• The qualification doesn’t have to be that high-tech.
Differing paradigms around print literacy theory:

• **Cognitive theorists** hold that print literacy greatly enhances a person’s cognitive and reasoning ability ("the literacy brain" – Donald, 2001, p. 302). Likewise, **educationalists** refer to “the literacy mind” (Booth, 2006, p. 6). Policy people and politicians worldwide have been convinced by their line of argument.

• **Social practice theorists** (e.g., Gee, 1986; 2000) believe that print literacy plays very little part in strengthening cognitive capability. However, it may assist in helping a person to become more fluent and so can better explain their reasoning or decisions.
Educationalists such as Booth (2006) argue for:

A “continuum of literacy” and a present-day “retreat from complex and deeply structured modes of printed texts” resulting in “invisible illiterates” (p. 9).

Then “As we recognize the complexities of society’s issues, we see the need for ‘reading’ at the deepest level, for recognizing the shades of grey between black-and-white extremes” (Booth, 2006, p. 15).

(E.g., the debate about “Is Google making us stupid?”)

Without deep reading “Are those who read only minimal text ... susceptible to control by corporations, unethical political leaders or charlatans?” (Booth, 2006, p. 15).
Gibson (2008) describes:

“A crisis in the very meaning of ‘literacy’ ... as print has been displaced as the clearly dominant medium, its meaning has tended to drift. ... it has increasingly suffered from conceptual fuzziness ... the concept has become emptied of definite meaning. While literacy is still central to most notions of education, it is increasingly unclear what exactly we mean by it. All cultures, it is suggested, have a range of ‘sense-making practices’. ... The problem with this is that it tends to throw into doubt any program for developing the technical skills required to master any one sense-making practice” (p. 75).
Some varieties of orality:

- **Primary** orality: characteristic of a society without print literacy prior to contact with another society which has print literacy.
- **Residual** orality: usually evident in a society in transition from primary orality to print literacy.
- **Secondary** orality: emergent with the rise of new media, social media, multi-modality.
Primary orality:

“...the orality of a culture totally untouched by any knowledge of writing or print, ‘primary orality’. It is ‘primary’ by contrast with the ‘secondary orality’ of present-day high-technology culture, in which a new orality is sustained by telephone, radio, television, and other electronic devices that depend for their existence and functioning on writing and print” (Ong, 1982, p. 11).
Residual orality:

Residual orality: “a communicative condition which hampers efforts in certain languages and cultures to achieve a reasonable degree of 'literacy' despite the availability often of a most elegant written medium” (Hatim, 2003, 1).

Or a translator may transfer certain high-level oral rhetorical conventions from one language to another so that effective everyday communication in the second language is reduced.

Residual orality also often appears in ancient texts from when oral traditions were written down for the first time.
Secondary orality #1:

Ong (1982) proposed that “with telephone, radio, television and various kinds of sound tape, electronic technology has brought us into the age of ‘secondary orality’. This new orality has striking resemblances to the old in its participatory mystique, its fostering of a communal sense, its concentration on the present moment, and even its use of formulas. But it is essentially a more deliberate and self-conscious orality, based permanently on the use of writing and print” (pp. 133-134).
Secondary orality #2:

The effect of multimodality in communication has recently been “to dislodge written language from the centrality which it has held, or which has been ascribed to it, in public communication” (Kress, 2000, p. 182).

Or “new literacies are more ‘participatory’, ‘collaborative’, and ‘distributed’ in nature than conventional literacies” (Knobel & Lankshear, 2007, p. 20).
The (oral) nature of managerial work

Managers work at an unrelenting pace, favouring informal, oral forms of communication: “significant activity is interspersed with the trivial in no particular pattern” (Mintzberg, 1973, p. 31). “Their activities are typically characterized by brevity, variety, fragmentation, and discontinuity” (Mintzberg, 2009, p. 19).

Managers like a discontinuous, fire-fighting work-style involving almost continuous oral communication (Stewart, 1967; Mintzberg, 2009) to manage their fragmented, complex tasks.

Mintzberg (2009): “unlike other workers, the manager does not leave the telephone, the meeting, or the e-mail to get back to work. These contacts are the work” and “Gossip, hearsay, and speculation form a good part of the manager’s information diet” (p. 26).
Why are managers more inclined to orality than to print literacy?

