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8. BEYOND COMPLIANCE

Developing a Whole Organisation Approach to Embedding Literacy and Numeracy

INTRODUCTION

As researchers and professional developers we support educators to turn their commitment to improving literacy and numeracy outcomes for adult learners into effective action in a context in which compliance with certain directives is mandated. We build critical capability and seek to ensure that literacy and numeracy are not marginalised within tertiary educational organisations. In Aotearoa New Zealand¹ most such organisations are required to show that literacy and numeracy are embedded in Foundation Level programmes in line with the national adult literacy and numeracy infrastructure. Organisations are increasingly required to gather, analyse and report data on such factors as course completion rates and qualifications gained in policy regimes designed to increase learners' employability and equip them for further study. This chapter describes a model comprising an embedded literacy and numeracy whole organisation framework which supports data-driven decision-making by organisations wishing to gauge their progress in embedding literacy and numeracy against defined benchmarks. We consider how this approach may support educators to move beyond compliance within a regulatory framework to a deeper critical professional engagement.

ADULT LITERACY AND NUMERACY EDUCATION IN AOTEAROA NEW ZEALAND

We begin with a brief sketch of the adult literacy and numeracy education context in Aotearoa New Zealand.

Since the launch of the *Adult Literacy Strategy* in 2001 (Walker et al., 2001), Aotearoa New Zealand has developed a system of adult literacy and numeracy education with an infrastructure to support learning and teaching. The Tertiary Education Commission (TEC) is tasked with implementing government policy in line with the government's Tertiary Education Strategy (TES) (Ministry of Education & Ministry of Business Innovation and Employment, 2014). Māori, Pasifika and Youth are TES priority learner groups and literacy and numeracy are TES priority areas. Literacy and numeracy are defined as follows:

Literacy is the written and oral language people use in everyday life and work. A person's literacy refers to the extent of their oral and written language skills and knowledge and their ability to apply these to meet the varied demands of their personal, study and work lives.

and

Numeracy is the bridge between mathematics and real life. A person's numeracy refers to their knowledge and understanding of mathematical concepts and their ability to use their mathematical knowledge to meet the varied demands of their personal, study and work lives. (TEC, 2009d, p. 41)

These definitions are based in the English language, the most widely-spoken of Aotearoa New Zealand's three official languages (English, Te Reo Māori and New Zealand Sign Language). Language as a domain of learning is currently not specified in the infrastructure, although a version of the Literacy and Numeracy for Adults Assessment Tool (the Assessment Tool) for speakers of English as an additional language was launched in July 2015.

Use of the adult literacy and numeracy infrastructure is mandated for most tertiary education providers receiving government funding. The infrastructure consists of: quality assurance; teaching and learning resources (including Adult Literacy and Numeracy Learning Progressions, and Pathways Awarua, an online teaching and learning programme); assessment tools; funding systems²; and qualifications and professional development opportunities for educators. Professional development is built around the "three knowings": "knowing the learner"; "knowing the demands" and "knowing what to do" (TEC, 2008). These support a process which may be outlined as follows:

- Knowing the demands – of the situations that learners want or need to manage
- Knowing the learner – knowing what the learner can do already, in order to determine the next learning steps³
- Knowing what to do – to help learners move on to the next steps.

There is a strong emphasis on embedding literacy and numeracy at Foundation Level in tertiary vocational education, based on a definition of 'embedding' developed in England's Skills for Life strategy: "Where literacy, language and numeracy provision is central to the whole organisation at all levels, ranging from strategic leadership and management to delivery of practice" (Skills for Life Strategy Unit, 2004, quoted in QIA, 2008, p. 6).

The Aotearoa New Zealand model of embedding is outlined as follows in the TEC's 2009 report, *Strengthening Literacy and Numeracy: Theoretical framework*:

- Successful approaches to embedding literacy and numeracy clearly link the literacy, numeracy and vocational components of the course.

