LITERACY AND THE VISION SPLENDID

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Developments in what we know of learning and learning practices have highlighted literacy as the critical predictor of the work that many in the education and training community will have to do. From frontline supervisors responsible for on-the-job training of railway line workers in Queensland Rail, to convenors of tertiary courses with organising and moderating responsibilities across groups of colleagues, such developments have created an impetus to envision work practices in ways that account for workplace literacy. The authors pursue a chicken-and-egg dilemma as they outline action research in two diverse workplaces. In both cases literacy became the central focus in changed practices – either resulting from a reenvisionment, or causing one. First, in Queensland Rail, supervisors concerned with the health and safety of infrastructure workers reconceptualised their role in management and leadership to include identifying how and where literacy was problematic and to invent an appropriate accommodation. Their implementations of change were a new envisionment of practice and resulted in a highly practical kit of guidelines. Second, at Griffith University, convenors of courses in the first year of a Teacher Education program found that many ostensibly literate students had difficulty in relating and integrating concepts from different courses into a developing vision of teaching and of themselves as prospective teachers. The convenors adapted a taxonomic means for recognising and expressing relationships for different sources into a resource for guiding and assessing students' work. The experience has proven successful in terms of its student-based objective. But, it has not been without difficulty as a range of lecturing staff moves toward reenvisionment as a result of changed practice.

Training on the line - Study 1

The research literature in a number of fields indicates that policymakers often initiate change without understanding what those who get the jobs done need to know and to do to be able to implement them. This is faulty re-envisionment and typically, it negatively predisposes initiatives (e.g. in education, see the criticism of failure to properly involve principals and teachers by many in the Schooling Reform movement - Goertz, Floden & O'Day, 1995; in medicine, see discussion of communication weaknesses where patients are not involved in consultations about treatment and management plans - Burnard, 1992; Gordon, 1995; Katz, 1984; in tourism, see Flowers, 1996 on poor coordination between Australian States and its resulting loss in opportunity; in systems management generally with poor envisionment associated with functional breakdowns, disruption and mismanagement, see Gutknecht, 1988; Hespe & Little, 1971; Stewart, 1991). Queensland Rail (QR) was required from 1992 to morph from a huge section of a State Government Department to corporation. Together, freight and passenger businesses in 1990 were

losing $2 million a day. So it too, had envisionment with a threshold between success and failure that relied heavily on understanding what its workforce needed to morph appropriately. It set about its task with a deliberate and explicit sense of the importance of such an understanding.

Various QR initiatives taken in response to new organisational and management structures that the move to corporatisation created were concentrated on literacy and its inclusion in goals for better awareness of safer and more effective practice in QR's workplaces. Most noticeably, it established a literacy framework from which to assess and restructure literacy competencies of its workers, employed literacy advisors, formed a Literacy Management Committee, and published its own literacy policy (QR Literacy Policy, October, 1996). It went public with such developments, including a presentation by its CEO and Workplace Projects Manager at the 1996 national conference of the Australian Council of Adult Literacy. In 1995/96, the huge financial losses had begun to turn around. By 2000/2001, the financial result was a positive one.

There were many variables involved in QR's positive story over the past 10 years. Strong management, commitment and cooperation in the workforce and a principled business perspective have characterized the organization. The sense of literacy at QR has moved from "literacy-as-state" (Langer, 1987) to a wider concept where it is seen and "understood" by management as an instrument of interactive, collaborative communication. This new sensitivity may be seen in a number of projects used to encourage participation from staff in awareness-raising and competence-building on workplace literacy. For example, the Supervisor Support for Literacy Project (1996) centered on literacy as a key to unlock what track workers needed if they were to get the "Yellow Ticket" (certification that one who is 'on the track' can protect the workplace) and "Striped Ticket" (its equivalent for someone in an 'off track' situation). There had been incidents that needed deliberate attention. These included fatal accidents to people on the line, where unsafe working was associated with faulty communication. Frontline supervisors involved in infrastructure felt their gangs of maintenance workers included many who were illiterate. Some wondered if their own literacy was up to the tasks of the track and to the additional demands of leadership.

QR developed a program of action research where supervisors who were bridge-masters, road-masters, and depot supervisors in one of the administrative regions of the State participated. Each supervisor was responsible for a number of teams ("gangs"). At the start, most were reluctant participants. They were busy men with real work to do – buckled lines and wash-outs to fix; they did not really have time for getting together in "town' for workshops on literacy. This changed across the eight days eventually spent constructing the "Supers Lit-Kit" (their name). With some outside help, the research established a running definition for what the supervisors agreed "literacy" was. At first, it was very much a traditional definition ("Literacy is reading – and writing"). However, they began applying and adjusting their definition as they found more and more characterizations of literacy at work throughout the region. Ultimately, their description was that it was a multimodal phenomenon involving various forms – speaking, listening, reading, writing and observing. They indicated many instruments – telephones, radios,

walkie-talkies, "thousands" of forms, notes, signals, whistles, flags, lamps, train noises, etc. They also described the range of codes, meanings, uses, and positionings that these things created for all who were directly or indirectly involved.

For example, each shift of maintenance workers ("gang") typically began its work with a gang-member collecting and sharing information on what times trains would be on the section of line where they were working. Usually, this would happen with a start-of-shift telephone/radio communication taken by a senior member of the gang from Train Controllers working out of a large regional centre. Before the supervisors had formed their initial definition of literacy (a "3 Rs" view), much had been assumed about this important task – including a fairly common view that there wasn't much literacy involved. But, as they began to reflect on the nature of the job, and on what those who do it needed to know and to be able to do, the view changed and attributions such as the following came:

"You've gotta' know how to listen."
"And before that, you've gotta know how to use the code - and the right way to talk to the Controllers. ...."
"It's no good just rememberin' it. You've gotta write it down, and check you got it right."
" And the Controllers don't like that."