Essentially their world is tactical (rather than strategic) where they are more dependent on face-to-face and phone-mediated rather than print-based interactions. Information from oral sources is more up-to-date, more nuanced, and more highly-contextualised than what is available in the (more dated) print modes. Information from oral sources can also be tested and explored for relevance, immediacy and salience, whereas that from print typically cannot. Hence they distrust or neglect print information sources (Mintzberg, 1973, 2009). So how do managers rate in their print literacy?
Individuals’ skills as measured by the ALL survey, 2006. Tasks at each level:

- **Level 1 (0–225):** require the ability to read simple documents, accomplish literal information-matching with no distractions, and perform simple one-step calculations.
- **Level 2 (226–275):** seek the capacity to search a document and filter out some simple distracting information, achieve low-level inferences, and execute one- or two-step calculations and estimations.
- **Level 3 (276–325):** involve more complex information filtering, sometimes requiring inference, and manipulating mathematical symbols, perhaps in several stages.
- **Level 4 (326–375):** seek integration of information from a long passage, use of more complex inferences; completion of multiple-step calculations requiring some reasoning.
- **Level 5 (376–500):** explore capability to make high-level inferences or synthesis, use specialised knowledge, filter out multiple distractors, and to use abstract mathematical ideas with justification.
Sample ALL numeracy question:

Is breast milk safe?

Since the 1970s, scientists have been worried about the amount of Dioxin, a toxin in fish caught in the Baltic sea. Dioxin tends to accumulate in breast milk and can harm newborn babies.

The diagram shows the amount of Dioxin in the breast milk of North European women, as found in studies done from 1975 to 1995.

Amount of Dioxin in Breast Milk

Compare the percent of change in the Dioxin level from 1975 to 1985 with the percent of change from 1985 to 1995. Which percent of change is larger? Explain your answer.
New Zealand along with other industrialised countries is rated as having about **42%** of its adult population at poor or very poor literacy levels (ALL levels 1 and 2). Low print literacy is thought to impair people’s inclusion in everyday community and economic life, political participation, etc. A country’s economic and social progress tends to be associated with increased community ability in language, literacy and numeracy.
N.Z. managers’ low prose literacy

According to the ALL (2006) survey, about 76% of N.Z. managers are either at the minimum level (level 3) needed for work in a modern, complex society, or below (levels 1 and 2).

(However, this kind of assessment is contested by adult literacy social practice theorists, who argue that (print) literacy can be assessed only by contextualised means, not by a survey.)
However New Zealand managers’ prose literacy is significantly less than professionals’

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<th>Level</th>
<th>Managers’ prose literacy</th>
<th>Professionals’ prose literacy</th>
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<tbody>
<tr>
<td>5 Very good</td>
<td>2.2%</td>
<td>2.2%</td>
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<tr>
<td>4 Good</td>
<td>21.7%</td>
<td>29.6%</td>
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<tr>
<td>3 Medium</td>
<td>48.2%</td>
<td>50.3%</td>
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<tr>
<td>2 Poor</td>
<td>23.4%</td>
<td>14.8%</td>
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<tr>
<td>1 Very poor</td>
<td>4.5%</td>
<td>3.2%</td>
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ALL (Adult Literacy and Life Skills Survey), 2006.
Managers’ numeracy compared to professionals’ is also worth noting.

### Managers’ numeracy

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<tr>
<td>5 Very good</td>
<td>3.9%</td>
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<tr>
<td>4 Good</td>
<td>21.9%</td>
</tr>
<tr>
<td>3 Medium</td>
<td>40.3%</td>
</tr>
<tr>
<td>2 Poor</td>
<td>25.4%</td>
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<tr>
<td>1 Very poor</td>
<td>8.6%</td>
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### Professionals’ numeracy

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<th>Level</th>
<th>Percentage</th>
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<tr>
<td>5 Very good</td>
<td>6.4%</td>
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<tr>
<td>4 Good</td>
<td>28.3%</td>
</tr>
<tr>
<td>3 Medium</td>
<td>39.5%</td>
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<tr>
<td>2 Poor</td>
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ALL (Adult Literacy and Life Skills Survey), 2006.
Occupational orality

An orientation to orality rather than print literacy comes from the work done within a given profession or occupation (classically but not only managers). Managers show:

- a *medium to low* level of print literacy
- strong *connectedness* within their interpersonal networks
- low extent of *reflection or abstraction* in their approach to work along with a satisficing orientation to work
- high responsiveness to *immediate* (tactical) rather than long-term (strategic) issues
- *fragmentation* rather than focus in their work activities.
Meanwhile there is much emphasis on the need to “upskill the workforce”

The public discourse has been strongly around workers’ (rather than managers’) low skills. Evoked are moral panics from the past about “dangerous illiterates” (Gee, 1986, p. 733) along with the implication that people (working class) with low print literacy not only have the problem but are the problem.
Can managers retain their occupational orality but at the same time build their prose literacy?

