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Diabetes literacy: health and adult literacy practitioners in partnership

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This paper describes pedagogy in a series of 'diabetes literacy' programs involving culturally and linguistically diverse (CALD) communities. The programs were jointly delivered in local community sites, including neighbourhood centres and public housing halls, by qualified nutritionists from a public health service and adult literacy teachers from a technical and further education (TAFE) institute. The programs were funded by the Australian Government as an adult literacy innovative project, and they were considered innovative because the concept of 'diabetes literacy' is relatively new, and in the Australian health literacy context, the work of health professionals in a team with adult literacy teachers and other organisational partners is undeveloped and rarely documented. The main focus of the paper is on how these two partners managed to work together effectively within an integrated literacy approach focusing on the situated health needs of selected CALD communities.

Introduction

This paper reports on a project funded by the Department of Education, Employment and Workplace Relations (DEEWR) under its 2007 Adult Literacy National Project. It was an innovative project in the sense that it focused on 'diabetes literacy', a concept not yet widely known, and it involved organisational partnerships between a vocational education and training (VET) institution, a public health organisation, a diabetes education organisation and local community groups (see Black, Innes & Chopra 2008). At local levels similar partnerships may have operated 'under the radar', but rarely have they been documented in Australia. A central feature of the project involved adult literacy teachers co-presenting with qualified nutritionists (also dietitians) to provide diabetes education to local community groups. Underpinning the delivery of the programs was a pedagogy which viewed participants as members of social networks (Balatti & Black 2011), and focused on their situated health needs. This paper makes the case for the further development of similar partnerships and pedagogical approaches in health literacy projects.

The project involved the trialling of six short diabetes literacy programs (two hours per week for seven weeks) which focused on educating culturally and linguistically diverse (CALD) groups about the risks and prevention of type 2 diabetes. These programs can be seen as a local response to what has been termeda national diabetes 'epidemic' (Diabetes Australia NSW 2007), or in the words of some researchers, a diabetes 'juggernaut' (Zimmet & James 2006). The programs were conducted over the course of one year (from October 2007 to September 2008) and each program targeted different CALD groups in their local communities on the outskirts of a major Australian city. The target groups included CALD groups known to experience a higher rate of type 2 diabetes, including people born in China, Armenia, Iran and Afghanistan. Each program was jointly delivered by an adult literacy teacher and a qualified nutritionist, with

the support in some cases, of a local community member who acted as an interpreter. A diabetes support organisation (Diabetes Australia) provided some resources and professional development for adult literacy teachers prior to the programs. The focus of each program was on the prevention not the management of type 2 diabetes, and each program focused oneducating about the types and nature of diabetes, and the role of diet and exercise in helping to prevent type 2 diabetes.

An integrated concept of literacy

The programs were based on an 'integrated' concept of adult literacy (e.g. Courtenay &Mawer 1995; McKenna & Fitzpatrick 2005; Wickert & McGuirk 2005; Black & Yasukawa 2011). That is, the prime concern in the programs was the effective delivery and understanding of important health messages, and literacy practices were highlighted and addressed 'as interrelated elements of the same process' (Courtenay & Mawer 1995: 2). Thus, they were not programs designed to improve literacy skills as such, except in the process of facilitating learning about diabetes prevention. The adult literacy teacher's role wasmainly to minimise English language and literacy barriers to learning,and to help provide the approach to learning that best enabled participants to learn about diabetes. Qualified nutritionists provided the diabetes knowledge and expertise.

Diabetes literacy—a new concept

While health literacy generally is a contested concept (e.g. Peerson & Saunders 2009), we drew on a definition of health literacy by Zarcadoolas, Pleasant and Greer (2005: 196–197) to define diabetes literacy as: 'The skills and competences to comprehend, evaluate and use information to make informed choices about the risks, prevention and management of diabetes'. Specifically, the major concern was type 2 diabetes, and to locate diabetes literacy as an active form of community decision-making for promoting good health. In the

international research literature, there are relatively few examples of specific programs being conducted as a means of preventing type 2 diabetes, though programs have been developed to assist community groups in managing the disease (e.g. Deitrick, Paxton et al. 2010), and diabetes management information is available (as a 'toolkit') for adults with low literacy and numeracy skills (Wolff, Cananagh et al. 2009).