- Where tutors work as a team, learners are more likely to stay in training and complete literacy and/or numeracy qualifications in addition to vocational qualifications.
- Effective assessment in programmes where literacy and numeracy are embedded makes use of Learning Progressions to provide direction for teaching programmes and to monitor progress toward learning goals.
- Embedded literacy and numeracy provision is facilitated by appropriate organisational policies, management structures, resourcing and working conditions (TEC, 2009d, p. 5).

The final point in this list indicates that improving learner outcomes is to be regarded as the responsibility of all concerned, not only the specialist literacy or numeracy teacher. The report points out that for embedding to be effective in the long term, the value of literacy and numeracy must be understood and they must be viewed as integral parts of vocational training. Teaching materials are seen as important tools that can substantially influence the content and enactment of instruction, professional development programmes can be effective in improving tutor practice and learner performance and assessment data can be used systematically to improve programmes (TEC, 2009d, p. 7). Guidelines are available for embedding literacy and numeracy in different tertiary education sub-sectors (TEC, 2009a, 2009b, 2009c).

In 2012 specified funding for literacy and numeracy in tertiary education organisations was withdrawn and these are now treated as business as usual for funding purposes. At the same time, the importance of professional development as “a key ongoing priority” was reiterated (TEC, 2012a, p. 5). Meanwhile, the tertiary education sector (the sector) is becoming increasingly professionalised, and from 2015 Foundation Level tutors are required to hold a literacy and numeracy qualification.⁴

The National Centre of Literacy and Numeracy for Adults (the National Centre) was established in 2009 to support this work, funded primarily by the TEC and hosted by the University of Waikato. The National Centre builds the capability of the sector in literacy and numeracy through research-informed professional development, research and critical engagement with policy and practice at a national and international level.

The National Centre’s professional development work in literacy and numeracy has evolved in response to sector need and government priority, mediated by the TEC. It equips tutors to become competent and critical ‘embedders’ of literacy and numeracy and users of the literacy and numeracy infrastructure to support learner achievement.

From 2012, with literacy and numeracy officially business as usual and the sector becoming more familiar with embedding literacy and numeracy and with the infrastructure, tertiary education organisations began asking for evidence of

how well they were doing. At the same time, an annotated bibliography of research undertaken for the TEC found that:

The final challenge in the New Zealand context relates to embedding. The studies in this bibliography show that it works, but only with conditions in place related to whole-of-organisation approaches and programmes that are informed by LLN and vocational content. (Alkema & Rean, 2013, p. 34)

The National Centre has developed just such a whole-of-organisation approach to support educators to meet the challenge of embedding literacy and numeracy in Aotearoa New Zealand.

A WHOLE ORGANISATION APPROACH TO IMPROVING EMBEDDED LITERACY AND NUMERACY PRACTICE AND LEARNER OUTCOMES

The National Centre's embedded literacy and numeracy whole organisation framework (the Framework) comprises a guided self-assessment process using a strengths-based approach. It supports managers and other professionals to embed literacy and numeracy across the whole organisation. It works by building a shared understanding of what needs to be done to improve learner outcomes, based around the 'three knowings'.

The Framework has been developed for multiple uses and users, encompassing processes and practices at all levels of the organisation, including leadership roles and responsibilities, communication strategies, enrolment processes, teaching, assessment and professional learning. It covers: strategic planning for senior management; good practice in embedded literacy and numeracy teaching, learning and assessment for tutors and those involved in learning support; embedded literacy and numeracy programme development and programme approval for academic staff; and guidance on embedded literacy and numeracy funding criteria for managers. This approach supports the management of change at the learner, programme and organisational levels to achieve effective, efficient, ethical, inclusive, sustainable embedding of literacy and numeracy.

Figure 1, below, is a schematic representation of the whole-organisation Framework. The inner circle components represent systems and processes and those in the outer circle represent outcome measures, as defined by the New Zealand Qualifications Authority (NZQA) (2009). The wavy components represent those processes that happen across and through a number of components, binding the organisation together. Meaningful connections between the components are determined by the organisation's vision for embedding literacy and numeracy and the first step in the process is the articulation of this vision.

