

Adult and Community Education

Economic Evaluation of Adult and Community Education Outcomes

16 June 2008

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16 June 2008

Dear Margie

Final Report: Economic Evaluation of Adult and Community Education Outcomes

We are pleased to present this final report on Phase One of the Economic Evaluation of Adult and Community Education (ACE). The results to date highlight the significant value-add of the ACE sector.

Thank you for the extra time required to incorporate the key information about the ACE sector provided by the case study organisations.

This report has been prepared in line with our contract dated 17 June 2007. Please note our disclaimer on page 2 of the report.

We have really enjoyed working with the sector, seeing first hand what a selection of ACE organisations do and deriving a model that covers the elements of this work that can be quantified to provide an estimated economic valuation of the sector's social and economic outcomes.

Once this phase is complete, we will look forward to discussing Phase Two and being able to progress this work so that you will be in a position to present the results to TEC as soon as possible after the end of this financial year.

Yours sincerely



Suzanne Snively
Partner

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DISCLAIMER

In preparing this report and forming our views, we have relied upon, and assumed the accuracy and completeness of, information made available to us from persons with whom we have spoken in the course of consultation, or from public sources and other organisations that have provided information relevant to our report, or furnished to us by Adult and Community Education Aotearoa Inc and survey respondents of the sector. We have evaluated that information through analysis, inquiry and review but have not sought to verify the accuracy or completeness of any such information or conducted an appraisal of any assets. It should not be construed that we have conducted an audit of the information.

We will not accept responsibility to any party other than to Adult and Community Education Aotearoa Inc, to whom our report is addressed, unless specifically stated to the contrary by us in writing. We will accept no responsibility for any reliance that may be placed on our report should it be used for any purpose other than that for which it is prepared.

In preparing this report, we have relied on information that has not been independently verified. The statements and opinions expressed in this report have been made in good faith. Accordingly, neither PricewaterhouseCoopers nor its partners, employees or agents, accept any responsibility or liability for any such information being inaccurate, incomplete, unreliable or not soundly based, or for any errors in the analysis, statements and opinions provided in this report resulting directly or indirectly from any such circumstances, or from any assumptions upon which this work is based, proving unjustified.

We reserve the right, but are under no obligation, to revise or amend our report if any additional information which exists on the date of this report, subsequently comes to light. Further details regarding PricewaterhouseCoopers' liability in relation to this report are contained in Clause 6 of our agreement dated 17 June 2007.

1 Executive Summary

This report for Adult and Community Education Aotearoa Inc examines the social and economic impact of the adult and community education (ACE) sector. The conclusion from the examination is that ACE makes a significant social and economic contribution to the education sector and to the individual and the wider New Zealand community. The ACE sector has a diverse and extensive service offering, which enhances its social and economic impact. The impact of the sector's outcomes is driven by its practice of focusing on individual and community learning needs. The sector has an important role in involving individuals with the greatest need and as such, it is not surprising that the findings show that the marginal value it creates is substantial.

The analysis was populated with information from five ACE providers:

- (a) Aranui Community Learning Centre;
- (b) Rauawaawa Kaumatua Charitable Trust;
- (c) Te Aroha Noa Community Services;
- (d) Wairarapa REAP; and
- (e) Waitakere City Workers' Educational Association.

The ACE Sector

Adult and Community Education engages adults in a range of educational activities within the community (such as basic literacy, numeracy, computer skills) and a diverse range of other technical and life skills. ACE occurs alongside the formal education system. It promotes a culture of lifelong learning. ACE courses happen in a wide range of contexts in both structured and spontaneous forms. It is often initiated by individual and group needs which encourage adults to learn to understand their world and to seek change within it.

The ACE sector intersects with a number of sectors, including the tertiary education sector, the community and welfare sector, and the broader not-for-profit sector. Most ACE services, programmes and activities are provided at no cost to the user.

ACE Aotearoa estimates that the ACE sector provides services to over 409,000 discrete individuals, most on a part-time basis. At over 10% of the adult population, this is comparatively larger as a proportion of the total population and total tertiary population than many other countries. The total number of providers in the sector is estimated at over 532.

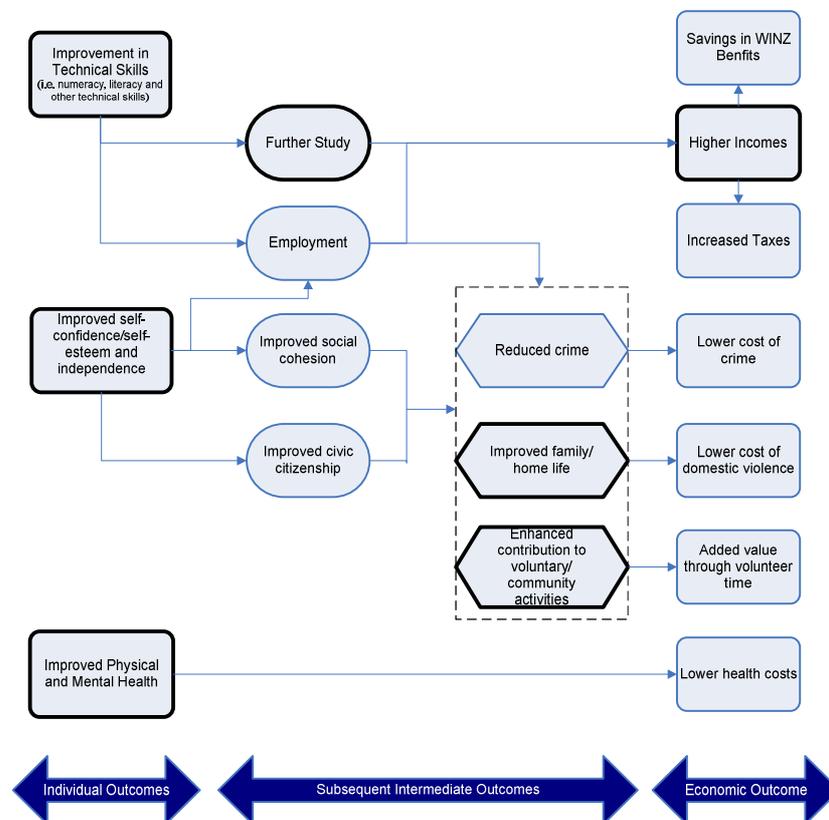
The ACE sector receives approximate funding of \$88.4 million annually, based on funding figures for the year ended June 2008. A large portion of its current funding comes from the Tertiary Education Commission (TEC) (\$45.5million). The remaining funding comes from other government agencies (\$20.5million), including the Ministry of Education and Ministry of Social Development, and private sources (\$22.3million), including lottery grants, public donations and fund raising.

This study evaluated the economic impact of the ACE sector. Based on a literature review, survey data collected from a cross-section of users, and case studies on five ACE providers, the annual economic value-added of the sector was estimated. The methodology used for the study was based on PwC's *outcomes methodology*, and assessed the inputs, outputs and outcomes of the sector.

The analysis of the added value of ACE was carried out by applying two frameworks developed by PricewaterhouseCoopers (PwC): its *value-added of voluntary agencies framework* (developed in conjunction with the New Zealand Federation of Voluntary Welfare Agencies) and PwC's *performance-based outcomes framework*. These frameworks provide a basis for valuing inputs, outputs and outcomes when the key components are unable to be costed using market prices.

The five providers we chose to be broadly representative of the sector, were selected and case studies used to test hypotheses and relationships evidenced in the literature and survey data. The case study providers participated in two workshops which sought to identify the sector's key outcomes, to understand the relationships between outputs and outcomes, and to assess the impact the sector is having on its key outcomes. The importance of the institutional knowledge embedded in these organisations is substantial and its value in assessing the sector benefits should be emphasised.

The literature review, provider workshops and case studies provided the background about how the sector works, as presented in the diagram below. This model takes the existing information about inputs and examines how these generate wider outcomes by engaging adult users in specific educational offerings.



A stratified sample of users was selected from across the case study organisations, and two additional organisations were added to provide a closely representational survey of the sector’s service provision. The survey sought information from users on the outcomes they were experiencing, had experienced or expected to experience as a result of their participation in ACE services. The survey collected information on changes in users’ incomes, mental and physical health, technical skills, happiness, study aspirations, home/family environment, involvement and participation in their community, and usage of community/government services.

The results from 595 respondents were collated and the data used to extrapolate the economic impact of the entire sector across a number of key outcomes. The results and relationships in the survey data were well supported by a wide body of literature and the assumptions agreed with case study organisations in workshops. The hypothesised economic impact model was also well supported by the survey data.

Analysis of the survey responses showed the significance of a number of important outcomes being generated by the ACE sector and provided the basis for quantifying its social and economic impact. The impact of the ACE sector across its outcome objectives was generally strongest in the areas of physical health, home ownership, career aspirations, and income expectations.

Based on the available data, including the survey responses, the estimated economic impact of the ACE sector is between \$4.8 and \$6.3 billion annually. This equates to a return on investment of \$54 - \$72 for each dollar of funding. Each dollar of government funding generates a return of \$16 - \$22, but this is further leveraged through private contributions to the sector, including those voluntarily added such as unpaid volunteer labour. The table below summarises the estimated value and net economic benefit (NEB) per dollar, allocated across government and private investment.

	Gross Economic Benefit \$million	Funding \$million	Net Economic Benefit \$million	NEB: Per Dollar Return
Non-Government	\$3,759 - \$4,903	\$22	\$3,737 - \$4,880	\$167 - \$219
Government	\$1,142 - \$1,526	\$66	\$1,076 - \$1,460	\$16 - \$22
Total	\$4,902 - \$6,429	\$88	\$4,813 - \$6,341	\$54 - \$72

A key economic benefit of ACE is increased income for adult users because of subsequent involvement in paid or higher paid employment. Benefits were also realised through savings in government welfare benefits, savings in crime and health, value added through enhanced community participation and increased taxes.¹

When compared to other community-based activities, ACE is likely to have one of the highest added values in economic terms, as it is largely focused on improving people’s productive lives through learning. Additionally, the benefits of enhanced learning are likely

¹ From enhanced skills combined with increased opportunities.

to have implication in all areas of an individual's life, whether as employees, parents or members of the community.

At first glance, the level of economic return to the ACE sector seems surprisingly high. A feature of the return is that the profile of ACE participants shows a large proportion from a lower socio-economic demographic. Because of this, there is a greater marginal return in improving the outcomes for these adult learners. In other words, ACE's estimated economic benefits reflect the demographic of the participants who its programmes serve.

The estimated economic impact of the sector is high even when the key assumption variables used in the model are varied. For example, changing the income, crime and health attribution variables by 10% generates only a 2-3% change in estimated value.

2 Introduction

Adult and Community Education Aotearoa (ACE Aotearoa) is the national umbrella organisation for the adult and community education (ACE) sector. ACE Aotearoa is a not-for-profit organisation with the purpose of advancing a learning society that is democratic, nurturing, effective, and sustainable, based on Te Tiriti o Waitangi.

This report is the first phase of a two-phase project. It presents the findings of an economic evaluation of the outcomes of the adult and community education sector as a whole and identifies the economic return the government and the wider community receive from investment in the sector. Phase two will provide an *outcomes monitoring toolbox* which will allow ACE sector organisations to report, monitor and evaluate their outputs and outcomes. Flowing from this will be recommendations for how the sector can develop its capability and enhance its return on investment.

Purpose

ACE has been in existence for more than eight decades. At present, ACE Aotearoa's records show that there are more than 409,000 New Zealanders enrolled in ACE courses. These courses span a wide variety of vocational and non-vocational activities, courses and programmes – from foundation literacy and numeracy skills to computer skills and business courses. Through its national association, ACE Aotearoa, the sector as a whole shares five primary objectives, namely to:

- strengthen social cohesion;
- strengthen communities;
- raise foundation skills;
- encourage lifelong learning; and
- target learners whose initial learning was unsuccessful.

The purpose of this project has been to review the impact the sector is making in regard to these objectives and to estimate the social and economic impact this has on the community by:

- examining the profile of the sector;
- examining the extent of the social impacts of the sector including:
 - employability;
 - improved health;
 - decreased reliance on social services and increased self sufficiency;
 - community development and cohesion; and
 - an enhanced civil society.

The project has drawn upon primary information from consulting with five case study organisations and ACE Aotearoa, demographic data provided by the Tertiary Education Commission and other government agencies, and a sector survey of users.

Section 3 examines the ACE sector's activities and outcomes.

Section 4 describes the five case study organisations who, as participants in this study, have provided more detailed formation about the sector's activities and outcomes.

Section 5 analyses the survey of ACE learners. A copy of the survey is included in Appendix B.

Section 6 discusses the key findings from a systematic literature search to discover other sources of information about the identification, definition and value of the social and economic benefits of adult education.

Section 7 outlines the methodology and framework for estimating the impacts of ACE. This section includes estimates of these impacts.

Section 8 discusses the implications for ACE and the analysis in this report.