Literature review

This project brings together the adult literacy and health sectors in a 'health literacy' initiative. In Australia, compared with some other western countries (outlined below), there are few health literacy initiatives, and especially where literacy and health professionals have worked together. To date, health literacy in Australia has been a concept developed and promoted largely from within the health sector (e.g. Nutbeam, Wise et al. 1993; Nutbeam 1999; Green, Lo Bianco & Wyn 2007; Keleher & Hagger 2007; Peerson & Saunders 2009) with very limited input from literacy specialists (for an exception, see Freebody & Freiberg 1999).

The situation in Australia is in contrast to health literacy in the United States (e.g. Nielsen-Bohlman, Panzar & Kindig 2004), Canada (e.g. Rootman & Gordon-El-Bihbety 2008, Simich 2009) and in Europe (Kickbusch, Wait & Maag 2005), where the concept and resulting programs are very well developed. In these countries and regions there are also examples of strong links between the adult literacy and health sectors. In the United States, this has been evident since the 1990s (e.g. Sissel & Hohn 1995; Hohn 1998), and a decade ago these links were referred to as 'a maturing partnership' (Rudd 2002). In the UK, the 'Skilled for health' initiatives have demonstrated similarly effective partnerships between health and adult literacy practitioners (The Tavistock Institute 2009).

In Australia, the first national health literacy survey (Australian Bureau of Statistics 2008) based on the Adult Literacy and Life Skills survey (ALLS, see Australian Bureau of Statistics 2007) provided a potential catalyst for the development of health literacy initiatives, though to date there has been little evidence of any action. Defining health literacy as essentially the ability to access and use health information, the survey sought to quantify the extent of health literacy in Australia, with claims, for example, that those with the poorest health literacy levels were generally older, lacking formal education, unemployed or their first language was not English.

Cross-sectoral partnerships

In both the health and adult literacy sectors, there is currently a push for partnerships as part of a trend towards 'linked-up' or 'whole-of-government' approaches to addressing social policy problems and issues. In health promotion the push for such partnerships and alliances has been going on internationally for more than a decade (e.g. Gillies 1998). This is due largely to the health sector's shift beyond clinical and curative measures to the growing recognition of the broader social, economic and environmental determinants of health (e.g. Wilkinson & Marmot 2003; Keleher & Murphy 2004), and the need to cross the boundaries of different policy sectors and thus break down previous 'silo' approaches to health.

The adult literacy sector in Australia by contrast is relatively new to the promotion of partnerships but, in recent years, cross-sectoral partnerships, community capacity building and notions of 'integrated' and 'social practice' understandings of literacy have been promoted strongly in some national research reports (e.g. Wickert & McGuirk 2005; Balatti, Black & Falk 2009). Research by Figgis (2004) and Hartley and Horne (2006), however, indicate the paucity of partnerships involving adult literacy and the health sector.

The role of social capital

Linked strongly to the push for partnerships and community capacity building is the concept of social capital which refers to social networks and relations between people within groups as a resource (see Australian Bureau of Statistics 2004). There is increasing recognition that the socio-economic well-being of individuals, groups and nations is dependant not just on the acquisition of technical skills (human capital), but also the networks, trust and shared values that comprise social capital (OECD 2001).

Social capital is increasingly being seen as playing a role in both health and adult literacy discourses. For example, at a very basic statistical level, the Australian health literacy survey (Australian Bureau of Statistics 2008) indicates that those who participate in groups and organisations, even as non-paid volunteers, achieve higher health literacy levels than those who do not participate. While there are some researchers who see the role of social capital in health as both complex and contested (e.g. Campbell 2001; Szreter & Woolcock 2004), nevertheless it is seen to offer a useful starting point and the space to examine the dynamics involved in the social determinants of health (e.g. Brough, Henderson et al. 2007), and worldwide this is a burgeoning area of research (e.g. Kawachi, Subramanian & Kim 2008).

