

*Responding to Pasifika adults' literacy needs through workplace programs: an evaluation*

John Benseman

Education Dept. Unitec Institute of Technology

PB 92025, Auckland, New Zealand

**Abstract:** National surveys in 1996 and 2006 showed that a significant proportion of New Zealand adults have low levels of literacy and numeracy skills that make it difficult for them to function effectively in a world of increasing literacy demands. As with child literacy, some groups, including Pasifika, are disproportionately over-represented at the low end of the literacy and numeracy skill continuum. Over the past decade, government has responded with a series of policy and strategy initiatives, which have aimed to increase the volume and quality of provision available for adults with low literacy and numeracy skills. Workplace literacy and numeracy programs have been included in this response. This article reports on a multi-method evaluation study of 18 workplace literacy and numeracy courses throughout Aotearoa and in particular, looks at the involvement of 107 Pasifika participants in these courses who completed both pre- and post-course interviews. The evaluation showed that the courses have been very successful in recruiting high numbers of Pasifika workers. The course participants have improved their literacy and numeracy skills, have changed how they carry out their jobs and many have reported impact on their personal lives.

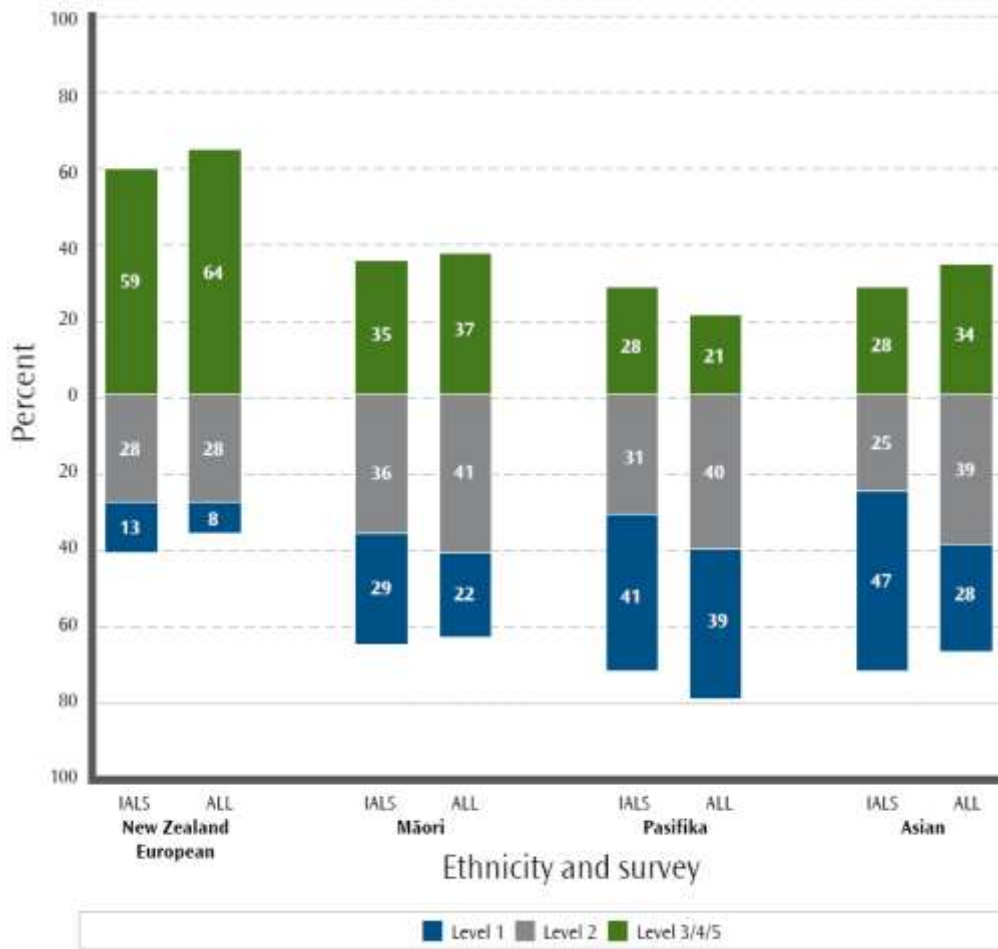
## *Responding to Pasifika adults' literacy needs through workplace programs: an evaluation*

### **Introduction**

Until the advent of two national surveys of New Zealand adults' literacy and numeracy skills in 1996 (OECD, 1997) and 2006 (Satherley & Lawes, 2008), there had been no reliable information about the incidence of these skills beyond the school gate. The first of these national surveys (the International Adult Literacy Survey – IALS) prompted much public debate and sparked unparalleled interest by national politicians and policy-makers in this issue (Benseman, 2008). While the 1996 survey essentially established the extent of the issue, the second survey (Adult Literacy and Lifeskills - ALL) offered a more extensive analysis of the issue, especially for some sub-groups, and also spelt out some of the implications for adults' lives – particularly for those whose skills were assessed at the lower levels.