They discussed also what was involved in recording such information, and in sharing it – deciding not only that there was lots of literacy, but also that this type of literacy was very important. Their definition broadened. They moved across several such tasks, including filling out forms, reading instructions from above, listening to work orders, watching how people went about picking up heavy objects, finding more and more literacy. They then examined traditional sanctions they had personally observed or experienced against declaring one's own dysfunctional literacy or illiteracy. They decided that the sanctions were undesirable. They looked also at what they did in supervision from the viewpoint of literacy in terms of existing and preferred practices, and where they could use existing systems of support such as QR's network with TAFE, private suppliers of literacy assistance and help from within the gang.

Finally, they decided to develop a set of materials to help other supervisors to monitor their own supervisory practices in relation to recognising literacy and monitoring and responding to the literacy needs of workers.

There have been a number of useful outcomes from this project. A Supers' Lit Kit was produced in 1996/97 and QR assigned two of the supervisors from the original team to travel the State conducting similar programs of action research. Features of some of the proforma that were confounding railway workers across the State were drawn to the attention of QR. The quasi-legal, impenetrable text of many such forms has been replaced to increase likelihood of a reader's engagement and worded in Plain English. There is a more widespread acceptance of literacy need and for on-site response by supervisors. Supervisors in the region where the original research was conducted set up in the following year a "Help-a-mate" system to offset delays between recognising problematic

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situations of literacy use and lasting response. It is uncertain to what extent these moves will promote lasting and positive replacement of old sanctions and habits. However, the intentions are in place, the system is committed at senior level to ongoing development of the corporate vision with a strategic view of literacy at work, and the locus of such strategic activity for personal skill development, workplace reform, safeworking, and productivity is at the workface.

Changing context: changing practice - Study 2.
In similar ways, the sense of literacy at Griffith University had moved from "literacy-as-state" (Langer, 1987) to a view where it was seen as an instrument of transformative learning. In a university context, knowing about literacy as practice is generally a "knowing what" view that emphasises literacy as product. Lecturers involved in this project assumed knowing about literacy as a "knowing how" applied understanding of the effects of literacy on learning (Bryer & Fletcher, 2000; Fletcher, Bartlett, Bryer & Bowie, 2000). This view included process as an essential feature of knowing

Pre-service teachers undertaking their second semester studies were expected to be able to demonstrate beyond the knowing of what literacy was as a practice, and demonstrate in specific and integrative ways what the doing of literacy could achieve for them as learners. A model of literacy as an instrument for learning required students to analyse and synthesise relationships across subjects in a written assessment task (Biggs, 1999). This common assessment item was allocated 30% of total marks in each of three of four, second-semester subjects where staff agreed to participate. Structural criteria (Biggs 1993) were used as explicit indicators for students to address in their writing. Their personal task was to think about what they had learned about teaching across the three subjects.

It was an awareness raising and competence-building project for both lecturers and students designed to encourage active participation (Lunenberg & Volma, 1999) of all involved in an online discussion forum. The use of technology to facilitate conceptual change (Clift, Mullen, Levin, & Larson, 2001) was a deliberate effort by lecturers to create a 'learning space' for over 300 students to discuss, clarify and share their evolving understandings of teaching and learning. Peer support has been found to have a positive effect on learning for first-year students (McInnis & Hartley 2000). The innovative use of an inter-subject forum where students who were enrolled in any or all of the three subjects could join in the group discussion encouraged peer support and collaboration.

Results
An 80-item "concepts of learning" questionnaire found 8 items had pre-post difference scores that correlated with success in the psychology subject. The results showed positive change in the following items:
> + Learning consists of thinking about relationships between pieces of information in order to make sense of them.
> + In order to understand material that they read, students should question, paraphrase, or criticize it.

+ The organisation of knowledge is unique in each person.
+ People create new ideas by reacting to other ideas within a community.
+ People can understand an idea from someone else's viewpoint, even when they come from different social backgrounds.

Negative change occurred in the following three items:
- People who can understand any given theory interpret it in the same way.
- A group of learners is only as strong as the strongest member.
- The mind receives knowledge passively.

These responses suggest students' views of learning had changed in ways to reflect the approaches to learning supported across subjects. Interview data supported these findings. For example:

It was the culmination of the assignment that I began to think. Oh I know some things that I didn't know about. And you showed a couple of videos of classroom situations and I suppose I only latched on to that because I thought, oh now finally you're doing what I thought you would, but certainly now I can't look at a book the same way now – or ever again and I've got a much better concept of what I'm doing.

However, an analysis of forum discussion found the main focus of postings centered on clarifying information related to assessment items rather than elaborating and synthesizing understandings. There was no evidence to support the view that online discussion transformed student learning.

Teaching outcomes for lecturers were positive. Collaboration promoted clearer understandings of the complementary work done across subjects. This resulted in a closer alignment of teaching objectives and a more coherent set of subject outlines for students. Identification of common student needs facilitated co-ordinated intervention where students encountered consistent and scaffolded support throughout the semester. The use of a common set of criteria for assessing student writing enhanced the moderation process in marking and offered insight in to the ways a view of literacy as process can contribute to transformative learning outcomes.

Conclusion
In both cases reported here literacy became a central focus as participants in policy and practice attempted to create and manage change in their respective workplaces. While a change imperative drove the particular reforms we have outlined, it is apparent that with reform came greater precision in initial conceptualizations of what needed to be done. In both cases, there have been successful outcomes – and a greater understanding of work yet to be done if envisionment is to be a forceful and dynamic property of institutional adaptation to needs for personal development, safety and productivity across all levels of a workforce.

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