The Framework is aligned with a range of relevant elements (TEC, 2009d). These include: the New Zealand Qualifications Authority's (NZQA's) key evaluation indicators, as set out in its External Evaluation and Review (EER) process⁵, the

standard means of reviewing the quality of performance in Tertiary Education organisations; the government's TES priorities (Ministry of Education & Ministry of Business Innovation and Employment, 2014); the Adult Literacy and Numeracy Implementation Strategy (TEC, 2015); the TEC's Table of Embedded Literacy and Numeracy Practices (TEC, 2012b) which characterises organisations at 'emergent', 'partial' and 'mature' stages of development; workshops and coaching with senior managers to develop a strategic-plus-operational plan for embedding literacy and numeracy; and professional development modules to support the plan.

Ultimately, the purpose of embedding literacy and numeracy in vocational tertiary education is to improve adults' literacy and numeracy capabilities alongside their vocational capabilities. Whether or not there is a need for improvement with regard to literacy and numeracy will depend on the answer to the question "Do learners' literacy and numeracy outcomes improve?" Accordingly, as the Framework developed, we identified the need for a data-utilisation model to sit within it that would assist organisations with evaluating learner outcomes through the analysis of data on learner performance in literacy and numeracy. The findings of such evaluation could then be used by organisations to improve their processes of embedding literacy and numeracy. Our model needed to support organisations to self-assess both their organisational processes and practices in embedding literacy and numeracy (through use of the Framework) and their learner outcomes, with the aim of improving both.



Figure 1. A whole organisation picture of embedded literacy and numeracy

Developing Data-Driven Decision-Making in a Whole Organisation Framework

This section of the chapter describes the data utilisation model we developed as part of our ‘whole organisation’ approach to improving learner outcomes, guided by research and scholarly literature and by our knowledge of adult literacy and numeracy and the environment in which tertiary education organisations are operating and utilising relevant performance data.

We began by identifying four necessary conditions for the data utilisation model to be effective. It needs to:

- reflect good practice with regard to data-driven decision-making
- acknowledge compliance requirements with regard to embedded literacy and numeracy
- acknowledge that embedded literacy and numeracy is business as usual
- allow for a manageable and meaningful data utilisation process.

We then identified research-informed indicators for each of these condition statements (National Centre of Literacy and Numeracy for Adults, publication pending).

Data-driven decision-making is a complex process. It is easy to drown in data, and it is equally easy to focus on one type of data only and pass over the idiosyncrasies of particular situations, which might provide a deeper understanding of the matter at hand. The data utilisation model needed to find a balance by limiting the amount of data to what is manageable, and at the same time providing sufficient focused data that are meaningful to whomever is engaging in the decision-making process. To allow for this complexity, the data are not used to drive, but to inform decision-making, through a process of inquiry (Schuyler Ikemoto, 2007). The data act as a starter of the conversation, through comparing them with an agreed benchmark, followed by a dialogue to create understanding and to develop strategies for improvement. There should be ample space for participants in the process to include additional data and to bring in their own observations to support the dialogue. As conclusions are drawn and judgments made, the key question is: “How do we know – what evidence do we have?”

A Self-Assessment Model for Literacy and Numeracy Data Utilisation

At the heart of the data utilisation model is the cycle of self-assessment which every non-university tertiary education organisation in Aotearoa New Zealand is expected to implement, as set out by the New Zealand Qualifications Authority (NZQA, n.d.). This allows the model to be aligned or integrated with the existing system of self-assessment within an organisation. The process is shown in [Figure 2](#). It includes stages similar to those in the self-assessment cycle described by NZQA (NZQA, 2009). At the centre of the diagram are the benchmarks: the indicators against which judgments may be made about learners’ literacy and numeracy

abilities and practices. Benchmarks may be minimum standards, or aspirational targets, or a combination of both. They are a measurable reflection of the pathway towards realising an organisation's vision for embedded literacy and numeracy. It is therefore important that an organisation is clear about its vision before it defines its benchmarks.