Glossary of Terms

ACE	Adult and Community Education. A broad range of formal and informal educational programmes which promote and facilitate the engagement of adults in lifelong learning.
Added value	The monetary value of an entity, good, or service at the end of a time period minus the monetary value of that same entity, good, or service at the beginning of that time period.
Agency	A community or voluntary agency (usually not-for-profit).
Discrete participants	Where each individual is counted only once per year, regardless of the number of programmes or activities they enrol or participate in.
Engagement effectiveness	The degree to which the outputs attract appropriate users, motivate participation and maximises outcomes.
Imputed value	The value of an asset that is not recorded in any accounts but is implicit in the product. For example, when making historical comparisons, an imputed value can be estimated for any period for which data is not available.
Inputs	The raw materials that are combined by an organisation to deliver outputs. The financial measure of inputs includes the value of wages and other personnel costs, production materials, capital costs.
Input-voluntary-value added (IVVA)	The voluntary and/or in-kind contributions of the labour, donations and capital that the agency (because it is above) combines with other inputs to provide outputs (services and goods). IVVA is a subset of the total value added by community and voluntary agencies.

Intermediate outcomes	Outcomes from user engagement with services that contribute towards better, often longer-term outcomes.
Logic Model	A logical step-wise description of the relationship between inputs, outputs and outcomes.
Market replacement cost	The full cost of replacing a subsidised good or service for a similar service without any subsidies. In the case of voluntary organisations, the cost of providing a good or service is often heavily subsidised by volunteer labour and other in-kind inputs.
Monetized value	A monetary value assigned to a good or service input or output which ordinarily is not quantified in financial terms. It is important to recognise that the purpose of this is to be able to compare non-market activities with market activities where there is a price set by willing buyers and willing sellers. The estimated monetized value is not a cash value.
Objectives	A series of defined and clearly stated key aims an organisation is attempting to achieve or effect. Objectives can be measured at all stages of the input-output-outcomes cycle and together form the common purpose of the organisation.
Opportunity cost	The cost of something in terms of an opportunity forgone (and the benefits which could be received from that opportunity), or the most valuable forgone alternative (or highest-valued option forgone), i.e. the second best alternative. Opportunity cost need not be assessed in monetary terms, but rather can be assessed in terms of anything which is of value to the person or persons doing the assessing (or those affected by the outcome).
Outcomes	The end results in a process or series of processes. From an organisational perspective, outcomes are usually determined by inputs, activities, processes and outputs. Outcomes are the result of people engaging with services that have been provided. Outcomes can be positive and negative, intended or unintended, depending on the extent to which and the ways that users choose to engage with the services offered.
Outputs/Services	Outputs are the goods and services delivered by an organisation. The combined impact of these, and the effectiveness with which they engage with and motivate users, determine outcomes.
TEC	Tertiary Education Commission.
Voluntary agency	A not-for-profit agency that is community owned and managed (governed). It will rely, at least in part, on time and/or resources freely given to provide services.
Voluntary inputs	Inputs that are contributed voluntarily and at no cost to the organisation. Include donations and sponsorships that add cash and in-kind contributions, imputed assets and unpaid working time.

3 ACE Sector Activities and Outcomes

Background

Adult and Community Education provides adults with an opportunity to engage in a range of educational activities that are community or iwi based. The sector provides individual and group learning and promotes empowerment, equality, active citizenship, critical and social awareness and sustainable development.

Typical programmes include:

- literacy and numeracy;
- English language for those with English as a second language;
- support to new immigrants;
- enhanced personal development and enrichment;
- support whānau/hapu/iwi development; and
- Māori language and culture.

The qualitative benefits of the ACE sector have been well understood for some time. The process of how these benefits are created and their value in terms of economic outcomes, however, is not so well understood. This is chiefly because the information and data collection systems necessary to understand these relationships do not exist or are poorly developed across the sector. While there is not always a clear link between the inputs, activities and economic outcomes generated, good outcomes data collection and monitoring systems can help, over time, to demonstrate these relationships.

A number of the specific 'educational' outcomes sought by ACE, such as improved literacy and numeracy rates, 'staircasing' to further education and improved employment opportunities, have clear and often well documented economic benefits. The economic impact of 'social' outcomes, such as enhanced self-esteem, improved happiness, social cohesion and civic citizenship, while adding to economic value, require a number of key assumptions to be made when estimating economic impact. This is because social outcomes have less documented research on their economic benefits.

The ACE sector providers have continuously articulated the importance of their activities and services to the individuals and communities they serve. In doing so, they tend to be communicating with those who already have awareness of what the sector does and its value (at least implicitly). The sector is aware of the need to be able to more explicitly articulate and demonstrate its importance in a way which is meaningful to its other key stakeholders, particularly its funders. The purpose of PwC's examination is to provide objective analysis of the value added and to model the way the sector generates a return on investment.

Nature of Adult and Community Education in New Zealand

The New Zealand Ministry of Education uses the following definition of the ACE sector: "A broad range of formal and informal programmes which promote and facilitate the

engagement of adults in lifelong learning”.² This definition broadly encapsulates the outputs and activities of the sector.

The Ministry’s strategy for the ACE sector, *Koia! Koia!*,³ illustrated a key feature of the sector - its diversity. The report described what the sector did and the outcomes it was achieving.

ACE is an essential part of New Zealand's education system. ACE contributes to government social and education objectives and has demonstrated its usefulness in identifying key emerging learning and social needs. It has an important role to play in the Government's goal for a prosperous and confident knowledge society as outlined in the Tertiary Education Strategy 2002/07. ACE provides learning opportunities to a wide range of people for whom the traditional system, at least temporarily, is inappropriate.⁴

ACE happens in a wide range of situations, both formal and informal. For many adult learners, it offers the first step to a life of ongoing learning. The 'adult approach' to ACE enables learners to make their own choices about where, what and how they learn, free from the pressure and competition associated with traditional courses and qualifications. This distinguishes ACE from the compulsory system.

An important part of ACE is taking learning to the learner. Programmes are held in community halls, church buildings and people's homes, as well as in schools and educational institutions.

Learner and Provider Profile of Adult and Community Education

ACE Providers

ACE providers are diverse in nature, ranging from Universities to REAPS, and includes both public and private providers. Providers can be broadly categorised as follows:

- Rural Education Activities Programmes (REAPS);
- Other Tertiary Education Providers (such as runanga);
- Schools;
- Community Groups and Private Training Enterprises (PTEs);
- Universities;
- Institutes of Technology and Polytechnics (ITPs); and
- Wānanga.

All providers are expected to align to five national priorities. *Koia! Koia!*,⁵ they are:

² Ministry of Education. Tertiary Education Strategy 2007-12, Incorporating Statement of Tertiary Education Priorities 2008-10.

³ Ministry of Education (2001). *Koia! Kioa! Towards a Learning Society. The Role of Adult and Community Education.*

⁴ Ministry of Education (2001). *Koia! Kioa! Towards a Learning Society. The Role of Adult and Community Education.*

⁵ Ministry of Education. Tertiary Education Strategy 2007-12, Incorporating Statement of Tertiary Education Priorities 2008-10.

- (a) targeting learners whose initial learning was not successful;
- (b) raising foundation skills;
- (c) encouraging lifelong learning;
- (d) strengthening communities by meeting identified community needs; and
- (e) strengthening social cohesion.

For some providers, these priorities represent a small part of their role within their communities, and are delivered in conjunction with other forms of education and training.

ACE providers have developed new programs over the years in line with adults' learning needs and interests. In its early years, ACE primarily delivered courses for hobbies and personal interest enrichment. This has changed in the past three decades. First came the introduction of basic adult education, with courses designed to provide basic language and living skills to help people to participate in and contribute to society. Over time, providers also began to offer specific vocational education and training courses.⁶

Courses that ACE providers now offer include:

- Adult literacy and numeracy;
- English language and social support programmes for speakers of other languages;
- Personal development education;
- Programmes for whānau/hapu/iwi development;
- Programmes to support cultural retention;
- Māori language and culture;
- Education to facilitate group and community development; and
- Education for social and environmental justice.

ACE Sector Size

Determining the size of the ACE sector in New Zealand is difficult. The sector receives its funding from a diverse range of sources, and data participation.

Using the five case organisations as proxies, and data from the TEC, MOE, and Ministry of Social Development, we have been able to estimate the total number of discrete participants or users in the ACE sector, as of 2006, at 409,000. Given the nature of the ACE sector there is likely to be an indeterminate number of people who participate in a wide range of other non-formal community initiated and community-based education programmes around the country, which are not funded by Vote: Education, or other government funding sources.

⁶ Birch, E. Kenyon, P., Koshy, P., Wills-Johnson, N. (2003). Exploring the Social and Economic Impacts of Adult and Community Education. Australian National Training Authority.

An estimate of the distribution of ACE sector participation by type of provider, based on figures provided by the TEC, other government agencies, and the case study organisations, is shown in the Table 3-1 below.

Table 3-1: ACE Providers and Number of Participants, 2006

ACE Provider	Number of providers - TEC funded only ¹	Number of providers – total estimated	Number of discrete participants –TEC funded only ¹	Number of discrete participants – total estimated
Rural Education Activities Programme	13	13	N/A	14,000 ²
Other Tertiary Education Provider (OTEP)	8	20	N/A	25,000 ³
Schools	214	214	153,887	153,887 ¹
Community Groups and PTE's	39	230	N/A	28,000 ⁴
Universities	9	9	188,113*	
Institutes of Technology and Polytechnics	21	21		
Wānanga	2	25		
Total	306	532	342,000	409,000

1. Data provided by TEC collected from providers through RS-44 forms.

2. Data provided by REAP – total number of enrolled participants across all programmes 18,320, discrete participants assumed to be at a ratio of .78 of enrolled participants.

3. OTEPs report participation data in annual reports or Statements of Service Performance. This number is estimated from Literacy Aotearoa and ESOL participation data. These organisations account for approximately 80% of total participants from this type of provider.

4. Estimated using data from Ministry of Social Development and Ministry of Education and case organisation estimates.

* Due to current data collection methods by the TEC the number of participants for Wānanga, ITPs and Universities is only collected in aggregate and can not be separate out.

Compared to overseas ACE sectors, the New Zealand ACE sector appears to be one of the most diverse.

Table 3-2 below illustrates the size of New Zealand's ACE sector compared to other similar sectors in some other OECD countries. The table illustrates the relatively large size of New Zealand's ACE sector when compared to other sectors internationally.

Table 3-2: ACE Sector International Comparison

Country	Size of ACE Sector - (% of Working Age Population)*	Estimated Size of Sector - as % of total Tertiary Sector Participation*
New Zealand ¹	402,000 (12.2%)	63%
Australia ²	478,000 (3.3%)	28%
UK ³	2,805,000 (4.6%)	52%
US ⁴	21,300,000 (10.6%)	57%

* Counted as discrete participants.

1. Size of tertiary sector includes data from 2005 as most recent Ministry of Education estimates.
2. Size of tertiary sector includes all VET and Universities. Information adopted from Elisa-Rose Birt et al. Exploring the social and economic impacts of adult and community education. NCVET. Australian National Training Authority. 2003. The ACE sector in Australia is relatively much smaller than New Zealand due to historically low levels of government funding and no formal administration.
3. Information from NCSALL. ACE does not include some community based programmes.
4. Information from ProLiteracy America. ACE sector include some work based on the job programmes and may not be directly comparable.

Funding

In New Zealand, ACE is a key part of the education system. (In 2007 Vote: Education allocated \$44.7 million to ACE). Currently ACE, funded by the Tertiary Education Commission (TEC), is provided through schools, Tertiary Education Institutes, and Private Training Establishments. Many community providers of ACE are not funded by the TEC. They may be accessing some government funding through other government agencies, or relying on grants and/or voluntary input, for example, Community Learning Aotearoa New Zealand (CLANZ) allocates small amounts of funding to community groups for community learning needs.

There is a funding framework for ACE providers, announced in July 2005, to determine eligibility for TEC funding. The key components of this funding framework are:

- A focus on achieving the five national ACE priorities;⁷
- Responding to community learning needs;
- Establishing equity and transparency in funding;
- Supporting a diverse range of providers and learning approaches; and
- Ensuring a smooth transition to new funding arrangements.

⁷ ACE priorities, p23 Report.

The total funding for the ACE sector, including the TEC, other government departments and private funding, is estimated at \$88.4 million for 2007. The funding from these three sources is illustrated in Table 3-3.

Table 3-3: Funding for the ACE sector

Funding Body	Total Funding (\$)
TEC	45,550,000
Other government departments	20,550,000 ¹
Private	22,330,000
Total	88,430,000

1. Includes funding from the Ministry of Education (excluding TEC funding), Ministry of Social Development, and Department of Labour.

The total TEC funding can be further disaggregated by type of ACE provider and is shown in Table 3-4.

Table 3-4: TEC Funding per ACE Provider

ACE Provider	Number of providers funded by TEC	Funding TEC 2007 - \$ million	Funding per participant (\$)
Rural Education Activities Programme	13	1.87	373
Other Tertiary Education Provider	8	5.63	225
Schools	214	16.13	105
Community Groups and PTE	39	3.37	112
Universities	9	18.56*	99*
Institutes of Technology and Polytechnics	21		
Wānanga	2		
Total	306	45.56	113

* Due to current data collection methods by the TEC the number of participants for Wānanga, ITPs and Universities is only collected in aggregate and can not be separate out. Source: TEC, 2007.