In the adult literacy field there is research indicating the social capital outcomes from adult literacy courses and how particular pedagogical strategies can help produce these outcomes, such as fostering bonding ties between participants, drawing on their life experiences and, through bridging and linking ties, encouraging connections with outside networks (Balatti, Black & Falk 2006, 2009). Much of this work draws on social theories of learning in which learning is understood to occur best when it is situated in 'communities of practice' (Lave & Wenger 1991; Wenger 1998). Learners in these communities create and negotiate knowledge and meaning in

dialogue with other community members, and thus become active participants in their own learning. This model has been proposed recently for health learning involving adult literacy programs (Schecter & Lynch 2011), and it underpins the effective delivery of the type 2 diabetes prevention programs described in this paper.

Type 2 diabetes and CALD groups

According to recent Australian Government reports, diabetes is one of the leading chronic diseases affecting Australians, with an estimated 787,500 people (3.8% of the population) diagnosed with type 2 diabetes in 2007–8 (Australian Institute of Health and Welfare 2011: 15). Further, the rate of type 2 diabetes in Australia has increased steadily, tripling from 1995 to 2007–8 (Australian Bureau of Statistics 2011). The majority of cases of type 2 diabetes (up to 80%) are considered preventable or can be delayed by healthy diet and increased physical activity (Colagiuri, Thomas & Buckley 2007: 2; Diabetes Australia 2007). Indigenous people in Australia experience the highest rates of diabetes, three times the non-Indigenous population, and diabetes is also associated with socio-economic disadvantage, living in remote areas and being born overseas. Regarding the latter group, the prevalence rate is higher for people born in regions such as North Africa, the Middle East and South-East Asia (Australian Institute of Health and Welfare 2008).

It is mainly people born overseas in non-English speaking countries who comprise the CALD groups that are the focus of this paper, and reports have examined the complexity of factors responsible for their higher prevalence rates (e.g. Australian Institute of Health & Welfare 2003; Australian Centre for Diabetes Strategies 2005; Thow & Waters 2005; Colagiuri, Thomas & Buckley 2007). Included in socio-economic risk factors are levels of spoken and written English, and the Australian Health Literacy Survey (Australian Bureau of Statistics 2008) indicated that people whose first language was not English performedmainly at the lowest two health literacy levels on the five-point scale of proficiency.

Interventions to help prevent type 2 diabetes for CALD communities often focus on changing lifestyle factors such as diet and physical exercise, and successful interventions are seen to be those that are *consultative*, involving the target community; *collaborative*, using a range of partnerships; *practical*, in removing linguistic and socio-cultural barriers; and *culturally appropriate*, taking account of the characteristics of the target groups (Colagiuri, Thomas & Buckley 2007). Establishing partnerships with ethnic communities in order to encourage culturally-competent health promotion is also seen to be significant (National Health and Medical Research Council 2006). All of these elements resonate strongly with the diabetes literacy programs outlined in this paper.

Methoology and research samples

Primarily, this project adopted a qualitative research approach. The research comprised three components: firstly, an action research component involving the researcher, the adult literacy teachers and the health professionals in each program; secondly, semi-structured interviews with the participants at the conclusion of each program; and thirdly, a follow-up telephone evaluation of participants' views undertaken at least one month after the program finished. This paper reports mainly on the first component—the action research. Details of the other research components are available in Black, Innes and Chopra (2008).

The key aim of the study, and the main 'new' element to be researched as part of the action research, was how adult literacy teachers and health professionals could work together effectively as team teachers. For both groups, team teaching was new in the delivery of diabetes literacy programs, though some adult literacy teachers did have experience team teaching with different vocational teachers in a VET context.

Action research focuses on the practical issues of immediate concern to social groups or communities (Burns 1999: 24). It is usually undertaken in naturally occurring settings and uses methods common to qualitative research. The participatory nature of action research and its emphasis on change and reflective professional practice made it particularly suitable for the innovative, community-based programs in this study. The action research in this study mainly comprised joint planning between the adult literacy teachers and health professionals prior to each session, and 'reflections' at the conclusion of most sessions on how the sessions progressed and how they could be improved in future. It followed the established format of most action research studies—the spiralling process of planning, action, observation and reflection (e.g. Kemmis & McTaggart 1988). The reflection sessions comprised the researcher who provided some focus questions, together with the two co-presenters of the program, and these sessions were tape recorded and later transcribed in full.