Depending on the structure of the organisation, benchmarks can be defined: at organisational level; at faculty/school/department level; at programme level; and at the level of support service departments (e.g., learning services, pastoral support services, academic services, staff development). It is important however, that all benchmarks are coherent such that they together contribute to realising the organisation's embedded literacy and numeracy vision.

While the vision is important for setting the benchmarks, the benchmarks are critical for identifying which data to collect, how to analyse them and how to make decisions and plans for improvement. Therefore, both the vision and the benchmarks are key to a system that is aimed at improving the utilisation of data to improve embedded literacy and numeracy practices and outcomes. Once the vision and subsequently the benchmarks are known, all steps in the self-assessment cycle are carried out in relation to the benchmarks, as [Figure 2](#) illustrates.

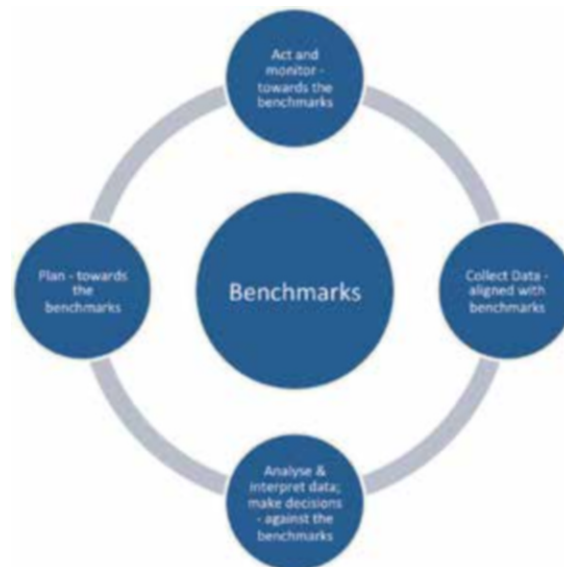


Figure 2. Self-assessment cycle as the basis of the literacy and numeracy data utilisation system

In the data utilisation model, self-assessment cycles, as shown in [Figure 2](#), exist at each level in an organisation: the organisational level; the department/school/

faculty level; the programme level; the service department level; and any other level relevant to the particular organisation.

Multiple self-assessment cycles may be undertaken per year, or per learner cohort. Cycles across the organisation are connected through using outcomes at one level as data to inform work at another level.

The model incorporates the use of NZQA's six key evaluation questions (KEQs) that are expected to guide self-assessment processes in tertiary education organisations (NZQA, 2009). There are two outcome KEQs:

- KEQ1: How well do learners achieve?
- KEQ2: What is the value of the outcomes to stakeholders, including learners?

In addition there are four process KEQs:

- KEQ3: How well do programmes and activities match the needs of learners and other stakeholders?
- KEQ4: How effective is the teaching?
- KEQ5: How well are learners guided and supported?
- KEQ6: How effective are governance and management in supporting educational achievement?

In analysing the data, participants in the data utilisation process consider KEQ1 and potentially KEQ2 in relation to the benchmarks, and then use one or more of KEQ3 to KEQ6 to analyse the processes that have led to the outcomes. Which KEQs are used will depend on the organisational level under consideration, as at different levels in the organisation people will look through different lenses. For example, a senior management team will look at the data through the lens of KEQ6 'How effective are governance and management in supporting educational achievement?' while teachers working at the programme level will use KEQ4 'How effective is the teaching?' as their lenses to consider the data.

The National Centre started providing guidance to organisations on the use of the KEQs to analyse their practices through the development of the Embedded Literacy and Numeracy Whole Organisation Framework, outlined above, in 2012. The data utilisation model described here incorporates the use of the Framework to assist organisations with gaining a deeper analysis and understanding of the processes that may have contributed to the literacy and numeracy outcome data.