Both surveys consistently showed some groups such as Pasifika, Maori, those with no qualifications, non-native speakers of English and older adults are disproportionately represented in the lower levels of reading, numeracy and problem-solving skills. For example, the graph below shows the distribution of prose literacy skills (Level 3 skills are seen as the minimum for functioning successfully in a modern society) by ethnic groups in both the 1996 IALS and the 2006 ALL survey (Satherley & Lawes, 2008, p. 23). Similar distributions are found for document literacy, numeracy and problem-solving skills. Pasifika are the only ethnic group whose representation in the lower levels increased in the period between the two surveys.

**Figure 1 - Prose literacy and ethnicity, IALS and ALL**



Over the same period, there was also growing concern about New Zealand’s economic performance, especially in relation to productivity, which has been given further urgency by the recent economic crises internationally. While New Zealand has fared better in the current economic climate than many European counterparts (but not as well as our near neighbour Australia), unemployment figures have steadily risen, involving disproportionately higher numbers of groups such as Pasifika (Department of Labour, 2012). Furthermore, there is concern not only about these groups bearing the greatest cost of the current economic recession, but they are also exposed to future vulnerability in the economy given their educational standings and the changing nature of work demands in an increasingly knowledge-oriented economy (Coxon, Anae, Mara, Wendt-Samu, & Finau, 2002; de Raad & Walton, 2007; Statistics New Zealand and Ministry of Pacific Island Affairs, 2010).

One response of government to these two issues has been the emergence of literacy and numeracy programs offered on-site at companies' worksites (Reid, 2008). These initiatives are linked to national aspirations to become high-value knowledge economies that are built on skilled and high-performing workforces who can contribute towards greater economic productivity (see for example, Department of Labour, 2009). Although there is much debate about which factors lead to greater productivity, most analyses include the upskilling of the workforce at all levels as a key part of any strategy in this area (Keep, Mayhew, & Payne, 2006).

While it is important to acknowledge that literacy and numeracy skills are not the only factor, poor workplace literacy and numeracy issues have been identified as factors that impede productivity and will hinder economic growth in the long run. Workplace courses therefore provide a platform for further skill acquisition and the unlocking of talent, as well as the uptake of innovation, ideas and knowledge (Gray 2006). While improved literacy and numeracy skills can have immediate application in workplaces, they also help unlock other learning opportunities such as helping with the literacy and numeracy demands of gaining vocational qualifications and other forms of workplace training. Reducing the number of people in New Zealand with poor literacy and numeracy helps to optimise labour market participation, improves the retention of workers and provides an investment in higher levels of skill for a significant number of workers.

'Upskilling the workforce' has therefore increasingly centred on improving workers' literacy and numeracy skills and with this development has come a raft of new challenges – both to the world of literacy and numeracy provision and to that of workforce development and training. There is very little research to inform these developments either in New Zealand (Gray, 2006) or internationally (Ananiadou, Jenkins, & Wolf, 2003; Salomon, 2009). In particular, there is a total lack of research about Pasifika participation in such programs.

The present study therefore provides a valuable indication of the contribution that workplace literacy and numeracy programs can make to Pasifika workers both in terms of their work roles and their literacy and numeracy skills generally.

## Methodology

The results reported in this article about Pasifika participants in workplace literacy courses are drawn from a comprehensive, multi-method evaluation program carried out over a three-year period, resulting in 18 individual course reports and culminating in a final report on all the project's findings (Department of Labour, 2010). The courses were diverse in terms of the industries involved, company size, geographical location, program formats, duration and types of learners. While the courses varied in approach and length, the teaching content had been tailored to the needs of the company and taught in keeping with the educational needs of the participants. A third of them were block courses (taught over whole days) and the others were run for one to two hours weekly. There was a mix of small group and one-to-one tutoring. The evaluation program sought to answer two key questions:

- What impact do workplace literacy and numeracy programs achieve for the learners and the companies they work for?
- What is the most effective way to organise and run workplace literacy and numeracy programs?