Outcomes for the New Zealand ACE sector

Given the diversity of providers and the services they deliver, and the diversity of the users and their objectives, the ACE sector contributes to a variety of social and economic

outcomes. Given the size of the sector at over 409,000 discrete participants (or 12% of the total working age population), it is not surprising that the outcomes and benefits of the sector are considerable.

The experience of the ACE case study organisations supports the international literature regarding the qualitative benefits from adult and community education programmes, which will be explored in greater detail in Section 6.

A basic argument for the wider benefits of learning is that, while qualifications matter, there are other skills, particularly the attainment of basic skills which are important in the labour market. These skills also have essential implications for the wellbeing of individuals and society. However, evident from the New Zealand experience, and overseas literature, is that the benefits and outcomes effected by the ACE sector are accounted for largely as a result of the sector's non-formal learning component. In other words the large proportion of benefits for individuals is found in the social and intellectual experience as they engage in a particular learning activity. This expansion of human capital is an important part of the real value the ACE sector provides.

In assessing the economic contributions of ACE in New Zealand, it is important to define those areas which have a quantifiable economic value and which are directly derived from ACE. It is easier and more accurate to measure and value the technical skills component of ACE, as outcomes such as improved learning skills and transitioning to further education have more clearly defined economic values. This does not reduce the importance of other components of ACE which lie largely in the field of social capital.

ACE has a socio-economic impact on well-being for both the community and individual.⁸. In measuring the economic outcomes associated with ACE, it is helpful to categorise the potential individual and community benefits according to the social indicators set out by the OECD. The eight areas are:

- (a) health;
- (b) education and learning;
- (c) employment and the quality of working life;
- (d) time and leisure;
- (e) command over goods and services;
- (f) physical environment;
- (g) social environment; and
- (h) personal safety.

Given the need for the ACE sector to be accountable to its funders, the sector has aimed to demonstrate its alignment with the goals of the TEC, and, more broadly, the Government. The expectations of how the TEC will contribute to the Government's outcomes are set out in Table 3-5 below.

⁸ Balatti, J. & Falk, F. (2001, September). Socioeconomic Contributions of Adult Learning to Community: A Social Capital Perspective. ESREA Research Conference: Lisbon.

Table 3-5: Summary of TEC Objectives

Expected Contribution of Tertiary Education	Success for all New Zealanders through lifelong learning	Creating and applying knowledge to drive innovation	Strong connections between tertiary education organisations and the communities they serve
Areas for focus	<ul style="list-style-type: none"> • Ensuring maximum educational opportunity for all New Zealanders • Strong foundations in literacy, numeracy and language • Successful transitions from school to tertiary education and work • Building relevant skills and competencies for productivity and innovation • Building skills and competencies for social and cultural development 	<ul style="list-style-type: none"> • Strengthening research-led teaching • Focusing resources for greatest effect • Improving transfer and application of knowledge 	<ul style="list-style-type: none"> • Connections to improve quality and relevance of education and knowledge • Connections to support economic transformation • Connections to support social and cultural outcomes

The priority outcomes for the TEC are:

- increasing educational success for young New Zealanders;
- increasing literacy and numeracy for the workforce;
- increasing the achievement of advanced trade, technical and professional qualifications to meet regional and industry needs; and
- improving research connections and linkages to create economic opportunities.

4 Case Studies

The five case organisations participating in this project are:

- (a) Aranui Community Learning Centre;
- (b) Rauawaawa Kaumatua Charitable Trust;
- (c) Te Aroha Noa Community Services;
- (d) Wairarapa REAP; and
- (e) Waitakere City Workers' Educational Association.

Each case study organisation participated in the workshops facilitated by PwC, provided full descriptions of their organisation and services, provided five case descriptions of their learners, populated PwC's framework and assisted with providing and collecting the surveys to their learners.

The case study organisations were asked to group their users into five representational cohorts and describe what an individual in each of these cohorts might look like, the services they used and the outcomes and objectives they achieved. These user profiles were extremely valuable in understanding how the activities the ACE sector provides engages with its participants. They helped to test the relationship between the outcome variables used within the evaluation model.

When conducting the analysis of the ACE sector and using the five selected case study organisations as proxies for the wider sector, it was important that all the relevant information was comparable. The ACE priority framework was used to combine and compare the user/learner grouping of each organisation as in the Table 4-1 below.

Table 4-1: ACE Priorities and Learner Categories

ACE Priority	Learner name	Learner's Prime Driver
Strengthening Social Cohesion	Breaking Barrier Learners	To be able to overcome their barrier to participate more fully in their community or wider society as an individual
Strengthening Communities by Meeting Community Learning Needs	Community Learners	To be able to participate effectively and contribute as an individual in a community group
Raising Foundation Skills	Foundation Learners	To be able to read or write, speak, listen effectively in English or Māori; or gain numerical skills
Encouraging Lifelong Learning	Lifelong Learners	To continually be expanding skills, attributes, knowledge,

ACE Priority	Learner name	Learner's Prime Driver
		interests or social networks
Targeting Learners whose Initial Learning was Unsuccessful	Targeted Learners	To be persuaded to 'give learning a go' despite negative perception about learning environments

Each case study organisation provided an organisational description, including a summary of their objectives, key services and the key users they serve. An edited version of these organisational descriptions is included in the following pages.

Aranui Community Learning Centre

Based in the Aranui area and surrounding suburbs, Aranui Community Learning Centre (ACLC) delivers most of Aranui High School's Tertiary Component. It aims to provide a safe, caring environment of diverse, responsive, community-based provision that enables learners of all ages to develop to their full potential.

ACLC sources and promotes specific courses that promote life-long learning, offers courses to increase outcomes for those whose initial learning was not successful and fosters adult specific delivery, teaching styles and professional practice, including integrated literacy and numeracy skills. Amongst others, some of the aims of the Community Learning Centre are:

- (a) To increase participation in programmes offered through the Aranui Community Learning Centre by under-represented groups;
- (b) To respond to community requests for learning opportunities and to build relationships with other providers with the purpose of facilitating learning opportunities that best meet the needs of the community;
- (c) To make learning opportunities for adults more accessible and to make resources available for community groups working in and around the community; and
- (d) To network and build capacity and capability of ACE providers in the Eastern Suburbs.

Jane (40)

Jane was brought up through a number of foster homes as a child. Going through these homes was a very hard thing, so her own family is very important to her. She tries to give her family the things that she never had.

As a girl, Jane was moved from school to school, and as a result never felt settled and never really learnt a lot. She decided to come back to learn literacy and numeracy partly due to her lack of budgeting skills. She initially made contact with the Community Learning Centre just to find out about opportunities. She was told by her husband that she didn't need to go back to learn, but within herself she knew that she needed to improve.

The current learning programmes that she is enrolled in at ACLC have built her confidence in a variety of areas, and she has noticed changes - her 6 year old reading level up to a 16 year old level. This progression has meant that she can achieve in all areas of her life and has significantly motivated her to do more.

ACLCL offers day and evening short courses that are either non-qualification based or carry qualifications. These can be classified into five areas:

- courses aimed at bringing the community together;
- courses that help people gain skills that they may have missed out on previously;
- courses that encourage lifelong learning;
- courses that raise basic skills in a variety of areas; and
- courses that bring people together.

Examples include courses for learning other languages, art, computers, business and fitness.

The learners can be characterised by a love of learning from diverse backgrounds (many had a negative experience of High School education), ethnicities, and ages. The learners at ACLCL can be grouped as 30% lifelong learners, 25% community learners, and 15% each for all remaining learning categories.

Rauawaawa Kaumatua Charitable Trust

The Trust is a non-profit incorporated organisation that had its origins in 1938 when Te Puna O te Ora was established as a gathering place for Māori; where their concerns and needs could be discussed and addressed. The present Trust was established in 1997.

Rauawaawa means 'the sides of the waka that embrace the chief, tohunga, and the many tribes, providing added protection as they pursue their journey forward'. Appropriately, the Rauawaawa Kaumatua Charitable Trust (the Trust) provides a variety of wrap around services, including health, social, educational and financial services, to over 400 kaumātua (people 55 years and older) in the city of Hamilton with the prime objective of enhancing their quality of life and well-being. The Trust works closely with a range of local community and education partners, in particular the Centre for Continuing Education, at the University of Waikato. In conjunction with its partners, the Trust provides services to kaumātua through both the principles of Tikanga Māori and the Tiriti o Waitangi. These include:

- Whanuanga, which recognises and respects the importance of kinship and relationships of the extended family;
- Manaakitanga, which recognises the need to care for others and show respect and dignity;
- Wairuatanga, which recognises and respects the importance of spirituality;
- Tino rangatiratanga, which recognises and respects the importance of self-determination;
- Aroha, which recognises the need for loving concern;
- Partnership, which recognises the Trust's philosophy of shared decision-making;
- Participation, which recognises the Trust's commitment to work with other providers to enhance service delivery to kaumātua; and
- Protection, which ensures the Trust nurtures, strengthens and abides by Māori cultural values and governing principles.

The Adult and Community Education programmes of the Trust include rorohiko (computer literacy), he oranga kai (healthy nutrition), korowai (feather cloak making), kaihoko putiputi

(floral art), waiata, harakeke and mahi raranga (weaving), houtu-mauea (gym), te reo and performing arts, mirimiri (massage), taonga making (jewellery making) and Preserving Our Heritage.

The two largest groups of learners are the Lifelong Learners (40%) and the Targeted Learners (32%). This is followed by the Foundation Learners with 20% and Breaking Barrier Learners (8%). While the prime reason for undertaking courses, programmes and activities with the Trust is not usually for a specific community purpose many of the kaumātua through doing their courses, particularly te reo, fulfil community roles and obligations, thereafter. For example, they become a kaikaranga or kaiwhaikōrero on the marae.

Hana

Hana is of Ngati Apa and Scottish descent. She is a superannuitant who has been a widow for two years. Her family has long since grown up and made lives elsewhere both in New Zealand and overseas. She moved to Hamilton from Taranaki when she married over forty years ago and does not have extended whānau in Hamilton. She relies on taxis and lives in a rented town house on the flat as she has difficulty with walking with a badly arthritic hip. She misses her husband a great deal as he was her soul mate. He was the outgoing one, unlike her mixing easily. He brought friends, fun and laughter into their home. He did a lot for her, getting the shopping, paying the bills, and helping with household chores. His death was sudden and unexpected.

A district nurse concerned about her isolation suggested that she might like to take up some activities at the Trust and made the initial contact on her behalf. Hana was shy at first as she had little knowledge of te reo and had not been on a marae since her childhood.

She enrolled in the Waiata class initially, quickly became an attender at the Friday Kāumatua days and then progressed to the Te Reo and Performing Arts class. Her family are pleased that she has at last begun to enjoy life again, gain a circle of friends and sense of purpose. They have noticed her increase in confidence, motivation and direction in life. Through the contact with the Trust she has been given more support at home as well as nutritional advice so she can reduce weight and undue stress on her hips. This weight loss combined with gentle rakau exercise has seen her sense of physical wellbeing increase and she is now more able to mobilise.

Te Aroha Noa Community Services

Te Aroha Noa Community Services (TANCS) is a community development agency which is based in Highbury, a lower socio-economic and culturally diverse area in the western suburbs of Palmerston North. Established 19 years ago, it offers a range of multi-disciplinary, integrated, early intervention services that are designed to support young families/whānau.

Services include:

- early childhood education;
- a first steps adult learning community which includes literacy development;
- Kapa haka;
- introduction to computers;
- aerobics and fitness classes;
- parent and relationship courses;

- ‘Pathway to Our Future’ courses;
- Parents as Involved Educators training;
- anger management;
- guitar classes;
- family/whānau development services;
- a Family Violence Free initiative and social work;
- Tu Tika i Te Tamaiti – an after school learning centre;
- child care;
- a food bank; and
- clothing shop and a craft group.

These services and programmes are often scaffolded in an integrated manner around a family/whānau.

Te Aroha Noa is focused on an underpinning kaupapa of empowering community members to identify their own solutions to the challenges they are facing and inviting them to collaboratively be part of creating positive change for themselves, their families/whānau and their community.

Community Parents

This group of learners consists of parents (single fathers, single mothers and couples) who are aged between 17-39 and are of Māori, Pacific Island and New Zealand European ethnicity. In some cases they have been initially referred to other family/whānau development services conducted by Te Aroha Noa by Government and Non Government agencies. They often very cautiously engage with an agency such as Te Aroha Noa. Trust building is a lengthy process but once this has been built they relate to Te Aroha Noa as if it is an extension of their family/whānau. Characteristics of this learner group include:

- Live in lower socio-economic suburbs of Palmerston North.
- Have had significant trauma in their own upbringing.
- Low self esteem.
- Desire something more for their children than they experienced.
- Have low expectations that there will be positive changes and outcomes in their own adult lives.
- Life has significant daily struggles that include alcohol, violence, drugs, gambling, and mental health issues.
- They are resourceful, resilient and survivors.
- They live on the fringes of contact with institutions and organisations.
- Low secondary levels of education.
- Outcomes emerging for this group include:
- Strengthening relationships with Te Aroha Noa staff and growing ability to positively engage with external professionals.
- Beginning to value their strengths, resourcefulness and resilience.
- Beginning to experience a love of learning.
- Growing sense of family/whānau and personal stability.
- A reduction in the impact of alcohol, violence, drugs and gambling in their lives. A greater sense of management of mental health issues where they are present.
- Experiencing a growing sense of choice and self mastery.
- Building positive support networks.
- A growing sense of belonging to a community.