FACTORS INFORMING THE DEVELOPMENT OF OUR APPROACH

Our approach has been informed by a number of factors. Work in England on a whole organisation approach (Skills for Life Support Programme, 2010) and raising standards (Quality Improvement Agency, 2008) was influential but we were determined not just to apply a solution developed elsewhere that might not suit the Aotearoa New Zealand context. Accordingly, we also considered a range of research and theoretical literature and consulted widely with the sector, as well as initiating

a project on data utilisation in a large Institute of Technology and Polytechnic (ITP) to test that aspect of our emerging model. We wanted the model to be practical and appropriate for its intended users, so it was important to align it with NZQA's KEQs, outlined above. This alignment enables organisations to follow similar processes for embedding literacy and numeracy as part of their whole organisation development and for self-assessment and External Evaluation and Review evidence-gathering, each of which feeds into the other. This aligned approach reinforces the importance and visibility of embedded literacy and numeracy and feedback to the National Centre indicates that this is appreciated in the sector.

International Research on Embedded Literacy, Language and Numeracy

In developing our model we considered international research on embedded literacy, language and numeracy (LLN) and the organisational factors that impact on provision in these areas, reviewed by Leach, Zepke, Haworth and Isaacs (2010). They identified four major strands in the literature: vocational language, literacy and numeracy; English as an Additional Language and biliteracy; language, literacy and numeracy practice; and critical literacy/New Literacy Studies. They synthesised their findings into a set of guidelines for language, literacy and numeracy development and delivery in organisations (Leach, Zepke, Haworth, Isaacs, & Nepia, 2009, pp. 5–7). The same team of researchers investigated how a sample of tertiary education organisations in Aotearoa New Zealand embedded literacy, language and numeracy. They found common features in all five case study organisations, each of which had a literacy, language and numeracy ‘champion’, either a strategic manager or a unit within the organisational structure, driving the embedding process (Leach et al., 2010, pp. 2–3). These literacy- and numeracy-specific findings guided our work on the development of the Embedded Literacy and Numeracy Whole Organisation Framework and data-driven decision-making.

Research on Organisational Change

Research on organisational change also informed the development of the model. However, in this we were hampered by the weakness of much of the work in this area and the lack of literacy- and numeracy-focused studies of organisational change. As Rune Todnem By states in his critical review of the literature on organisational change management:

theories and approaches to change management currently available to academics and practitioners are often contradictory, mostly lacking empirical evidence and supported by unchallenged hypotheses concerning the nature of contemporary organisational change management. (By, 2005, p. 369)

One author we have found useful in relation to organisational change is the Sardinian communist Antonio Gramsci. Gramsci's concepts of hegemony

(Coben, 1995) and ‘war of position’ may be especially pertinent, although they were developed in the very different context of revolutionary struggle in early twentieth century Italy:

Gramsci developed a strategy for revolution in countries where the state holds power as it were in reserve, through the institutions of civil society, rather than through force alone [...]. The war of position entails the building of alternative, revolutionary forms of organization [...]. The hegemony of the dominant fundamental group pervades all aspects of civil society, including the law, education, morality and culture in the widest sense and so it is in these areas, as well as in the military field, that the revolution must be waged in order to form a new ‘historical bloc’. (Coben, 1998, p. 15)

Gramsci describes ‘hegemony’ as:

the ‘spontaneous’ consent given by the great masses of the population to the general direction imposed upon social life by the dominant fundamental group; this consent is ‘historically’ caused by the prestige (and consequently confidence) which the dominant group enjoys because of its position and function in the world of production. (Gramsci, 1971, p. 12)

Mumby (1997) offers a “re-reading” of Gramsci’s concept of hegemony for organisational communication studies, arguing that:

How we conceptualize hegemony has consequences for the ways in which we think about the social actors who engage in processes of organizing. A dialectical understanding of hegemony allows for a critical conception of organizations and society that is more sensitive to the nuances of resistance and control. (Mumby, 1997, p. 370)

We are interested in just such “a critical conception of organizations and society that is more sensitive to the nuances of resistance and control” in the context of Aotearoa New Zealand, a parliamentary democracy in which compliance with certain state directives is mandated for educators whose work is supported by the state.