In light of the aim of the study—to investigate how adult literacy teachers and health professionals could work together effectively as team teachers—the transcript interview data were organised according to several themes. These included: how an 'integrated' concept of literacy was implemented; how the adult literacy and health professionals determined their respective roles and professional boundaries; the importance of planning and communication for successful programs; and the main elements of a collaborative pedagogy which included a social capital approach to pedagogy. These themes comprise the main headings of the findings and discussion section in this paper.

In total, six local community programs were delivered, featuring Asian and Middle Eastern community groups identified in the research literature as experiencing higher rates of type 2 diabetes. The programs were delivered in local community sites considered to be in areas of low socio-economic status, and which featured a high

concentration of public housing. The sites included neighbourhood/community centres, a church hall, a public housing hall and, in one program, a TAFE college. On average, 10 participants completed each program, and predominantly participants in the programs were female (86%). The ages of participants varied, but primarily they were older, averaging 55 years, though in two programs the ages averaged 70 and 72 years respectively. Recruitment to the programs was mainly through word of mouth via existing local community networks, including through local Chinese, Armenian and Iranian organisations.

Program structure

The structure of the programs was initially determined through discussions between the nutritionists and the adult literacy teachers. While there were some slight variations, in the main the six programs (of two-hour sessions for seven weeks) adopted the following structure:

Weeks 1 & 2: Introduction, getting to know participant needs, introduction to what is diabetes—the differences between the types of diabetes and how diabetes affects people.

Weeks 3 & 4: A focus on diet—discussions on food types, food labels, nutrition and the food and diet of the participants in the course. In some programs a trip to a supermarket was undertaken.

Weeks 5 & 6: A focus on exercise—pedometers were supplied to every participant, and in some programs there were group exercise activities (Tai Chi for example, and a short walking tour in the community).

Week 7: A relaxed final session with general discussions, recaps on the essential messages, details provided of

diabetes treatment referral services in the area, and a communal lunch provided by the participants.

Findings and discussion

Implementing an 'integrated' concept of literacy

'Integrated' literacy is a well known concept in vocational education and training, but there are often misunderstandings over what it involves and how it should be implemented (Black & Yasukawa 2011). For several of the presenters in these diabetes literacy programs,it was mainly through trial and error that they gained a better understanding of how it might work effectively in practice. As we have indicated, these programs were not designed to improve literacy skills as such, except in the process of facilitating learning about diabetes prevention, but at times this message became a little confusing. A health professional commented at one stage, 'well, I don't want to take over because the aim is also literacy', which was not entirely correct. In her particular program there was greater potential for confusion because it involved converting an existing adult literacy class to a diabetes prevention classfor the period of the program (seven weeks). While the rationale for doing this was sound—working with an existing mainly Chinese community group attending an off-campus literacy class in a local neighbourhood centre—it was nevertheless found problematic to re-label the class as a 'diabetes prevention' program and to then expect all participants and presenters to understand the primary focus was now health and not literacy. The 'integrated' concept, however, was less of an issue in the other diabetes literacy programs, as the literacy teacher on a program delivering to a Chinese group demonstrated in explaining where she considered literacy should fit in:

> We use a lot of English and they get the key words, [but] from an English teacher point of view, it's not giving grammar and everything, it's just the key words, like carbohydrate, Glycemic

> Index … insulin, all these kind of key words … or like the GI symbols, [so] they know what to look for …

Determining roles

It was to be expected that there would be some difficulties to overcome with two professionals, unknown to each other prior to the program and from different disciplinary backgrounds and sectors of work, team teaching on a seven-week program.