- Addressing learning constraints such as literacy and numeracy.
- Regular and increased attendance of children in Early Childhood Centre.
- Regular attendance and participation in organised short courses.

The Breaking Barrier Learners is the largest category of learners for Te Aroha Noa with 43%. Community Learners is the second largest group with 31%, followed by the Lifelong Learners with 17%. The Targeted Learners and the Foundation Learners are relatively small groups for Te Aroha Noa with, respectively, 7% and 2%.

Wairarapa REAP

Wairarapa REAP (WaiREAP) is a community-based organisation that provides cross sectorial education focused services in the Wairarapa region. It runs programmes for preschool children and their parents, for children at school and their parents, and for people who have left school.

The key objectives of WaiREAP are:

- Providing educational opportunities for people of all ages including early childhood, schools and adults;
- Supporting community organisations and initiatives; and
- Linking community and government goals.

While WaiREAP exists for the benefit of all Wairarapa residents, WaiREAP places particular emphasis on rural dwellers. This is to redress an otherwise educational disadvantage for rural dwellers in accessing the range and depth of activities enjoyed by their more urban counterparts.

The programmes are usually developmental in nature and the result of expressed requests or identified needs. WaiREAP attempts to ensure that services are delivered where the learners are based. WaiREAP is a facilitator of educational services in the community and provides a wide range of quality programmes based on needs expressed formally or informally. The courses include classes in computer training, art, and parenting.

WaiREAP's learners are Community Learners at 40% of total learners, followed equally by Breaking Barrier Learners and Life Long Learners on 20%. Foundation Learners and Targeted Learners make up the balance with 10% adult.

Supporting Community Initiatives

Wairarapa REAP supports a range of initiatives that contribute to the wellbeing of the wider community.

The formal initiatives include: Violence Free Wairarapa, Safer Communities (Masterton, Southern Wairarapa, Tararua), Strengthening Families, Regional Intersectorial Fora (Māori Development), Injury Prevention, Healthy Eating Healthy Action, Active Wairarapa, ACE Network (Regional), Culture and Heritage Strategy

Wairarapa REAP also supports a range of less formal initiatives where sometimes they are the initiator and sometimes a partner or supporter, including: Men's Sheds, development of new community based Early Childhood centre, Image Wairarapa (digitising images for worldwide accessibility as part of the Digital Strategy), broadband access, technology accessibility for those without internet, community literacy support, Kindness Day

Waitakere City Workers' Educational Association

Waitakere City Workers' Educational Association (WEA) aims to provide accessible and affordable Adult and Community Education within West Auckland. A key objective of the organisation is a just, equitable and sustainable society in accordance with Te Tiriti o Waitangi.

WEA provides ACE services to meet the needs of priority learning groups which actively promote the social development and public good of the Waitakere community. WEA currently offers over 16 workshops and courses per term that align with the five Adult and Community Education priorities identified by the Tertiary Education Commission.

The work of the organisation can be divided into three separate but interconnected areas:

- (a) Courses and Workshops; courses that are subsidised, and run during the day, evenings and sometimes weekends;
- (b) Information and support: information and advice about training and other services in the Waitakere community; and
- (c) Strengthening the Waitakere community:

Current programmes involve courses on ESOL, driver education, First Aid, yoga, parenting & personal development, Treaty of Waitangi & Te Reo Māori.

WEA's learners range in age from 16 to 60+ years and are of all ethnicities. WEA's 2007 students are 78% female. The predominant age group is 30 – 39 (at 36%) and the predominant ethnicity is Asian or "Other" (at 38% and 24% respectively, where "other" comprises Indian, Burmese, Czech, Afghani, Congolese, Cambodian etc). However 21% are aged 20-29 or 24% 40-49, and 21% of students are European, 11% Māori, and 7% Pacific Islanders.

In terms of ACE learner categories, WEA's learners are mostly from the Breaking Barriers and Community Learners categories (both 32.5%). The Lifelong Learners and the Foundation Learners with 15 and 13%, follow and the Targeted Learners count for 7% of WEA's learners.

Comparison of the five case study organisations is shown in Table 4-2 below.

Table 4-2: Comparison of Learners Within the Case Study Organisations

Learner name	ACLC	Trust	TANCS	WaiREAP	WEA
Breaking Barrier Learners	15%	8%	43%	20%	32.5%
Community Learners	30%	0%	31%	40%	32.5%
Foundation Learners	15%	20%	2%	10%	13%
Lifelong Learners	25%	40%	17%	20%	15%
Targeted Learners	15%	32%	7%	10%	7%

5 Survey of ACE Learners

This section covers the survey component of the project.

Survey Methodology

Information was collected through user/learner surveys for each of the five case study organisations. This was to gain information from ACE students about the outcomes they have achieved as a result of studying. The survey results provide the basis for confirming gains from ACE and quantify any economic gains. The data from the surveys can be aggregated and analysed to examine the relationship between outputs and outcomes.

The survey had the following three parts:

- (a) background information;
- (b) specific information that relates to the user/learner before the programme/course, since the programme and their current situation; and
- (c) any further comments that the user/learner had.

A copy of the survey is included in Appendix B.

Two survey approaches assisted in gathering the information from the learners; an internet-based questionnaire and a hard copy version. The five case study organisations chose a cross-section of their learners.

A further survey was sent to Literacy Aotearoa and ESOL to supplement the five case study organisations.

Survey Results

The total number of responses from the survey was 595. They are illustrated in Table 5.1 below. Responses for each organisation are weighted according to the representative value of each organisation for the ACE sector⁹. This ensures that results from organisations such as Literacy Aotearoa are not over weighted, and it ensures that each organisation is given a proportional representation in the result. These weightings are presented in the last column. All subsequent results are adjusted according to these weightings.

Table 5.1: Response Weighting

ACE Organisation	Response Percent	Response Count	Representational Weighting %
Literacy Aotearoa ¹⁰	50.1%	298	11%
ESOL	5.5%	33	11%
Aranui CLC	8.9%	53	20%

⁹ See Section 7 for a discussion of how these are determined.

¹⁰ Includes comparative data collected from VAVA Study.

ACE Organisation	Response Percent	Response Count	Representational Weighting %
Wairarapa REAP	6.4%	38	10%
Te Aroha Noa	9.1%	54	15%
Rauawaawa Trust	12.1%	72	22%
Waitakere WEA	6.6%	39	10%
Other	1.3%	8	1%
Total		595	100%

Figure 5.1 below shows there is a large number of participants in the ACE sector over the age of 65. This has an effect on reducing the overall direct economic impact the sector has as a result of shorter working lives and reduced productivity benefit. There are significant social benefits, however, for this age group which do have indirect benefits such as improvements in mental and physical health over their remaining life. The average age of survey respondents is 46 and reflects the generally older age of ACE participants than traditional education users.

Figure 5.1

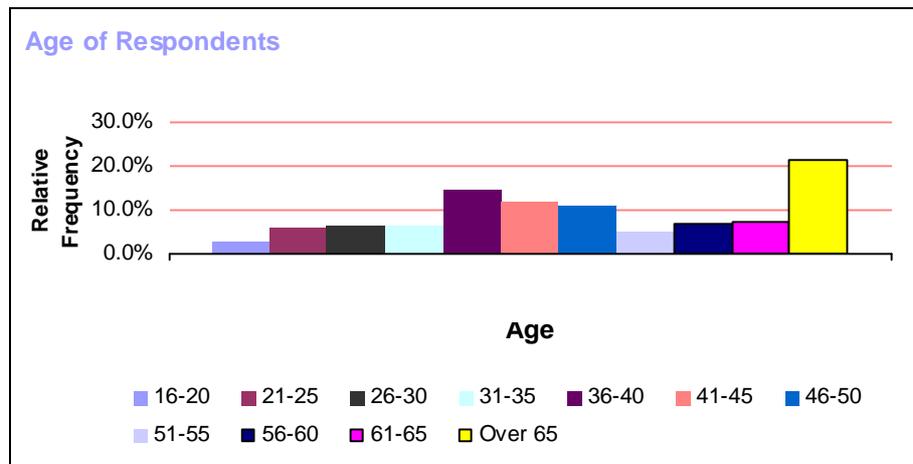


Figure 5.2 below illustrates there is a high proportion of females who undertake ACE programmes/activities. As some literature shows, females also tend to be more socially involved in their communities and are more likely to actively seek out community based learning experiences.¹¹

¹¹ Johnstone, R., (2003), The Prevalence of Adult Education in Western Economies. London School of Education. London

Figure 5.2

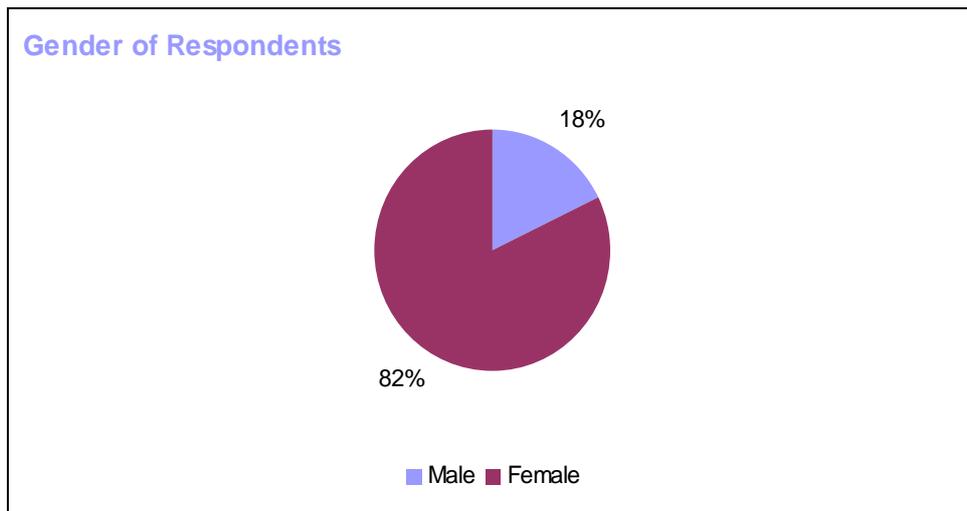
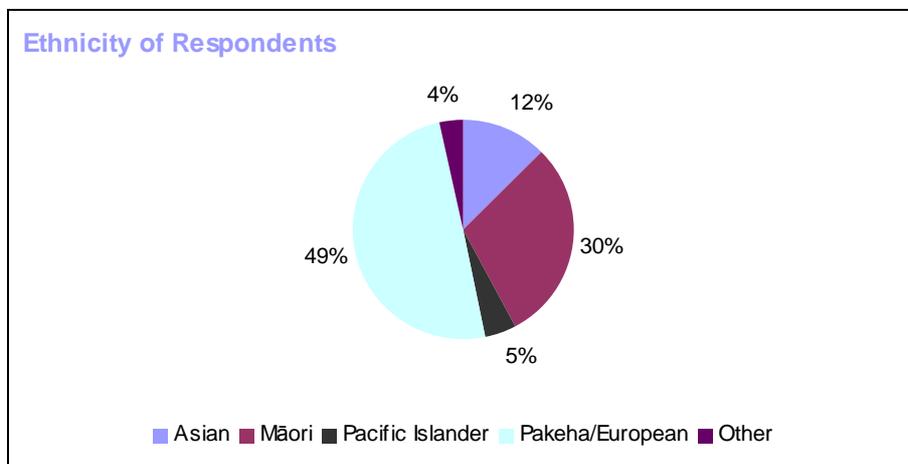


Figure 5.3 illustrates the overrepresentation of ethnic minority groups in the sample of the ACE sector compared with the general NZ population. Given the focus of ACE programmes and activities on the individual learners' needs and learning styles, its programmes need to accommodate different ethnic learning styles.¹² It also illustrates a key assumption in that as the general profile of ACE participants tends to be from lower socio-economic demographics, there is a greater marginal return in improving the outcomes for these individuals. Where ACE participants come from groups of society with greater need, the estimated economic benefits tend to be higher.

Figure 5.3



¹² Feinstein, L. & Sabates, R. (2007, June). The Public Value of Adult Learning: Skills and Social Productivity. Centre for Research on the Wider Benefits of Learning: London.

Figure 5.4 and 5.5 highlight that most ACE programmes and activities tend to be delivered in less than five hours per week and the majority are 10 or fewer weeks in length.