In Gramsci’s view, the state in a parliamentary democracy is “an instrument of ‘rationalisation’, of acceleration and of Taylorisation. It operates according to a plan, urges, incites, solicits, and ‘punishes’” (Gramsci, 1971, p. 247). Arguably, this is what is happening with regard to adult literacy and numeracy in Aotearoa New Zealand. The ‘plan’ is the Tertiary Education Strategy (Ministry of Education & Ministry of Business Innovation and Employment, 2014) and through providing an infrastructure and mandating educators to use it, the state, through its agencies, ‘urges, incites and solicits’ the consent of educators and ‘punishes’ those who do not comply.

These insights resonate for us because they bring to the foreground issues of power, resistance and control that are germane to our experience of the regulatory regime in which we work, and which we have outlined above. While not necessarily

sharing Gramsci's revolutionary aims, we recognise the tensions Mayo describes in his case study of the Centre for Labour Studies in Malta:

Despite its contestation of dominant forms of practice, of being “against” hitherto legitimized social relations, the Centre is also “in” the institution – part of the institution whose hegemonic practices it contests. This situation of being “in and against” the system or state can lead to strong contradictions, possibly bordering on co-optation. (Mayo, 2005, p. 83)

So what are the challenges of embedding literacy and numeracy in Aotearoa New Zealand and how can these theoretical insights help us to address these challenges? We briefly outline some of them here: at the policy implementation level; at the level of the organisation; and at the level of the tutor.

CHALLENGES AT THE POLICY, ORGANISATION AND TUTOR LEVELS

Challenges at the Policy and Policy Implementation Levels

Since 2009 the pace of change in adult literacy and numeracy education policy and policy implementation in Aotearoa New Zealand has been considerable. An infrastructure and funding regime has been developed that, while robust and internally coherent, is not yet well articulated with other educational sectors or with the workplace. The focus of policy implementation has remained at the level of the programme and the tutor rather than the organisation as a whole and remained largely within the Tertiary Education sector. Policy implementation across government has sometimes lacked coherence, with, for example, different rules for use of the Assessment Tool in TEC-funded and non-TEC-funded work.

Challenge at the Organisational Level

It is evident from the research literature that a clear focus on literacy and numeracy is critically important for all concerned in the organisation: teachers; learning support; management; governance; marketing; administrative staff; employers; community; family; and most of all for learners. One of the unintended consequences of literacy and numeracy becoming business as usual is that organisations may lose literacy and numeracy focus and switch resources to the next area seen as representing a funding opportunity. This is worrying because while pockets of good embedded literacy and numeracy practice may exist in an organisation, these may not be generalised across the whole organisation. Evaluations to date undertaken by the National Centre of Literacy and Numeracy for Adults suggest that whereas embedded literacy and numeracy is usually a clear focus for the literacy and numeracy tutor and for the Chief Executive, this may not be followed through at the middle management level, resulting in disproportionate responsibility resting with the tutors. Without a whole organisation approach, embedded literacy and numeracy provision is not supported

(Casey et al., 2006) and little improvement in learners' literacy and numeracy outcomes is likely to be evident.

We have identified key areas within organisations which house related processes, systems, policies and practices, each of which needs to support embedded literacy and numeracy and each of which needs to be the responsibility of an identified individual or group. When this is done, the lens on embedded literacy and numeracy shifts from a tutor focus to an organisation focus, requiring the active participation of senior and middle management, learning support, administration, reception and marketing staff, governing and advisory boards, as well as tutors and Assessment Tool administrators. This issue is particularly pertinent in private training establishments (PTEs⁶) many of which are small organisations without a large organisational infrastructure.