As the programs were essentially about diabetes education, in most programs the nutritionist led the program by introducing the diabetes prevention knowledge, and the literacy teacher provided a secondary, supporting role, trying to ensure that participants understood and were engaged with the issues. However, this was not necessarily the case with all programs. In one of the programs, it was clear that the health and literacy presenters considered they had equal though different roles, and they were sufficiently confident and relaxed enough in their roles to 'just jump up and interchange' as the need arose in the sessions. As the dietitian (D) explained, they worked together in a cooperative, equal fashion:

> Yes, well, I think we worked very well together, because often we would find one of us was standing up talking or doing something on the whiteboard and suddenly the class would be trying to say a word and I wouldn't know how to instruct them through that, so I would deflect to L [the literacy teacher], who would then take over or jump up and do a diagram … and she would do the same when she was revising something with them and a content question would come up—either she would answer it and look to me for confirmation, or she would throw it over to me …

The literacy teacher in the above partnership stated:

> D [dietitian] puts the content, and then I do activities, say, with D's content, so she's like the knowledge, and I kind of structure the class and do the activities like I would normally in an everyday classroom.

Issues involving the relative status of the two team teachers, and whether or not one dominates, appear to be central issues in team teaching situations involving disciplinary experts working with adult literacy and numeracy teachers (Black & Yasukawa 2011). In another of the diabetes programs, the adult literacy teacher knew the participants very well, having taught them literacy skills for part of the year, and this teacher was also quite knowledgeable about diabetes. In these circumstances, she took a more dominant role in the delivery of the program, which made the health professional feel uneasy, especially as she considered some of the information provided to participants was too prescriptive, and from her health perspective, actually incorrect. As she stated, 'it's hard when someone's trying to talk about your area of expertise'.

Professional boundaries

The above situation of a health professional feeling uneasy about how health knowledge was being delivered by a non-health professional should hardly be surprising, and there were several other situations in the programs where both or either presenters were seen to move beyond their areas of professional expertise. In one case, a dietitian felt sufficiently strongly about an issue of incorrect information being delivered that she informed her co-presenting adult literacy teacher by email prior to their next session. Similarly, some adult literacy teachers expressed the view that their co-presenting health professionals sometimes spoke too fast and delivered information inappropriately, for example, covering too many concepts in one go, or being too didactic ('you can't just sit there and talk'). These were relatively minor issues, easily overcome, though they nevertheless demonstrated that presenters were aware they were members of different professional networks, and there was a natural sensitivity on their part to reflect and protect their own areas of expertise. In an ideal situation, it was precisely the combination (i.e. 'integration') of thetwo areas of professional expertise that offered the possibility

ofan enriched learning experience for participants. The following three-way dialogue involving the researcher (R), a dietitian (D) and her co-presenting literacy teacher (L) can be viewed as an example of professionals representing their respective areas of expertise in an integrated way:

> (R) Well, that's the other thing, when they do go and consult a doctor … they know the questions to ask, they already have a grounding [as the result of this course]
>
> (D) That's what I'd like to, I mean, (my) personal role that I have is that they will leave this with an increased awareness of the issues around diabetes, eating, exercise, care of the feet, and where to go for more help, and to be a bit more empowered in asking their doctor
>
> (L) And they know what these words mean, they know concepts, what insulin is and what it does
>
> (D) Take more control over their own health
>
> (L) And they've already got that schema before they go in there … they know the words.

There was also inevitably a carry-over of skills and knowledge from one professional area to another. Literacy teachers gained knowledge about diabetes and how to prevent type 2 diabetes, and health professionals developed pedagogical strategies appropriate for working with CALD participants.

Planning and communicating

A key element to effective team teaching in these programs was the planning and the communication between the co-presenters that went on before the program started and between sessions during the program. In most programs the two presenters communicated via email prior to the sessions, and this enabled a good working relationship. One dietitian commented:

> Our resources complemented each other. I had these pictorial resources I got from Diabetes Australia on risk, and they fitted perfectly with the worksheets. Well, I guess that's because we had communicated about what we wanted.

However, in one of the programs where the co-presenters did not communicate very effectively from the beginning, there were some initial problems, as the literacy teacher explained:

> I was a bit surprised because when she turned up, she said sort of, 'now, do you want to get started now?'... And I was surprised because I presumed that she was going to be leading it and giving the information. So I actually didn't quite know where ... [to begin].

In this program the situation was quickly resolved before the following session and henceforth there was regular communication between both presenters by phone and email, prompting the literacy teacher to later state, 'It felt more comfortable and she said that too ... I feel like we've got bit more of a game-plan'.