Figure 5.4

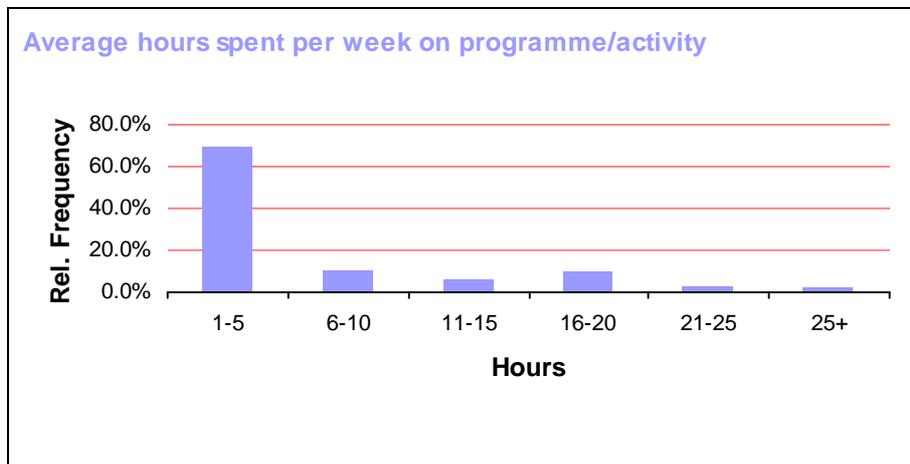
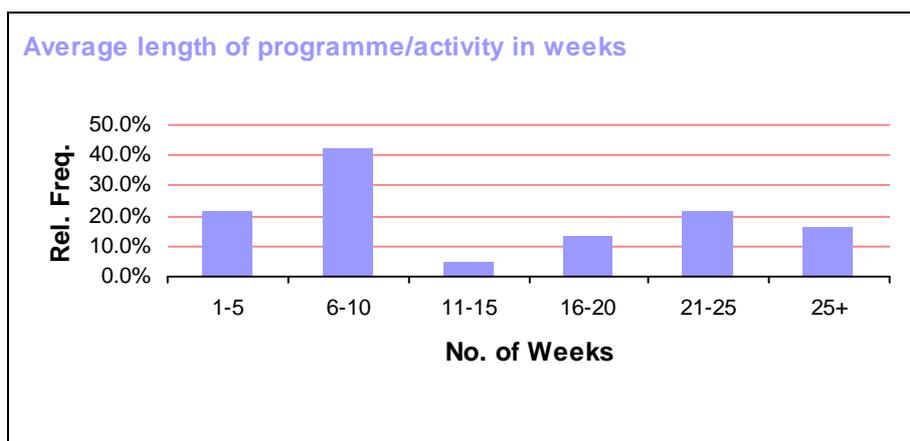


Figure 5.5



As illustrated by Figure 5.6 below, the primary reasons for participants' involvement in ACE programmes or activities are to improve confidence and self esteem, and for enjoyment. It is interesting to note that a large number of the participants' primary objective is to improve employment prospects or transition into further study. Figure 5.7 also shows that *all* participants felt they were achieving their objectives, and 94% felt they had fully achieved their objectives. This illustrates the efficacy of ACE provision in terms of delivering on learners' self-set objectives.

Figure 5.6

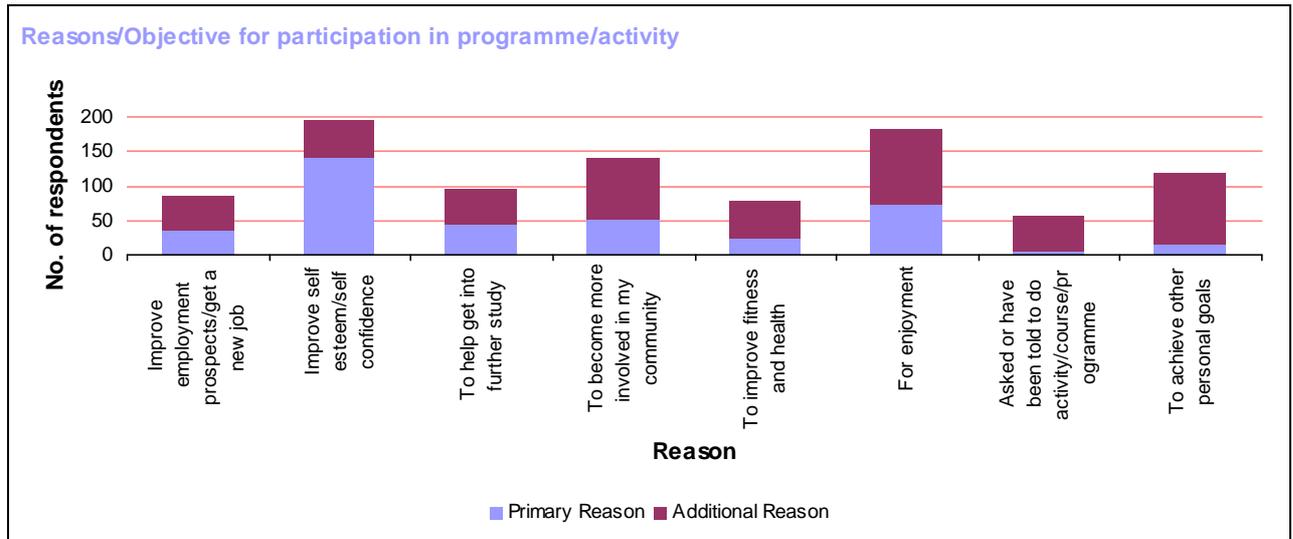


Figure 5.7

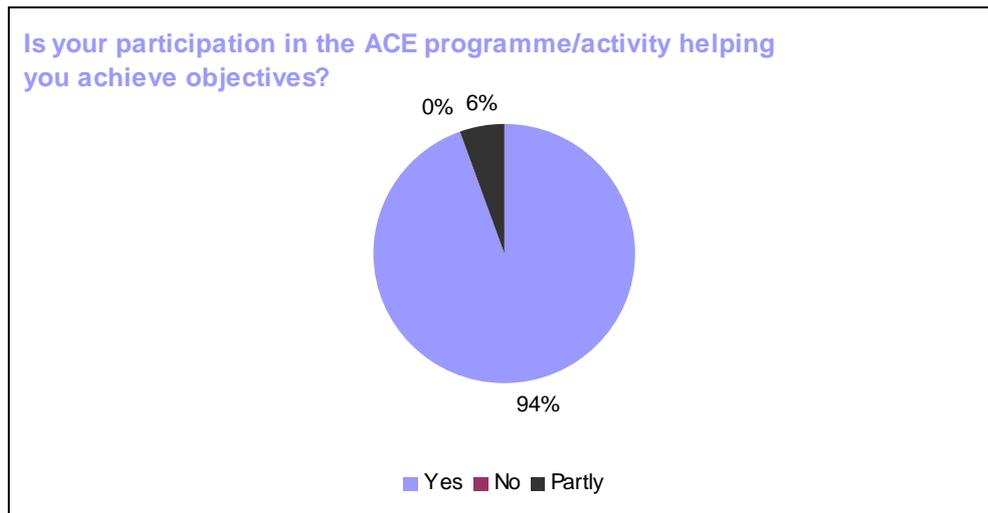


Figure 5.8 shows the value of ACE programmes/activities in improving learners' technical skills, particularly in the area of numeracy and literacy. Less than 20% of learners surveyed were directly involved in numeracy or literacy specific programmes. Yet 20% of respondents recognised an improvement in their literacy and numerical skills suggesting that these skills have been additional indirect benefits of being involved in ACE programmes, courses and activities.

Figure 5.8

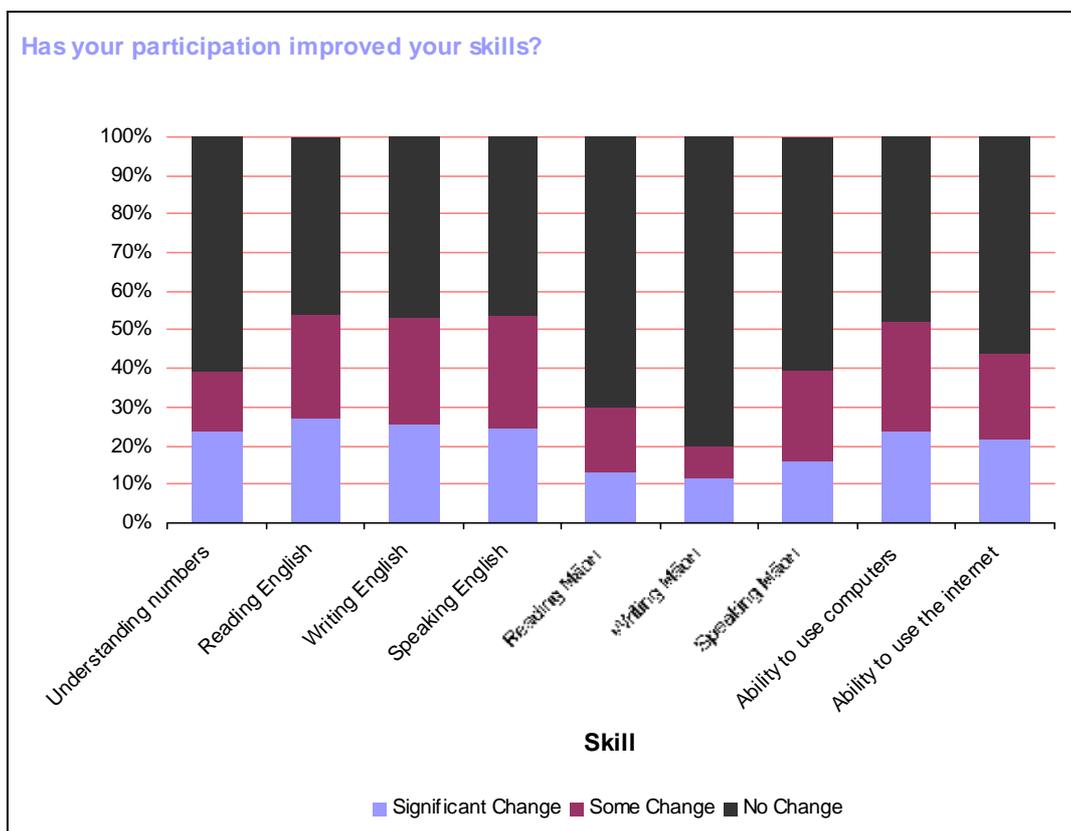


Figure 5.9 shows that learners' participation in ACE activities/programmes has a significant impact on many facets of their lives. Over 90% of all participants indicated that they had experienced some increase in self-esteem and self-confidence as a result of their participation in ACE.

58% of participants indicated they had an improvement in their health, with 33% indicating a significant improvement. Over 73% of respondents indicated an improvement in home/family life, which is significant in reducing the effects of domestic violence.

An improved ability to communicate with others, which was experienced by over 87% of all respondents is, we believe, an important factor in improving home/family life and reducing the chances of domestic violence. It also increases acceptance and understanding of other cultures and ways of life, and helps individuals to become more assertive.

An improvement in overall happiness was identified by 88% of participants.

Figure 5.9

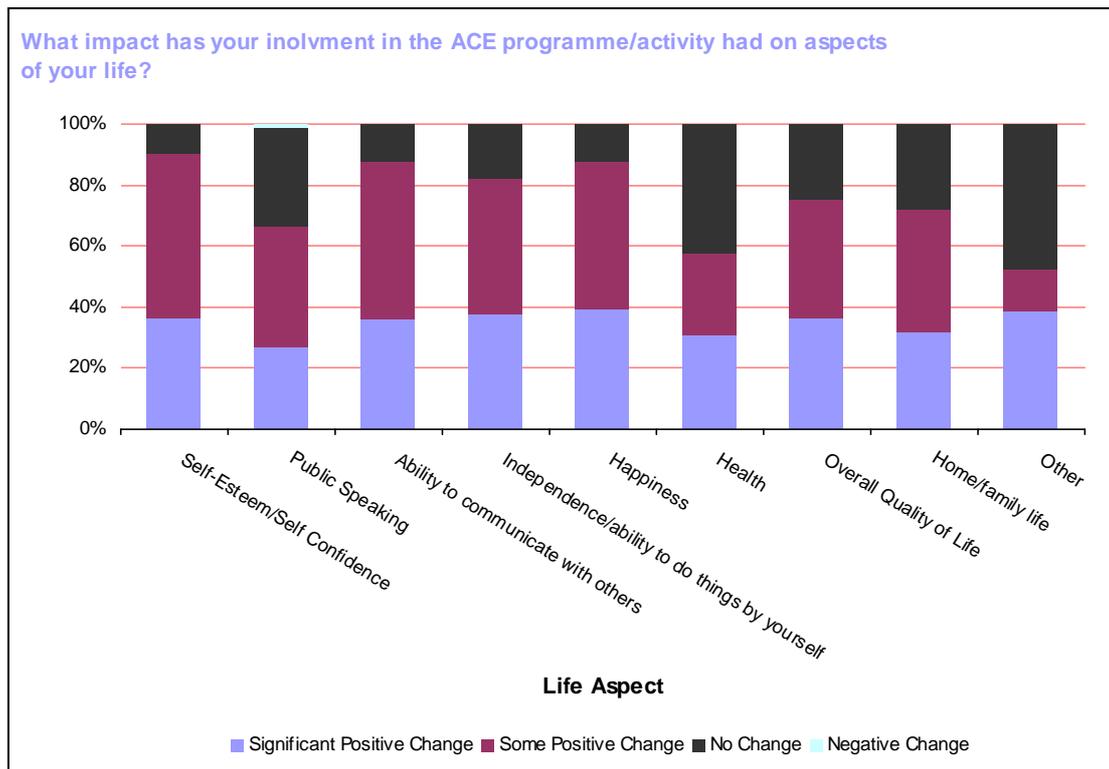
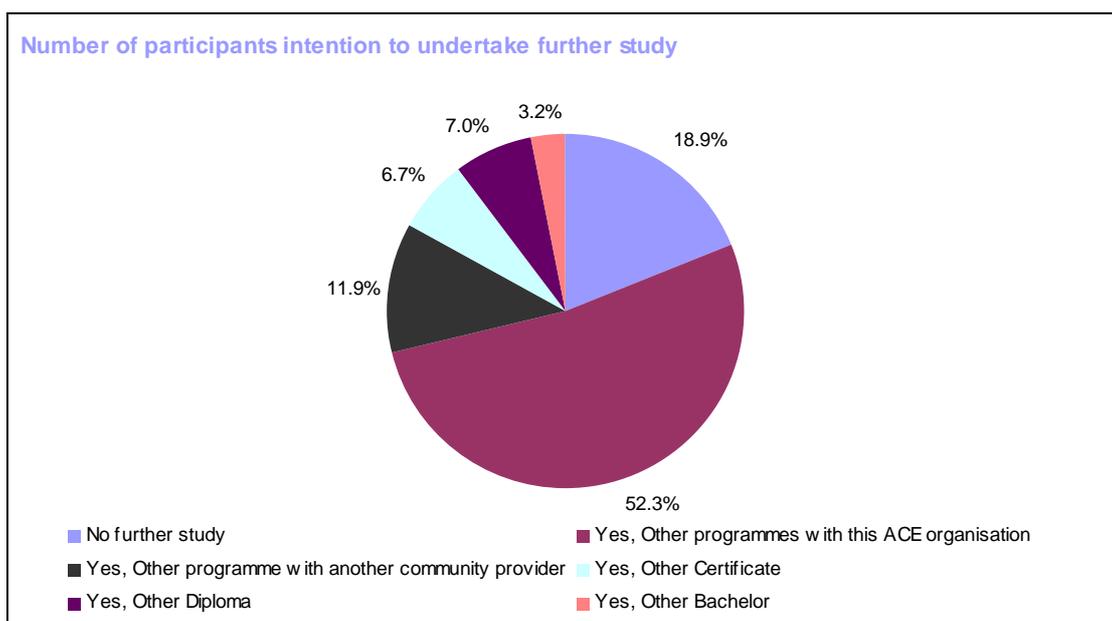