The evaluations sought a wide range of both quantitative and qualitative data pre- and post-course to identify outcomes for the course participants, their workplace practices, the companies they work for and their lives outside work. Data sources included:

- company literacy needs analyses (undertaken by the course providers)
- course planning documents
- interviews (pre- and post-course) with course participants, supervisors, managers, provider managers and tutors
- learner assessments for literacy and numeracy skills (pre- and post-course)
- observation of teaching sessions
- supervisor assessments (pre- and post-course)
- provider records (e.g. attendance and periodic reports), resources (e.g. course manuals) and evaluations.

Reading and writing skills were assessed using Go!,<sup>i</sup> an assessment tool developed by the National Foundation for Education Research in England. The Go! results are scored on its own scales, but can also be equated with the five levels in the International Adult Literacy Survey (IALS) and the Adult Literacy and Lifeskills (ALL). People at Levels 1 and 2 (Satherley, Lawes et al. 2008, p. 32) can:

*Level 1:* read simple documents, accomplish literal information-matching with no distracting information and perform one-step calculations (approximately 18% of New Zealand adults were at this level in 1996 and 13% in 2006)

*Level 2:* search a document and filter out some simple distracting information, make low-level inferences and execute one- or two-step calculations and estimations (approximately 29% of New Zealand adults were at this level in 1996 and 31% in 2006).

In contrast, people at Level 3 can: perform more complex information-filtering, sometimes requiring inferences, and manipulate mathematical symbols, perhaps in several stages (approximately 35% of New Zealand adults were at this level in 1996 and 41% in 2006). Level 3 skills are often considered a suitable minimum for coping with the demands of everyday life and work in a complex advanced society and are therefore said to be the ideal minimum level for adults (Murray, 2009). Level 1 scores can also be further sub-divided into three groups known as the United Kingdom (UK) 'Entry Levels 1, 2 and 3'; UK 'Level 1' equates to IALS/ALL Level 2 and UK 'Level 2' to IALS/ALL Level 3. Using these sub-groups is useful for showing movement within Level 1, which is often difficult to detect.

Overall, a total of 491 course participants were interviewed and assessed pre-course and 343 (69.8%) of these participants were also interviewed and assessed post-course; most of those who missed the post-course interviews had left their companies in the period following the initial interviews.<sup>ii</sup> Of the 491 participants interviewed pre-course, 133 (27%) of the pre-course participants and 107 (37%) of the post-course participants were Pasifika. This article reports the findings for these Pasifika participants.

## **Findings**

### ***Characteristics of Pasifika participants***

The 133 Pasifika participants initially enrolled in the 18 workplace LLN courses were unevenly distributed across the 15 companies in the project. Some companies had no Pasifika participants at all, while they made up more than half the participants in some of the other courses. In general, these distributions reflected both the characteristics of the company catchment population in general and the ethnic makeup of their company's workforce in particular. The ethnic distribution in the courses shows that the representation of the different ethnic groups in courses is predominantly determined by the nature and location of the companies that choose to participate in these programs. Recruiting companies with high numbers of Pasifika workers usually ensures high Pasifika participation in the courses.

The average age of the Pasifika participants was 40.9 years (ranging from 25 to 67 years), with approximately two-thirds female – this gender distribution reflects the types of companies involved (e.g. dry-cleaning, elder care). Over half (55%) were Samoan, 17% Fijian (including Indian Fijian), 11% Tongan, 10% Cook Island Maori and smaller numbers of Niueans and Tuvaluans; these proportions for the larger groups broadly match distributions in the New Zealand population. They had worked for their companies an average of 5.7 years (ranging from three months to 42 years) and been in their present positions an average of 3.6 years (ranging from one month to 21 years). Most had worked in what could be broadly classified as semi- or unskilled manual jobs all their working lives. Nearly all (93%) the Pasifika participants had learned English as an additional language, with only four identifying English as their mother tongue. On average, they had lived in New Zealand an average of 9.1 years.

Pasifika participants had more secondary schooling on average (predominantly completed in their home countries), but less workplace training than New Zealand Europeans and Maori. They also rated their school experience more positively than other participants. Despite their longer years of schooling, Pasifika had completed fewer formal qualifications, both at school and since leaving school.