A collaborative pedagogy

All the programs were conducted in an informal, relaxed, interactive manner, encouraged by the local community contexts. Every program except one (conducted in a TAFE college) involved participants seated around one central table. Teaching facilities were sometimes sparse with a mobile whiteboard being transported to two centres, but that was a secondary concern. In one program targeting Chinese residents in a neighbourhood centre, other Chinese people were in the same centre playing mahjong, table tennis and doing Chinese brush painting. As an indication of informality and the community feel of these programs, the literacy teacher commented that at morning tea time her students, '... have a chat with the people in there and say what they're been doing, and then we get people wandering past the door and having a nose in here'.

In one program targeting Afghan and Iranian mothers, their young children played close by and interacted with them during the class. Some groups comprised mainly older participants with some Chinese and Armenians in their respective programs being in their 80s, though some of their peers in the class were quite young. In one program, a grandmother, daughter and grand-daughter were all involved in sessions for a short time, and intergenerational and interfamilial factors of some kind were at play in other programs. The formal education levels of participants varied also, with some having university qualifications while others were illiterate in their own first language. One elderly participant was blind. No attempt was made to screen participants prior to the course; all were welcomed. Although the presenters spoke in English, in several of the programs, local community members acted as interpreters, and this dynamic, multi-dimensional, communication process, while appearing to an outsider as chaotic at times, allowed all participants to communicate in ways they felt most comfortable about health issues they all felt strongly about. These local community/network aspects were very significant in facilitating the informal pedagogical approach in the programs, and they are indicative of the social capital elements discussed in the following section.

'Empowerment' and a social capital approach

All the programs involved a similar pedagogical approach, with the adult literacy teachers being employed in the one TAFEcollege, and thus likely to share similar pedagogical perspectives. Interestingly, there was no hint of dissonance from the health professionals with the pedagogical approach taken. The discourses of adult literacy pedagogy and public health in particular share some similar themes, with a strong focus on community and individual empowerment, and even the background influence of educational philosophers such as Freire (e.g. see Laverack 2004: 51).

Recent adult literacy research has demonstrated how particular teaching strategies result in social capital outcomes (Balatti, Black & Falk 2006, 2009), and the presentation of diabetes knowledge in the programs was undertaken in a way that encouraged the social capital concepts of bonding, bridging and linking ties.

Bonding ties are the strong ties that build cohesion and common purpose within the learning group. There were many ways that bonding was encouraged within the programs, and in particular it involved building trust which requires 'encouraging people to get to know one another and creating a non-judgmental climate in which people feel safe to share life experiences and to make errors as they are learning' (Balatti, Black & Falk 2009: 23).

One literacy teacher said she and the dietitian deliberately sat down with the participants in the sessions rather than stand up, 'so we didn't have that type of us and them kind of thing, so we were all on eye contact'. Activities in the sessions were also as non-threatening as possible. For example, rather than ask if any participants had type 2 diabetes, participants were asked if they had or knew of any family members with the disease. Participants also did group activities based on their diet rather than itemise their personal food items over a set period, which might have been confronting or embarrassing to some participants. The community interpreters were also very helpful as mediators in reducing the social distance between presenters and participants.

To nurture a sense of belonging, sessions included a lot of group discussion and working in pairs, and participants were encouraged to share their viewpoints and their life experiences. Group cohesion was assisted by the health professionals accommodating the expressed needs of individual participants, even when they were not directly related to diabetes prevention. For example, one elderly participant wanted to know about osteoporosis, which the dietitian subsequently discussed with the group, and another participant with diagnosed

type 2 diabetes brought his own glucose readings along for the dietitian to advise him on.