Figure 5.10 shows the number of individuals intending to progress on to further study as a proportion of overall respondents. It is interesting to note the large number intending to go on to further study with the existing ACE organisation: 82% of all respondents. Of these, 53% will take up another course with the same ACE organisation. 17% of individuals said they were intending to undertake further tertiary education at a higher level. This indicates that involvement in ACE enables users to stair-case to higher education.

Figure 5.10



Improvement in expectations or aspiration is an important outcome and has a significant amount of predictive power in determining future outcomes as evidenced by literature.¹³ Figure 5.11 illustrates that 48% of respondents expected an improvement in income, 60% expected an improvement in future career prospects, and 57% expected an improvement in their health and fitness. 28% of respondents also expected an increase in their home ownership prospects as a result of their ACE participation. Figure 5.12 illustrates that 88% of respondents feel their overall life opportunities have increased as a result of their participation in ACE.

Figure 5.11

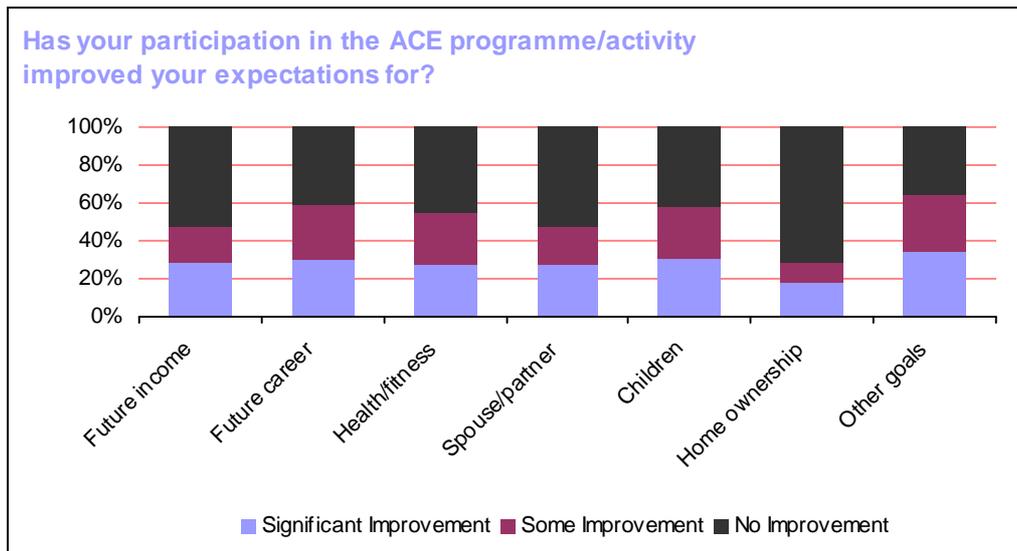
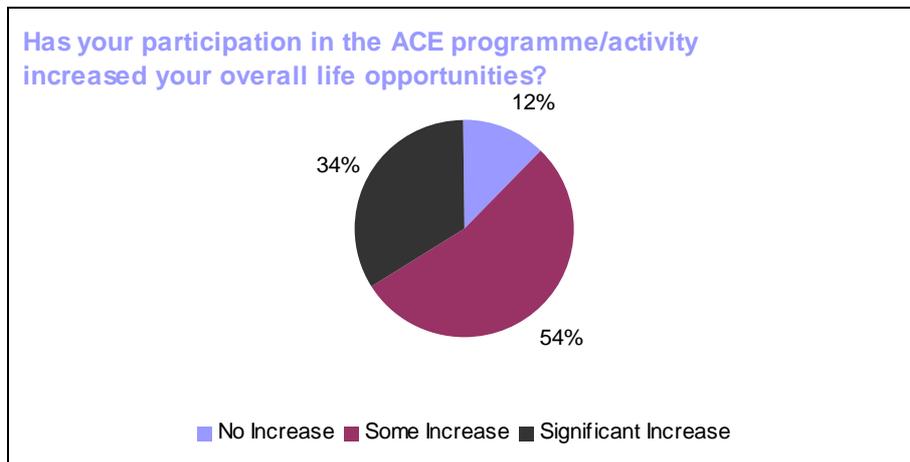


Figure 5.12



¹³ Using Expectations Data to Study Subjective Income Expectations. Journal of the American Statistical Association, Vol 92, 1997.

Improvement in health was also evident as a benefit of ACE by respondents. Figure 5.13 shows over 62% of all respondents indicated they had experienced at least some improvement in their overall health and wellbeing as a result of participation in ACE. It is interesting to note that over 15% of respondents indicated they had an improvement in the smoking and alcohol consumption as a result of their ACE participation. Improvements in mental health were also experienced by 38% of all respondents.

Figure 5.13

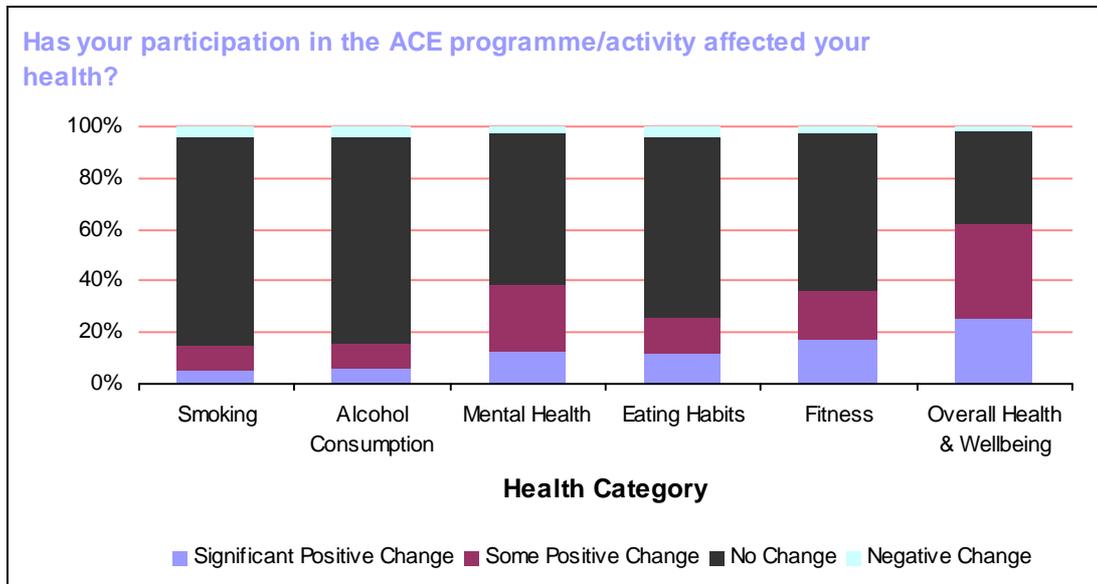


Figure 5.14 shows that in general ACE participation does not change how individuals use community services, and in fact in some cases increased their likelihood of using some services, particularly employment and education based services. This is not surprising as many individuals, through their involvement in ACE become more aware of other community services and more confident in using them. Figure 5.14 also shows that overall ACE participation is likely to increase individual's involvement in community activities, with 74% of individuals indicating an increase in community participation. Community participation has a significant effect on adding value through volunteer time, and contributes to civic citizenship and social cohesion.

Figure 5.14

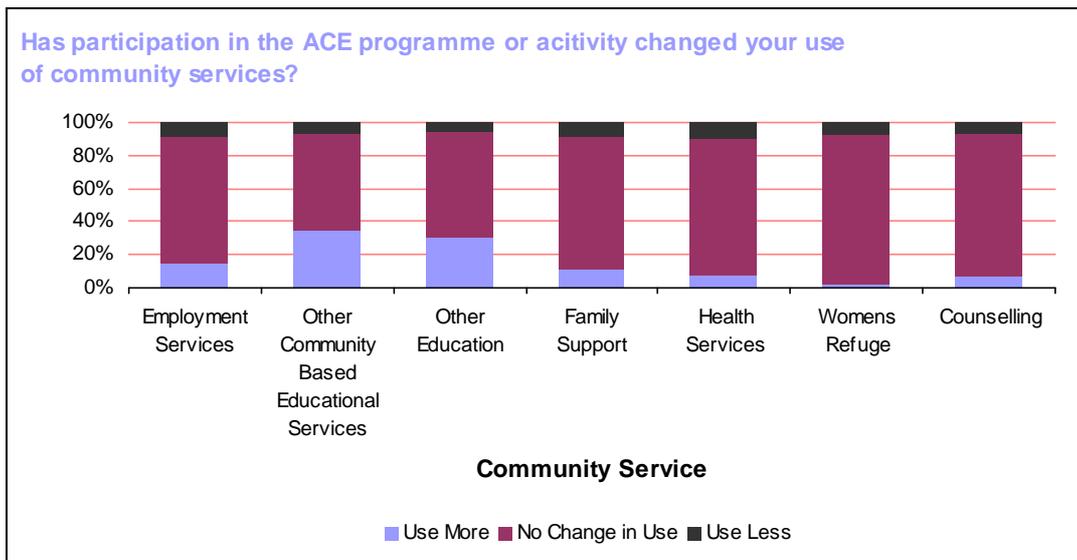


Figure 5.15

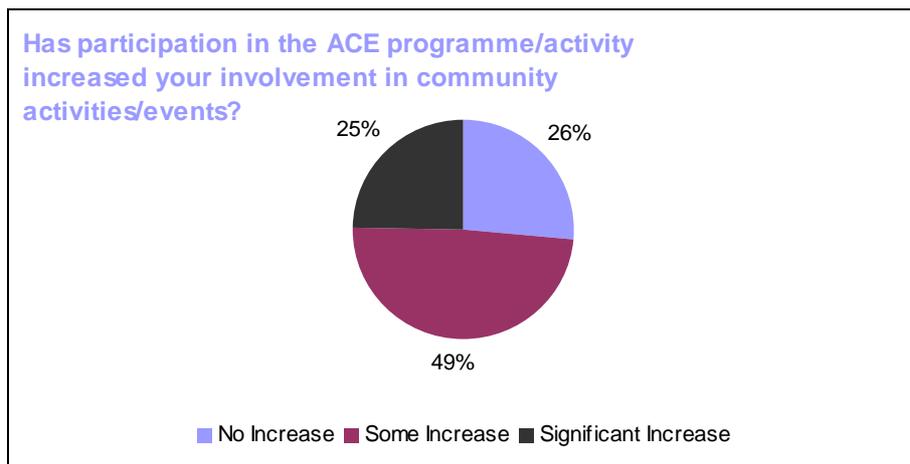
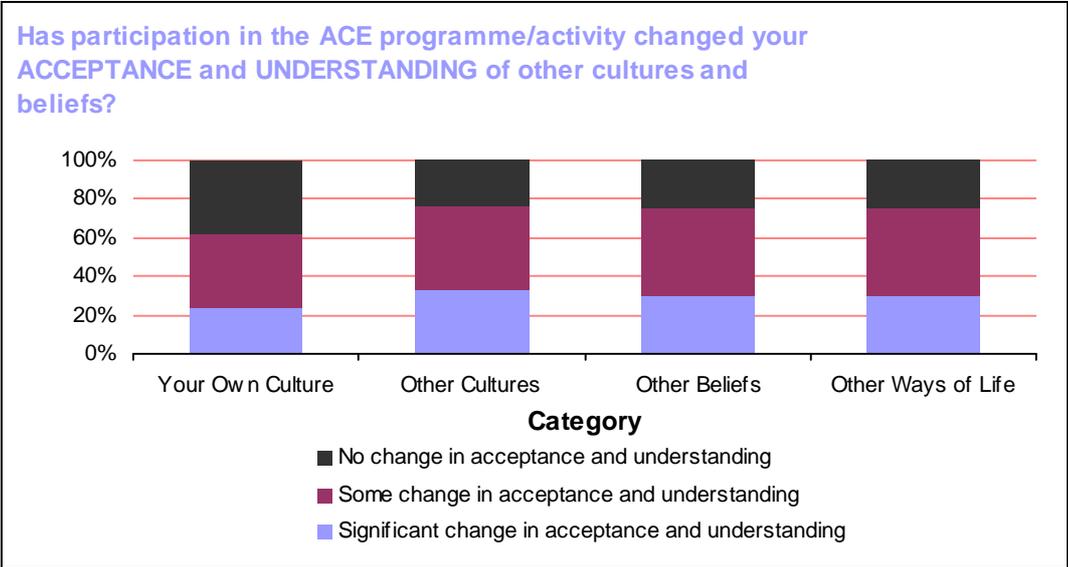


Figure 5.16 illustrates how participation in ACE improves individuals' acceptance and understanding of other cultures, beliefs and ways of life. This contributes to outcomes in improving social cohesion and reducing racially motivated crime.¹⁴

Figure 5.16



¹⁴ Hamerstein, Roger. 2003. Racial Crime and Cultural Understanding. Journal of Social and Ethic Research.