In their workplace courses, Pasifika attended slightly longer courses, but still had similar attendance rates (81%) to their non-Pasifika counterparts. Like most of the participants,

courses were offered in work-time and usually on-site. They rated their courses very highly (5.2 on a 1-6 rating scale). Comments about the courses were predominantly positive and fell into the following categories:

- personal sense of satisfaction from making progress and challenge
- catering for individual needs and circumstances
- good for revising what they already knew, or “should have known”
- specific aspects of LLN skill improvement (e.g. learning to calculate percentages)
- being respected as adult learner within a supportive environment
- value of skills learned for use in the workplace
- helping with life issues outside work (e.g. immigration visas).

Comments included:

*It was fun the way she teaches. I'm not good at maths but she made it easy to learn. The maths was challenging, but not reading and writing.*

*Great, gave me more understanding; also breaking things down, planning and then working out how to get there.*

*Different learning experience for me. Catching up on the basics - reading, writing and doing health and safety forms.*

*Very happy for this course. Improve my language. Too many things I no understand, too many words I no understand.*

*Really good, helpful. Improved English more. Helped with completing accident forms. Learned about communication skills and maths.*

*Good, learned more. I'm speaking now, too shy to speak in front of people. As a team leader [for 28 people] I have to speak every morning - now I feel more comfortable doing it. I would like to speak properly.*

*It's helped me a lot. It's made me more open to communications with management and foremen. [Tutor] taught me about communicating, being assertive and stuff.*



There were far fewer critical comments, which fell into the following categories:

- irrelevant teaching content, lack of challenge, not being taught what was promised
- turnover of tutors
- frustrations with other learners
- poor organisation, timing, course length, or location.

Comments included:

*I like the course, but I feel confused, I can't learn the tenses - past perfect, all too confusing.*

*Quite good, but timing too short, jumping ahead too much - always behind time, everything squeezed up. Never done course like this before.*

*Not really very challenging. Not sure why I was chosen for the course, although we did some stuff with formal language for emails, structuring emails, keeping them short, using bullet points and so on.*

The course participants rated their tutors more highly at 5.7 on the 1-6 scale. Even in cases where participants were critical of their courses, they were often still positive (or at least less critical) about their tutors. The comments match very well with the research literature on effective teaching (Benseman, 2001; Daloz, 1986; Heimlich & Norland, 1994; Looney, 2008) and covered the following themes:

- overall personal qualities, including trustworthiness, patience and ability to listen and talk to learners in an empathetic way (e.g. nice person; intelligent, genuine)
- commitment—‘going the extra mile for learners’ (e.g. dropping things off for the learner at their home)
- creating a safe, inclusive learning environment for under-confident learners (e.g. lets everyone speak), “not like school” (e.g. bringing things down to your level so you could understand)

- ability to relate to learners as adults in a meaningful way such as relating to issues outside work
- ability to assess learners' needs and pitch teaching to match
- specific teaching skills, especially clarity and ensuring relevance of teaching material (e.g. knack of using stories to illustrate points, real-life experience), use of humor
- use of formative assessment (assessing learner progress throughout the course and modifying teaching to match learners' specific needs and rate of progress)
- challenging and supporting learners, varying teaching tempo
- knowledge of teaching content, aura of competency.

### ***Course outcomes - literacy and numeracy skills***

Course participants' reading and writing skills were assessed both before and after their courses using the assessment tool Go! The 41 who were assessed at UK Level 2 (=IALS/ALL Level 3) were not re-tested post-course as Go! does not assess above this level and they are seen as independent readers. Table 1 below shows that 18 Pasifika were at Entry Level 1 (E1) at the beginning of their courses; of these, six were still at E1 after the course, four had progressed to E2, seven to E3 and one to Level 1. Fourteen were at E2 at the start; of these, one was still E2 after the course, 11 had progressed to E3 and two to Level 1. Thirty-two were at E3 pre-course; ten stayed at this level, 21 progressed to Level 1 and one to Level 2. Twenty-eight were at Level 1 pre-course; 21 of these participants stayed at this level and seven progressed to Level 2. In total, 54 (58.7%) went up at least one level and four (4.3%) went up two levels.<sup>iii</sup> None regressed between testings.