The exercise component of one program also encouraged group cohesion. The Tai Chi video which the presenters showed to the group, while useful, was soon abandoned as the older Chinese participants demonstrated to the presenters their own local form of Tai Chi. The session was, in the words of the teacher, 'very physical and together, really connecting …'. This session in turn seemed to encourage the group to focus on other forms of dance in the next session, furthering bonding within and between participants and the presenters, as the literacy teacher indicated:

> … and they would all laugh, and then the other one would get them to show them some kind of dance … and they are showing each other different dance moves and things this week, I've kind of noticed that, social aspects of them … it was very nice, but it was a very role reversal, they were showing us what to do … But it was really lovely, and they were loving it, and I was getting my right and left wrong all the time …

Evidence of increased bonding and trust in the group which resulted from this pedagogical approach was provided in one Chinese group with participants increasingly admitting to having type 2 diabetes. This appears relevant because there is evidence in the research literature that some ethnic groups, including the Chinese, feel stigmatised by acknowledging their diabetes condition (Colagiuri, Thomas & Buckley 2007: 22). And yet, as sessions progressed and participants felt more at ease in their group, they were asking specific questions relating to their own condition, including bringing along their own medical records to discuss with the dietitian. As the dietitian noted, 'I think in the first week or so I was aware that one person actually had type 2 diabetes. By the end (after seven weeks),there were still people coming out of the woodwork'.

Bridging ties, which are links between groups of people who are different, and *linking ties*, those links to institutions, were also encouraged. There were instances, for example, of the presenters trying to encourage participants to join walking groups or a local gym or swimming club or dancing group in order to increase levels of physical activity. Some participants were encouraged to get involved in a community garden project in one local area, and local excursions (where possible) were a feature of each program. In all programs, links were made to local health institutions providing specialised diabetes services.

The pedagogy was thus situated in the everyday lives of the participants in their own communities. While the two presenters did have a pre-conceived idea of the structure of the program sessions (outlined earlier), the aim was not to adopt a deficit approach and impart knowledge to unknowing participants. Very quickly sessions followed the direction of the participants' interests. Sessions on diet in one program for Chinese residents, for example, led to heated discussions about different types of rice, the relevant costs to purchase (rice with a lower glycemic index [GI] tends to be more expensive), and cultural values in conflict with healthiest options. This led to a compromise health message of eating smaller servings of rice, but more vegetables. Cultural values relating to different types of cooking oil were similarly discussed and negotiated, and seemingly straightforward concepts such as what is meant by 'a piece of fruit' were the subject of contestation. The participants could be seen to comprise learning 'communities of practice', with largely sharedethnic and cultural values, and much of their learning in the programs resulted from discussions with each other. Interestingly, the one program where this did not work quite so effectively was the one delivered in the TAFE college. In this program the participants, while comprising a 'student' community of practice, featured greater diversity in their language and cultural backgrounds, and the classroom seating arrangements (at separate tables and in rows) did

not encourage the same level of dialogue and self-direction. In this program there was greater focus on teacher-developed 'worksheets', which gave the program more a flavour of formal learning, in contrast to the informality of programs delivered in the local neighbourhood centres or public housing halls.

Conclusions

Health professionals providing education on preventing type 2 diabetes to various CALD groups in local community contexts is not new (see Colagiuri, Thomas & Buckley 2007). But there are features of this project, including the various organisational partnerships, and adult literacy teachers and health professionals working together within a social capital pedagogy, that make this project innovative and potentially useful as a model for other health literacy initiatives.

In the literature review, Rudd (2002), a well known health literacy specialist, refers to 'a maturing partnership' between the literacy and the health sectors in the United States. By comparison, and adopting the relationship metaphor, this would make partnerships between the two sectors in Australia, such as those featured in this project, akin to 'a first date'. As indicated in the literature review, there are very few documented cases in Australia of health and literacy professionals working in partnership.

This paper indicates to a large extent the potential for adult literacy teachers and health practitioners to work together effectively. They appear to share the aims of individual and community empowerment, and they can work collaboratively using pedagogical approaches that encourage such empowerment. However, this project was essentially a pilot study, a one-off, government-funded, innovative health literacy project, and to move beyond pilot studies to more systematic initiatives requires greater resource commitments. While this project featured organisational partnerships at the micro (the teaching interface) and meso (middle organisational) levels, what Australia

lacks in the area of health literacy are partnerships at the macro level—between peak government, health and literacy/educational organisations (see Balatti, Black & Falk 2009),which would provide some policy direction, stable funding and sustainability to health literacy programs in Australia. These diabetes literacy programs hopefully will encourage a step in that direction.

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