Challenge at the Tutor Level

A major challenge at the level of the tutor is churn. Continuity is important for learners and tutors alike and it is disruptive for learners and wasteful for organisations to be constantly training up new tutors only for them to leave a few months or even weeks later.

Also, a piecemeal approach in some organisations has meant tutors have been faced with a succession of requirements for compliance. These have induced a degree of initiative-fatigue and, together with the organisational factors outlined above, left some tutors feeling that they are left 'holding the literacy and numeracy baby' in their organisation.

Another challenge at the tutor level is around use of the infrastructure to support the embedding of literacy and numeracy. While most adult literacy and numeracy practitioners and managers in Aotearoa New Zealand tertiary education organisations probably agree in principle that embedding literacy and numeracy is a good thing, there is some resistance to aspects of the infrastructure that are designed to support embedding, such as, for example, the TEC's requirement that tertiary education organisations with Foundation level programmes use the Assessment Tool with learners. The fact that this requirement is linked to funding means that some in the sector see use of the Assessment Tool as primarily a compliance issue. This is compounded by over-reliance in some parts of the sector on a casualised workforce with an ethos of volunteerism, sometimes accompanied by an over-protective attitude to adult learners. Sometimes compliance is seen as an end in itself. For example, one tutor said she was relieved that her students did not have to use the Assessment Tool, while acknowledging that both she and the students needed to know if they were equipped to cope with the more rigorous literacy and numeracy demands of the more advanced programme which they aspired to join, at a level covered by the Assessment Tool. This somewhat contradictory position underlies the need for a critical understanding of the unintended consequences of mandatory regimes, in this case, tending to limit rather than expand learner outcomes.

This is where Mumby's "re-reading" of Gramsci's "dialectical model of hegemonic struggle" is particularly apt. As he points out, it "enables critical organizational scholars to recognize that discursive practices intersect in multiple, frequently contradictory, ways to provide myriad interpretive possibilities" (Mumby, 1997, p. 369). He also points out that Gramsci's "philosophy of praxis argues for a dialectical relationship between critical scholars and social actors, such that knowledge claims about the world are the product of both" (Mumby, 1997, p. 370). This helps us to understand the contradictory positioning of components of the adult literacy and numeracy infrastructure, including the Assessment Tool. Use of the Assessment Tool is a compliance issue *and* the Assessment Tool is a diagnostic tool for informing teaching and learning *as well as* a tool generating data for managers to consider when deciding on the shape, scope and scale of provision (decisions which also may be embraced or resisted by those effected); it is not simply one or other of these things. Similarly, the National Centre may be seen by some 'resisters' as an instrument of government control rather than a source of support and professional development for the sector; to an extent this is fair comment, while also being unfair, since it is both.

CONCLUDING REMARKS

So how can educational organisations ensure that literacy and numeracy are embedded across the whole organisation – effectively, efficiently, ethically, inclusively, critically and sustainably? We argue that the National Centre's whole organisation approach can and does support organisations to do this. The approach supports efficacy and efficiency to the extent that is driven by a shared vision and communicated across the organisation with key roles and responsibilities clearly identified. It is ethical and inclusive insofar as the shared vision and associated processes are ethical and inclusive, with common reference points and shared understandings. Moreover it is inclusive insofar as the organisation operates democratically and transparently, taking ownership of the process by self-assessing against desired outcomes for learners and designing and developing its own action plan for implementation. It supports a critical approach in that it enables organisations to analyse how well they are doing through identifying strengths and weaknesses in current practice in a robust, critical and transparent way. It supports sustainability in that it identifies key processes, practices and systems essential to sustaining embedded literacy and numeracy in the long term – built-in, not bolted on – incorporating the whole organisation.