6 Literature Search: Adult and Community Education

ACE Benefits and Outcomes from International Studies

Within the Adult and Community Education sector, there is a diversity of views and opinions held about the identification, definition and value of the social and economic benefits of adult education. A view that is consistently held, both by ACE users and by other independent empirical research, is that education aimed at adult learners builds human capital. However, how human capital is described and its various component parts are understood is complex.

The discussion below briefly summarises the literature about human capital as it relates to ACE.

Not all benefits of investment in human capital can be captured in terms of direct economic impact. Instead they may have a multitude of social benefits which in turn have economic consequences. These are usually categorised into economic and non-economic benefits. The creation of knowledge, skills, competences and aptitudes relevant to economic activity affect not only performance at work but also social behaviour. “Spin-off” benefits may affect public health, crime, the environment, parenting, political and community participation and social cohesion, which in turn feed back into economic well-being.¹⁵

Improved Self-Esteem/Self-Confidence

Most studies on outcomes in adult education cite a number of non-academic outcomes. It is difficult to isolate the technical education component as being the cause of those outcomes. However, there are obviously strong correlations between increased self-confidence (and the hopefulness and optimism this generates) and the return on further education gained as an adult.¹⁶

Researchers are challenged by the difficulty of isolating variables in adult learning when attempting to show direct causal relationships between education specific programs and non-academic progress. Self-confidence is the most commonly mentioned non-academic outcome. According to Beder, participation in adult literacy has a positive impact on learners’ self-image.¹⁷

Another important outcome is that learners consistently report that attending a literacy program helped them to feel more independent.¹⁸

Improved Community Cohesion

Attitude change is mentioned in the literature as well. Preston states in his report, which looked at attitude changes on over 8000 people, that ‘adult learning has beneficial impacts on attitude changes’.

¹⁵ OECD (1998). Human Capital Investment; An International Comparison. OECD, Paris

¹⁶ Westell, Tracy (2005). Measuring Non-Academic Outcomes In Adult Literacy Programs: A Literature Review.

¹⁷ Beder, Hal. The Outcomes and Impacts of Adult Literacy Education in the United States: NCSALL Reports #6.

¹⁸ *ibid.*

Many studies mentioned that as a result of increased levels of confidence, learners build relationships with others that help to create a sense of community.¹⁹

Westell emphasises the fact that what people have learned is that *they have learned*. Bossort²⁰ associated these impacts with an economic benefit to society in facilitating healthier lifestyles and greater and more informed participation in social relationships of all kinds.

If we look at the wider benefits of learning, Chevalier and Feinstein cited in [Feinstein and Sabetes]²¹ showed through simulation that taking women without qualifications to level two in the UK would lead to a reduction in their risk of adult depression at age 42 from 26% to 22% (a 15% reduction). A US study from Lleras-Muney²² shows that an additional year of education lowers the probability of dying in the next 10 years between 1.3 to 3.6 percentage points. Feinstein and Hammond²³ showed that participation in adult learning had positive effects on race tolerance, authoritarian attitudes, political cynicism, political interest, number of memberships and voting behaviour.

Bowman²⁴ looked into the Australian ACE providers instead of the learners (*“the value of ACE providers”*). According to this report, the range of outcomes ACE providers are achieving, include:

- (a) re-engaging adults with learning who have limited previous education and giving them a new start at obtaining basic education skills, for life and work purposes;
- (b) providing pathways for learning-engaged adults into formal tertiary education and paid work and so helping to up-skill Australians to keep pace with the increasingly skills-rich nature of much of the available work nowadays;
- (c) offering vocational training in their own right and across the full spectrum of VET (vocational education training) qualifications and fields of educational study, including in the trades areas and at diploma levels where there are identified skills shortages across the country;
- (d) improving mental, physical and emotional well-being (a growing issue in Australia, given the ageing of the population among other reasons);
- (e) encouraging adults to become active as volunteers in community activities, and thereby contributing to social cohesion and unity; and
- (f) facilitating local networks and community-led developments that is in line with community needs and objectives.

¹⁹ *ibid.*

²⁰ Bossort, P., Cottingham, B. and Gardner, L. Learning to Learn: Impacts of the Adult Basic Education Experience on the Lives of Participants. Vancouver, B.C.: Adult Basic Education Association of British Columbia.

²¹ Feinstein, L. and Sabetes, R., (2007). The Public Value of Adult Learning: Skills and Social Productivity. Centre for Research on the Wider Benefits of Learning Discussion Paper. London.

²² Lleras-Muney, A. (2005). The relationship between Education and Adult Mortality in the United States. *Review of Economic Studies*, 72, 189-221.

²³ Feinstein, L., & Hammond, C. (2004). The contribution of adult learning to health and social capital. *Wider Benefits of Learning*, Research Report 7. London.

²⁴ Bowman, K. (2006). *The value of ACE providers: A guide to the evidence base.*

Human Capital

The OECD made an international comparison about human capital investment.²⁵ Human capital investment confers benefits on individuals, enterprises and societies. These benefits may be economic in nature and accrue in the form of additional earnings, productivity or economic growth. Human capital investment can also give rise to a wide range of non-economic benefits including greater social cohesion, lower crime and better health.

The OECD has reviewed some of the key evidence for the relationship between human capital and economic and social outcomes. Inevitably, because of data constraints, the most robust measures of benefit and of returns focus on market outcomes only, and are based on formal educational attainment rather than on wider definitions of human capital investment. Notwithstanding the variety of complex inter-linking factors which underpin economic growth, the evidence does point to a positive relationship between expenditure in education and general macroeconomic performance.

Enhanced Incomes and Employment

A substantial amount of research and literature exists on the economic benefits of adult literacy programmes. Often these economic benefits are measured in terms of the increase in incomes as a result of better job prospects²⁶. These studies also measure cost savings, such as, the reduction in welfare costs and reduced crime and family violence costs, which have a high correlation with education and socioeconomic levels.

The 1998 report of the OECD on Human Capital stated that educational attainment is positively related to individual performance in the labour market. Those with higher levels of education are more likely to participate in the labour market, face lower risks of unemployment and receive higher average earnings. On average across 26 countries, individuals with below upper secondary attainment can expect to spend more than twice as much time unemployed as tertiary graduates. As well as being more likely to participate in the labour market, people with more education earn more on average over their lifetimes.

A study by Dean,²⁷ of the value of 4,865 adults obtaining their General Equivalency Diploma²⁸ in the United States, showed:

- increased rates of employment (17.4% increase);
- higher skilled jobs (37.2% increase);
- higher satisfaction with their jobs (37.8% increase);

²⁵ *ibid.*

²⁶ Hartley, R (1989). *The Social Costs of Inadequate Literacy: A report for International Literacy Year*, AGPS, Canberra; Gleeson, L 2005, *Economic returns to education and training for adults with low numeracy skills*, NCVET, Adelaide; ProLiteracy America 2003, *US adult literacy programmes: Making a difference—A review of research on positive outcomes achieved by literacy programmes and the people they serve*, ProLiteracy Worldwide, Syracuse, NY.

²⁷ Dean, G. (1998). *The value of obtaining a GED in Pennsylvania*. *PAACE Journal of Lifelong Learning*, 7, 73-84.

²⁸ *General Equivalency Diploma*, an exam specially geared for high school dropouts who wish to complete an equivalent to high school graduation as adults.

- more likely to earn over \$20,000 (26.5% increase);
- reduced dependency on welfare (by 5.6%);
- increased home ownership (18.4% increase); and
- the participants had gone on to other forms of education (60.5% of the total).

Most research into adult literacy shows that literacy has a persistent, positive and statistically significant association with people's earnings per hour, or per week. People with greater literacy skills are paid more, on average, than people with weaker literacy skills, even after taking account of other observed factors such as age, ethnicity and gender.²⁹ Using the New Zealand IALS data, Maré and Chapple (2000) show that a 10% increase in the average of the three literacy scores raises male annual earnings by 4.0% and female annual earnings by 5.1%.³⁰

Improved Health

There is clear evidence that better educated people tend to be healthier, even correcting for the health benefits that they enjoy because of their higher income. Studies³¹ have shown that adults with more schooling have generally better health outcomes on average. Reading helps people to access information about health issues and treatment, as well as being able to understand and process the information gathered. Indirectly, adult learning gains also generate other effects on their physical and mental functioning.³²

Reduced Crime and Violence

There also exists a substantial body of literature which indicates that there is a correlation between domestic violence crime, education and socioeconomic levels.³³ McCauley et al (1995) found that for 63% of domestic violence victims, they had a high school certificate or less. Of domestic violence abusers, 43% had even lower levels of education.³⁴ While the link between education and domestic violence is often indirect, research shows that inverse correlation further strengthened by income levels. Domestic violence has a very strong inverse

²⁹ Johnston, M. (2004). Adult literacy and economic growth. New Zealand Treasury working paper.

³⁰ Maré, D & Chapple, S. (2000). "Literacy formation and its influence on earnings and jobs.", Wellington, Department of Labour.

³¹ Studies of OECD (1997), Taubman and Rosen (1982), Grossman (1975) and Desai (1987)

³² Ministry of Education (2001). KOIA! KIOA! Towards a Learning Society. The Role of Adult and Community Education.

³³ Lockhart L. L. (1999). A re-examination of the effects of race and social class on the incidence of marital violence: A search for reliable differences. *J Marriage Fam.* 1987; 49:603-610.

Demetrios, Anglin, & Taliaferro. (1999). Risk Factors for Injury to Women from Domestic Violence. *New England Journal of Medicine.*; Centerwall BS. Race, socioeconomic status, and domestic homicide, Atlanta, 1971-72. *American Journal of Public Health.* 1984; 74:813-815.

³⁴ McCauley, Kern, Koldner & Schroder. (1995). The "battering syndrome": prevalence and clinical characteristics of domestic violence in primary care internal medicine practices. Johns Hopkins University School of Medicine, Baltimore, Maryland, USA.

relationship and is often the determining variable in the education and domestic violence link.³⁵ Estimates of the cost of domestic violence in New Zealand range from \$1.5 billion to \$1.7 billion per year.³⁶

It has also been shown that there is a strong inverse relationship between crime and education/income levels. Lochner (1999) found that education beyond high school reduced the likelihood of a person committing a crime by 30%, and that education beyond the equivalent of New Zealand's Year 11, reduced the likelihood of a person committing crime by up to 95%.³⁷ Job Corps, a literacy program for youth in the US estimated a reduction in crime per participant of US\$4,500 (NZD\$7,258).³⁸ Research findings reported by Behrman and Stacey³⁹ (1997) also tend to support the view that the major crime-reducing effects of education come not only from higher levels of educational attainment, but also from the socialising and supervisory activities of education programmes.

Often research also shows a strong inverse relationship between income levels and crime. The results of these studies, however, need to be treated carefully, as on some measures, such as GDP per capita there are a positive relationship between increasing incomes and an increase in certain types of crime.

In general, the combination of increased education, employment and income levels will have a significant decrease on the likelihood of an individual committing a crime.⁴⁰ As reported by the New Zealand Treasury, crime in New Zealand costs \$9.1 billion a year. Of that amount, \$7 billion is borne by private individuals and \$2.1 billion by the government.⁴¹

A summary of the relationship between the main social outcomes and their economic consequences as evidenced by the literature is illustrated on the next page.