**Table 1– Changes in UK levels of Pasifika Participants (n=92)**

|          |            | UK Level Post-course |         |          |          |         |       |
|----------|------------|----------------------|---------|----------|----------|---------|-------|
| UK Level |            | E1                   | E2      | E3       | 1        | 2       | Total |
| Pasifika | Pre-course |                      |         |          |          |         |       |
|          | E1         | 6 (33%)              | 4 (22%) | 7 (39%)  | 1 (6%)   |         | 18    |
|          | E2         |                      | 1 (7%)  | 11 (79%) | 2 (13%)  |         | 14    |
|          | E3         |                      |         | 10 (31%) | 21 (66%) | 1 (3%)  | 32    |
|          | 1          |                      |         |          | 21 (75%) | 7 (25%) | 28    |
|          | Total      | 6                    | 5       | 28       | 45       | 8       | 92    |

Writing skills were also measured using the Go! assessment tool. A total of 92 Pasifika participants completed both pre- and post-course writing assessments. There was a smaller impact on writing skills; initial scaled scores averaged 15.8 out of 29 and post-course were 18.0 out of 29, an average gain of 3.8 points (24.1%). In one of the three tasks, the participants were asked to write about a current topic such as smoking. In the initial assessment they averaged 8.3 lines of text, which increased to 10.8 post-course, reflecting an increased confidence in this skill.

Asked if they thought their reading skills had improved as a result of the course, over half (55%) said they had improved ‘a lot’, a third (34%) said ‘a bit’ and the rest (11%) said ‘not at all’. Similar self-assessments were also recorded for writing skills.

### ***Changes in workplace practices***

Along with changes in literacy skills, the evaluations were also concerned with changes in how the participants carried out their jobs after completing their courses. They were therefore asked a series of questions about their work and these findings were triangulated by asking their supervisors to rate the participants across a range of work skills pre- and post-course.<sup>iv</sup>

Participants were asked a series of questions about the effects of the course on their work and how they felt about it. Asked if the course had changed how they thought about their jobs; 71 (66.3%) said that it had affected them in a positive way. Those who said that it had changed how they thought about their jobs were then asked to explain how things had changed for them. Typical comments included:

*More confidence. More able to be up front with people.*

*Before, I wasn't worried about the problems. Now I can think of trying to solve the problems and how to do things. Can put things to the bosses and all that.*

*I feel a little bit better about myself. Now understand more about my job.*

*I'm so interested. Feel better because I can do things better.*

*As a Pacific Islander, it helps me with my grammar and how to approach people and know the right words.*

There were modest changes in other ratings. Asked to rate their job satisfaction on a 1-6 scale (1 –low), Pasifika participants rated it 4.9 pre-course and 5.3 after the course. Ratings of their companies did not change (5.0 pre- and post-course), there was a small rise in their ratings of job confidence (5.2 to 5.5) and a modest rise in their job satisfaction (4.9 to 5.3). There was a small drop in their interest in training (5.4 to 5.2).

They were then asked to comment on changes in their work performance as a result of doing the course. A total of 53 participants (49.5 %) reported that they felt they were doing their jobs ‘a lot better’ as a result of the course, 39 (36.4 %) felt they were doing their jobs ‘a bit better’ and 15 (14.1 %) felt they were doing their jobs ‘the same’ as before the course. No participant reported doing their job worse as a result of the course.

*Reading blueprints - a whole lot easier, I look at it and go ahead with it. It's great when I clicked on to it, it all seems so obvious now.*

*Paperwork, maths, doing orders. More confident to ask questions with other people and supervisors before - hardly spoke. Now do - with colleagues and patients. I practise speaking.*

*I didn't understand a lot about what they were saying about the work I do. I'm a better talker, I understand what they say, I ask more questions.*

*Related a lot to work as work in an English-speaking environment. Really helped me to understand team briefings.*

*I use things in my job. Daily reports - now I do them and I understand them, how to put them into words. How to deal with my staff - makes my job easier especially around language - I learned some ways to work with them - sign language, simplify English.*

*Understand better what people say. Understand better - numbers, fractions and first time not good English but now little bit better.*

*Mainly health and safety - ID hazard sheets - now know how to do them - before the course just told Mama [fellow-worker].*

### ***Supervisor ratings***

Participants' immediate supervisors were an important source for verifying changes in course participants' workplace practices, as they observed the course participants' work on a daily basis. For this reason, supervisors were asked to rate the course participants across a range of elements covering their daily work practices on a 1–10 scale (1 = low) both before and after the course. The table below shows that there were small but consistent increases in the supervisors' ratings across all six aspects of participants' work.