What is new about this work? The model for self-assessment itself is not new; it has existed in the quality assurance literature for many years, and is similar to one already in use for generic organisational self-assessment in Aotearoa New Zealand (NZQA's EER). The novelty is found in the explicit focus on literacy and numeracy, on organisations taking ownership of and being explicit and transparent about what they are trying to achieve with embedded literacy and numeracy, and on everyone in

an organisation working towards these goals in a coherent, ethical, sustainable and critical way.

The model has been developed in the spirit of use-inspired enquiry (Stokes, 1997). As Smith, Schmidt, Edelen-Smith, and Cook point out:

In his canonical Pasteur's Quadrant, Stokes (1997) proposed that rigor and relevance are complementary notions that, when merged, further the production, translation, and implementation of instructional practices that are both rigorous (i.e., evidence-based) and relevant (i.e., practice-based). (Smith, Schmidt, Edelen-Smith, & Cook, 2013, p. J47)

The National Centre's Embedded Literacy and Numeracy Whole Organisation Framework, incorporating data-driven decision-making in a cycle of self-assessment, is both rigorous and relevant. In principle, all members of the organisation have a voice in creating the path towards realising the vision. Whose voice is heard will ultimately depend on the power relations being played out within the organisation and the wider context, as Gramsci would attest. Learner self-assessment is regarded as good practice in the process and further work will focus on ways of strengthening the learner voice.

Compliance with requirements set by the funding provider creates a tension with the idea of an organisation taking ownership over its literacy and numeracy vision. Compliance is necessary for organisations in order to survive financially and organisations are unlikely to create a vision that is not informed by compliance factors. The idea of the Framework is that, once the vision has been created, this becomes the driver for the organisation's practices. Compliance requirements are then used as enabling factors for realising the vision, rather than as drivers themselves, and certainly not as limiting factors.

Tufekci's (2014) concerns about the dangers of 'big data' are also relevant here. While the data-driven decision-making model outlined above is intended to devolve power to the organisation and the educator, the data on which it depends can be used to enforce compliance with targets over which the educator and the organisation have no control. Much depends on the transparency and ethical standards maintained by all concerned as they negotiate the relations of power and control articulated around the literacy and numeracy infrastructure. We believe that data-driven decision-making in adult literacy and numeracy education can enhance the professionalism of the educator and manager, inform policy makers and policy implementers of adult learners' progress as an issue of legitimate public concern, and enable adult learners themselves to gauge their progress. In the process, the hegemony of the state is maintained but for Gramsci, "hegemony is always contested; only ever a temporary resolution of a continual conflict" (Coben, 1998, p. 15). We hope this chapter will encourage debate that will move beyond the reductive binary of compliance/non-compliance and contribute to the development of a deeper ethical and critical notion of professional responsibility – to learners, to colleagues and to funders – amongst adult literacy and numeracy educators.

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The views expressed in this chapter are those of the authors and do not reflect the views of the Tertiary Education Commission or any other organisation or individual.

NOTES

- ¹ Aotearoa is the Māori *name* for New Zealand. In this chapter we are using both names to reflect the fact that Te Reo Māori is an official language of New Zealand.
- ² The Aotearoa New Zealand adult literacy and numeracy infrastructure is outlined at <http://www.tec.govt.nz/Tertiary-Sector/Tertiary-Education-Strategy/Literacy-and-Numeracy-Implementation-Strategy/>
- ³ Stages in learning are set out as 'steps' in the Learning Progressions for Adult Literacy and Numeracy (TEC, 2008a; TEC, 2008b).
- ⁴ <http://www.nzqa.govt.nz/providers-partners/self-assessment/make-self-assessment-happen/tools-and-resources/key-evaluation-questions/>
- ⁵ <http://www.tec.govt.nz/Tertiary-Sector/Tertiary-Education-Strategy/Literacy-and-Numeracy-Implementation-Strategy/Qualification-requirements-for-literacy-and-numeracy-educators/>
- ⁶ PTEs must be registered with the NZQA and their curriculum and academic standards must meet national standards.

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