Do they need to advance further up the prose-literate scale as measured by the ALL survey?

Social practice theorists might argue that orality (or spoken literacies) are probably well-adapted to managers’ workplace realities. So why worry about managers’ print literacy?
Others argue that all jobs are starting to demand higher levels of print literacy, pointing to:

- the new “document-driven work culture” (Belfiore, 2004, p. 22) which demands better literacy
- the Internet-enabled, digitised, ISO-compliant workspace (Follinsbee, 2004)
- rising levels of innovation and sophistication at work internationally in ‘fast capitalism’ (Gee, 2000) (Management matters in New Zealand, 2010).
We used to describe ‘knowledge work’ as something distinct from other kinds of work, but Farrell (2006) argues that:

“The effects of accelerating time and diminishing space ... are well documented identifying characteristics of the global economy ... (which) exert pressures towards the standardization and homogenization of products, of services, of cultures, and of the ways people do their work” (p. 8-9).

• “the transformation of the global economy is reframing virtually all work as ‘knowledge work’ in the sense that the active production and application of knowledge keeps all businesses operating in IT-enabled global networks of production” (p. 13).
There are concerns that N.Z. will continue to be overtaken by smarter business practices.

“Since 1990 N.Z. has slipped from 10th to 20th on the GCI” (Global Competitiveness Index) (Management matters in New Zealand, 2010, p. 1).

“Looking ahead, given the increasing global competitiveness of India and China and associated sophistication in their business strategies, operations and networks, it is likely that the share of better-managed Indian and Chinese firms will also increase” (p. 36).
Increasing focus on sophistication and innovation of managerial practice

“Business sophistication and innovation are key components which are incorporated in the Global Competitiveness Index (GCI) measure and are linked to the competitiveness of nations” (Management matters in New Zealand, 2010, p. 36).

Is innovation dependent on managers’ heightened print literacy? If managers’ work is getting less tactical and more strategic, is there a new need for print literacy competencies?
Under debate is whether the new Internet-enabled, digitised, globalised, document-driven workplace is delivering just a new accretion of print demands on top of managers’ occupational orality, requiring their compliance (e.g., with ISO standards) but not creating any fundamental change in actual job practice.

Or will the new Internet-based print demands of fast capitalism (especially rising global competition) require a fundamental change in managers’ work capabilities and styles, including better print literacy?
Elements of a research agenda

Since the 1970s new functions such as planning, quality assurance, customer service, reporting and accountability have been thrust upon shop-floor level workers. All require increased literacy competencies. However increased demands of literacy are in two categories (Wyse & Casarotto, 2004). Print literacy is needed for areas such as the above. Second, the relations of literacy (Jackson, 2000) are the more exacting expectations held of workers under fast capitalism, e.g., more initiative-taking, personal investment in work, deep-acting emotional labour, and stronger responsibility for enterprise success.

For research: what are: (1) the emerging print literacy competencies demanded of managers, and (2) the relations of literacy demanded of managers in enterprises which are changing faster and becoming more innovative worldwide?
At the 95% confidence level

The proportion of professionals at level 1 or 2 prose literacy is significantly less than that of managers ($17.9 + 1.96 \times 1.49 < 27.8 - 1.96 \times 2.59$). The proportion of professionals at level 3, 4 or 5 prose literacy is significantly more than that of managers.

The proportion of professionals at level 1 or 2 numeracy is NOT significantly different from that of managers. The proportion of professionals at level 3, 4 or 5 numeracy is NOT significantly different from that of managers. Professionals on average have higher levels of education than managers – which will likely be an explanatory factor.

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Findings from the New Zealand Management Practices and Productivity global benchmarking project *April 2010*


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