**Table 2: Supervisor ratings of Pasifika Participants, Pre- and Post-course**

|                                     | <b>Average pre-course rating</b> | <b>Average post-course rating</b> | <b>Change</b> |
|-------------------------------------|----------------------------------|-----------------------------------|---------------|
| Attitude to work                    | 7.2                              | 8.1                               | .9            |
| Being a team player                 | 7.2                              | 7.8                               | .6            |
| Ability to use their own initiative | 6.7                              | 7.5                               | .8            |
| Ability to work without supervision | 7.3                              | 7.9                               | .6            |
| Willingness to attempt tasks        | 7.1                              | 7.9                               | .8            |
| Completion of                       | 6.6                              | 7.6                               | 1.0           |

|                                |            |            |           |
|--------------------------------|------------|------------|-----------|
| paperwork                      |            |            |           |
| <b>Average of six measures</b> | <b>7.0</b> | <b>7.8</b> | <b>.8</b> |

*Personal changes*

As part of the post-course interviews, participants were asked if they thought the course had changed the way they think about themselves. A total of 74 (69.1%) said that they thought it had. Those who said it had done so were then asked for elaboration about how the course had changed they thought about themselves. Replies to this question related to changes involving personal confidence, a sense of satisfaction with their literacy skills, feeling better about their jobs/work, improved relationships outside work and improved assertiveness skills. Some examples of comments were:

*Way I write – I’m surprised about amount of ideas I have to write.*

*It’s changed my drinking and helped me plan things for my family.*

*I feel better - I am happy. The first course made me confused but this one made me happy.*

*I used to look down on myself but now I know I can do it.*

*Much more confidence. [Youngest in her family] I don't let the others tell me what to do any more.*

As a measure of general confidence and also as a skill that is key to workplace communications (especially for non-native English speakers), participants were also asked (pre- and post-course) to rate on a 1–6 scale (1 = low) how confident they felt speaking in a range of contexts: talking one-to-one, talking to a small group, talking to a large group and talking to someone unknown. Pasifika participants showed small but consistent increases in all of these self-ratings for speaking: 4.5 to 5.0 for one-to-one, 4.3 to 4.8 for small groups, 3.6 to 4.0 for large groups and 3.9 to 4.6 for someone unknown.

Finally, participants were asked post-course if the course had “changed the way you relate to family and friends” - 30 (28.1%) said the course had changed the way they related to family and friends ‘a lot’, 29 (27.1%) said ‘a bit’, and 48 (44.8%) said ‘not at all’. Those who reported ‘a lot’ or ‘a bit’ of change felt that these changes had occurred as a result of a number of interrelated factors, including better literacy skills (including speaking and listening), improved self-confidence and work changes. Changes in self-confidence had led some of the participants to become involved in their communities such as taking on roles in their communities and churches for the first time.

At the conclusion of their post-course interviews, participants were asked if they had any plans for doing other courses in the future. About two-thirds of the participants were either actually continuing their learning (e.g. starting a trade qualification) or were interested in continuing their learning in some way, although those in the latter group varied considerably in how specific they were about their plans. Only a very small number were able to name a specific subject and course provider that they are interested in pursuing. The most common response to this question was a positive indication of wanting to do additional learning, but not knowing how to go about pursuing the interest. It is also noteworthy that by far the most frequent subject that interviewees said that they wanted to learn about was computers.

Below are several vignettes of Pasifika participants based on their interviews and supervisor feedback:

R has been a laundry worker for eight years. Before the course she found it difficult to communicate with other workers who did not speak her language. After the course she commented “I have learnt about communicating. I speak slower ... I now sit down and talk slowly to them and they understand me, I listen to them. I get more fun out of it now.” In addition, R is now using her improved writing skills to complete the health and safety ID hazard sheets - “I used to do short cuts and pass the buck – now I do it myself.” R had decided that this course opened her up to a world of learning and was keen to look for a study program outside of work that she might be able to do.

A is a 35 year old machine operator who started the course with very low reading skills. At the start of the course A was not very interested in undertaking training, but by the end indicated that he was very interested. “I was pretty hesitant about doing the course because I didn't want to expose myself about my reading and stuff ... but I decided to give it a go anyway.” Before the program he indicated that in five year’s time he no longer wished to be with the company, but at the end indicated that he would like to go up through the company. A learned how to fill in pink slips for machines, hazard ID and accident forms and how to measure which has led to changes in how he does his job. While A only made a small improvement in reading during the program, the course had given him confidence to undertake study. “I’m doing the [Certificate]. I’m quite daunted but excited about it. I’m doing it with a group and can cope with the reading and writing as we support each other a lot.”

M had left school when he was eight years old following very negative experiences with his (English) teacher at school. In order to cope with his English language difficulties in his job, he kept a notebook of his jobs in his first language, which he would then take home for his wife to translate into English and do any calculations in order for him to then update his logbook at work the following day. He is now completing this paperwork at work.

S is rated by his supervisor as a very reliable and capable worker. Prior to the course, S had difficulty being understood by his workmates and struggled putting into words what he wanted to say. Since entering the program his communication skills have improved. This coupled with increased confidence in his ability enabled S to be promoted to a Team Leader. He has also acted as supervisor when the shift supervisor has been absent.

K is now a full-time worker in her company, despite radical cut-backs in staffing numbers due to the recession. Before joining the program, the company was concerned that K could not communicate well with her work colleagues which led to down-time when extra time was spent explaining the work required. However, since joining the program, K has shown a vast improvement in her communication skills and has proven herself to be a competent and hardworking asset to the company.



## Discussion

Two national surveys of New Zealand adults have highlighted that many adults do not have sufficient literacy and numeracy skills to fully participate in a society where demand for these skills are constantly increasing and changing. As with a number of groups, the resolution of these issues is particularly important for Pasifika if they are to fully participate in the workforce as well as other spheres of their everyday lives. While there have been numerous on-going efforts to overcome these issues within the New Zealand schooling system over recent years, it is clear that the responses with children are unlikely to ever fully resolve them – if only for the fact that the vast majority of adults are already out of the schooling system’s reach.

Achieving better literacy and numeracy skills for adults will therefore need to be addressed by a range of initiatives tailored to the realities of their everyday lives. But there are considerable variations in the ability of different forms of tertiary provision that include literacy and numeracy provision to recruit and retain Pasifika adults. While there has been some reasonable success in recruiting Pasifika into formal tertiary programs (where literacy and numeracy is now embedded into most Level 1 to 3 courses), the rates of overall participation have not changed much over the past decade (Ministry of Education, 2011b; TEC, 2009). Other forms of tertiary education where literacy and numeracy are provided such as adult and community education have historically only ever catered for a small number of Pasifika learners (Benseman, 1996). Pasifika participation in industry training is still well below that of other groups (Ministry of Education, 2010, 2011a) also and the amount of literacy and numeracy tuition available in these programs varies considerably (Ryan, McDonald, Sutton, & Doyle, 2012).

It is significant therefore that some of the companies in this project recruited and retained high numbers of Pasifika workers. The successful recruitment of these workers has occurred because the programs were provided in companies and industries that have high proportions of Pasifika workers. Most were in semi-skilled manual jobs that have been vulnerable to down-sizing in the current economic crisis. By targeting these companies, the programs ensured high rates of Pasifika participation.

Most of these participants had left school early with few or no qualifications and have remained largely outside other forms of tertiary education. Workplace programs are therefore an effective way of recruiting these ‘non-traditional’ learners and providing opportunities to improve their literacy and numeracy skills. The courses and their tutors have been rated very positively by providing adult-appropriate learning experiences. Although not all participants have increased their reading and writing skills, most have. The participants also reported that the courses are highly relevant to what they do in their jobs and had positive effects on how they do their jobs as well as on them personally.

Courses provided in workplaces can certainly be seen as a viable and valuable form of learning provision for Pasifika adults to improve literacy skills.

## References

- Ananiadou, K., Jenkins, A., & Wolf, A. (2003). *The benefits to employers of raising workforce basic skills levels: a review of the literature*. London: NRDC.
- Benseman, J. (1996). Participation in the fourth sector. In J. Benseman, B. Findsen & M. Scott (Eds.), *The fourth sector: Adult and community education in Aotearoa New Zealand*. Palmerston North: Dunmore.
- Benseman, J. (2001). *Making the learning happen: a study of teaching effectiveness in Training Opportunities*. Wellington: Skill NZ.
- Benseman, J. (2008). Foundation learning in New Zealand: an overview. In J. Benseman & A. Sutton (Eds.), *Facing the challenge. Foundation learning for adults in Aotearoa New Zealand* (pp. 11-28). Palmerston North: Dunmore Publishing Ltd.
- Coxon, E., Anae, M., Mara, T., Wendt-Samu, D., & Finau, C. (2002). *Literature Review on Pacific Education Issues. Final Report by Auckland Uniservices for the Ministry of Education*. Wellington: Ministry of Education.
- Daloz, L. (1986). *Effective teaching and mentoring*. San Francisco, Calif.: Jossey-Bass.
- de Raad, J.-P., & Walton, M. (2007). *Pacific People in the New Zealand Economy Understanding linkages and trends*. Wellington: NZIER.
- Department of Labour. (2009). *The role of skills for productivity: towards a DOL perspective. A Workforce 2020 Discussion Paper*. Wellington: Department of Labour.
- Department of Labour. (2010). *Upskilling Partnership Programme - evaluation report*. Wellington: Department of Labour.
- Department of Labour. (2012). *Pasifika Labour Market Factsheet – June 2012*. Wellington: Department of Labour.
- Gray, A. (2006). *Upskilling through foundation skills. A literature review*. Wellington: Department of Labour.
- Hattie, J. (2009). *Visible learning. A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.
- Heimlich, J., & Norland, E. (1994). *Developing teaching style in adult education*. San Francisco: Jossey-Bass.
- Keep, E., Mayhew, K., & Payne, J. (2006). From skills revolution to productivity miracle - not as easy as it sounds? *Oxford Review of Economic Policy*, 22(4), 539-559.

- Looney, J. (2008). *Teaching, learning and assessment for adults. Improving foundation skills*. Paris: CERI/OECD.
- Ministry of Education. (2010). *Comparing Modern Apprenticeships and industry training*. Wellington: Ministry of Education.
- Ministry of Education. (2011a). Participation in workplace-based learning [http://www.educationcounts.govt.nz/statistics/tertiary\\_education/participation](http://www.educationcounts.govt.nz/statistics/tertiary_education/participation) (December 23, 2011 ed.).
- Ministry of Education. (2011b). *Profile and trends: New Zealand's tertiary education sector*. Wellington: Ministry of Education. Retrieved from [http://www.educationcounts.govt.nz/data/assets/pdf\\_file/0016/102643/Profile-and-Trends-2010.pdf](http://www.educationcounts.govt.nz/data/assets/pdf_file/0016/102643/Profile-and-Trends-2010.pdf).
- Murray, T. S. (2009). Longitudinal research related to the acquisition and maintenance of literacy. In S. Reder & J. Bynner (Eds.), *Tracking adult literacy and numeracy skills. Findings from longitudinal research* (pp. 85-104). New York: Routledge.
- OECD. (1997). *Literacy skills for the knowledge society. Further results from the International Adult Literacy Survey*. Paris: OECD & Human Resources Development Canada.
- Reid, S. (2008). Learning it on the job: foundation skills in the workplace. In J. Benseman & A. Sutton (Eds.), *Facing the challenge: foundation learning for adults in Aotearoa New Zealand* (pp. 96-109). Wellington: Dunmore Publishing Ltd.
- Ryan, R., McDonald, H., Sutton, A., & Doyle, S. (2012). *Formative evaluation of ITO Embedded Literacy and Numeracy Projects*. Wellington: Department of Labour & Heathrose Ltd.
- Salomon, M. (2009). *Workplace literacy and essential skills: what works and why?* Montreal: The Centre for Literacy/Le Centre d'alphabétisation.
- Satherley, P., & Lawes, E. (2008). *The Adult Literacy and Life Skills (ALL) Survey. Gender, ethnicity and literacy*. Wellington Ministry of Education.
- Statistics New Zealand and Ministry of Pacific Island Affairs. (2010). *Education and Pacific peoples in New Zealand*. Wellington: Statistics New Zealand.
- TEC. (2009). *Improving student results: tertiary education sector performance*. Wellington: TEC.

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<sup>i</sup> The results were moderated within the research team and by an external literacy and numeracy expert.

<sup>ii</sup> In total, in excess of 1000 interviews and 840 assessments were carried out for the project.

<sup>iii</sup> The calculated Cohen's effect size for Pasifika reading scores was 0.73. Effect size quantifies the effect of an intervention relative to other groups. An average size for educational interventions is .4 (Hattie, 2009).

<sup>iv</sup> No respondents were told their pre-course ratings when asked for their post-course ratings.