³⁵ Petersen R. Social class, social learning, and wife abuse. *Soc Serv Rev.* (1980); 54:390-406.; Abbott J, Johnson R, Koziol-McLain J, Lowenstein SR. Domestic violence against women. Incidence and relevance in the emergency department population. *JAMA.* 1995;273:1763-1767.

³⁶ Snively, S. (1994) The New Zealand economic cost of family violence. Family Violence Unit. Department of Social Welfare. Wellington.; Beckett, T. & Chapple S. (2006) An estimation of the costs of family violence and neglect to New Zealand. Ministry of Social Development. Wellington.

³⁷ Lochner, L. (1999). Education, Work, and Crime: Theory and Evidence. Rochester Center for Economic Research.

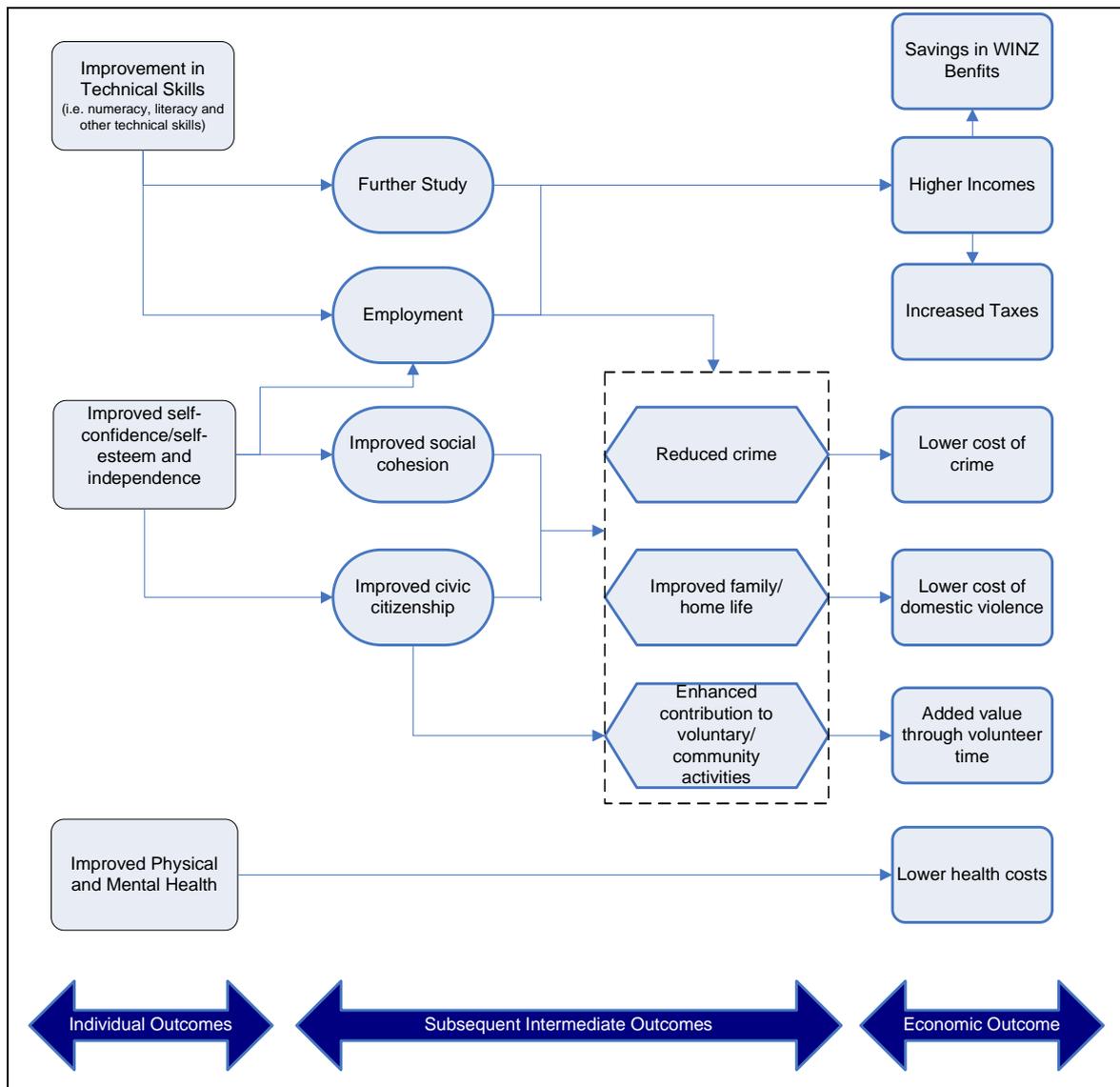
³⁸ Long, C. Mallar, and C. Thorton. Evaluating the Benefits and Costs of the Job Corps. *Journal of Policy Analysis and Management*, 1(1):55(76, Fall 1981.

³⁹ Behrman, J.R. and Stacey, N. (1997). The Social Benefits of Education. The University of Michigan Press.

⁴⁰ Lochner, L. (1999). Education, Work, and Crime: Theory and Evidence. Rochester Center for Economic Research.

⁴¹ NZ Treasury. Economic Cost of crime in New Zealand. 2006.

Table 6-1: Key relationships between individual outcomes and their economic benefits



7 Estimating the Impacts of ACE

A model estimating the economic impact of the ACE sector was developed using the data collected from the survey of ACE learners, the relationships between variables identified in the literature, and the assumptions agreed to during the workshops with the case study organisations.

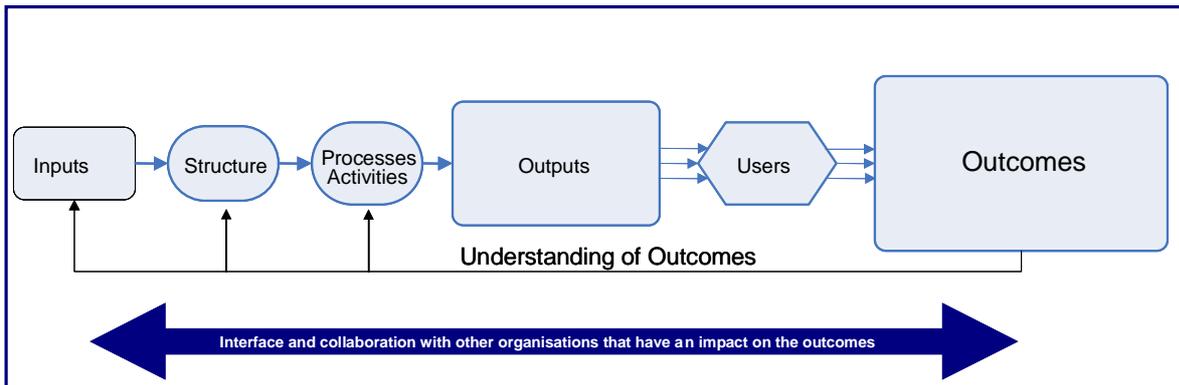
To calculate and estimate the economic benefit, it is necessary to understand the economic impacts of the various outcomes achieved by ACE learners. Some of these economic impacts can be directly measured, for example, actual or expected increases in incomes. Other economic impacts are measured by virtue of other social or technical outcomes, for example, going on to further higher education is likely to have an economic impact when the individual has finished their study through higher earnings. Other social outcomes such as improved self esteem, have economic impacts such as reduced cost of crime and lower cost of domestic violence.

Methodology

Outcomes Framework

PwC's *outcomes framework* was applied to describe and understand the relationships between inputs, outputs and outcomes within the ACE sector (Figure 7-1).

Figure 7-1: Outcomes Framework



Source: PricewaterhouseCoopers, 2008

This approach is designed to calibrate inputs (funding and other resourcing) from several sources and examine the way that these inputs contribute to the composition of the outputs. The effectiveness of these outputs is then examined in relation to the extent of engagement of adult learners within the ACE sector. This engagement is the mechanism that generates the achievement of results (outcomes) and it is the nature of this engagement (the focus and depth of it) that leverages the added value to society. The framework has been designed so that the value add from these outcomes can be attributed as an economic benefit to both society and the individual.

Inputs, Outputs and Outcomes

Staff and volunteer time and materials that are combined to produce the ACE sector's services are 'inputs'. The inputs combine to make up the provision of ACE's services – its course offerings. The value of the outputs is greater than the sum of all the inputs because of the way in which the inputs combine to produce the ACE activities. The combination of inputs and the processes used to generate the services are categorised as 'outputs'.

Outcomes answer the question: “What difference does our organisation make?” Outcomes express the impact that an organisation achieves through the provision of its services to its users. Outcomes are the changes that occur or the difference that is made to an organisation’s “public” because of the way that they engage with ACE’s services/outputs. ACE’s public include individuals, groups, families, households, organisations, or communities.

Organisations can improve their outcomes by increasing their understanding of the relationship between outputs and outcomes; specifically, how their outputs succeed in engaging users to increase the value of the outcomes achieved. Successful organisations strive to gain an understanding of the connection between inputs, outputs and how these outputs engage with users to achieve the outcomes. By articulating and understanding the links between outputs, their users and outcomes, ACE providers can continually increase the value of the outcomes they set out to achieve.

Effective organisations are those that record, report and monitor how their outputs engage their users in a manner that leverages increasingly better outcomes. Examples of effective outcomes in the ACE sector may include improvements to the quality of life of adult learners through programmes (outputs) that engage them in ways that increase their independence or self-esteem (outcomes).

In general, not all outcomes are achieved at the same time. Some outcomes must be accomplished before other outcomes. Distinguishing between outcomes that are achieved over the short, intermediate, and long term is an important part of understanding how outcomes are created and the benefits they generate.

It is important that this ‘logic model’ is not static. It can and should change over time as experience with, and knowledge about the determinants of the sector and the outcomes of its service providers increase.

Social and Economic Outcomes

The description of the ACE sector’s social and economic outcomes is the starting point to estimating their value. Although often contrasted, the social and economic outcomes are not mutually exclusive and often occur together. For example, a social outcome often has an economic consequence. We can say that improving the cohesion of a family unit (social outcome), can result in reducing the *likelihood* of family violence which has an economic consequence. Likewise, an economic outcome can sometimes have a social consequence that leads to improved social outcomes that can be given a monetised value. For example, improvements in incomes (economic outcome) have been shown to reduce crime (a social outcome) which in turn has another economic outcome (reduced cost of crime).

Literature Review

The systematic international literature search identified the latest research and data relevant to ACE sector outcomes. It also sought to discover if there were similar studies done of comparable sectors overseas. In addition, the literature search looked for other economic and social evaluation approaches relating to adult and community education. This provided rich information to use as the basis for assumption about the ACE sector to calibrate outcomes.

Data Collection

Given the size and scope of the ACE sector, and the absence of sector-wide data collection systems, a key challenge is to capture reliable data that can be aggregated to describe the sector as a whole. Most ACE service providers operate relatively independently of each other and this reduces the extent of published shared knowledge.

In addition, although individual service providers know ‘intuitively’ about their own users’ characteristics, there are limited resources to collect, record and analyse descriptors in detail. Some organisations, such as PTEs and universities, collect robust data about their course output and, in some instances, this is accompanied by some data about those who use the service and the outcomes achieved. In general, however, data about ACE activities is limited. As a consequence, most knowledge about the sector is derived intuitively and held within the minds of those individuals who have an interest in the ACE sector’s activities.

The case study approach provided a means to describe and capture the nature, type and diversity of the sector’s outcomes. It also enabled a detailed analysis and understanding of the linkages between inputs, outputs and outcomes. The learnings and relationships between outputs and outcomes for each case study were used to assist with gaining a perspective on the likely magnitude and identifying outcomes that would cover the entire ACE population.

Two workshops were conducted with five case study organisations to understand their programmes and to describe their activities, inputs, outputs and outcomes.

Workshop 1

The first workshop provided an opportunity for the five case study organisations to describe themselves, their services, their users and their expectation from the project. The workshop covered the following:

- The broad objectives of the ACE sector, and the outcomes its users sought;
- A summary input, output, and outcome framework;
- The relevant input, output and outcomes data collected by the sector – what data is collected and how;
- A number of specific tasks including:
 - Completion of an organisational input worksheet;
 - Completion of a data availability worksheet;
 - Completion of an organisation profile and summary; and
 - Completion of five user case studies, which were a stratified sample of the users within their organisation.

A common framework, based on the *ACE Priority Framework*, was used to combine the user case study groups across all five organisations. The user case studies described the ACE sector user base and the nature of their engagement with ACE services. The description of the case studies has been discussed further in Section 5.

The workshop focused on understanding and analysing in qualitative terms the individual and community based outcomes that are realised as a result of the sector’s programmes and activities.

Workshop 2

This workshop was a follow-up on the tasks given to each organisation in the first workshop, and an opportunity to test the preliminary outcomes framework with the case-study organisations.

It focused on the design and delivery of a survey instrument to capture quantitative, outcomes-related data, from each of the case organisations learners.

A service delivery worksheet was completed, which captured service output data from each of the case study organisations, including, course/programme/activity name, enrolments, delivery mode, length, and if available, completion rate.

Survey of Users

Data on the outcomes of individual users collected through a sample survey was collected from each of the organisations. This provided quantitative data on the individual outcomes users were achieving as a result of their participation in ACE sector programmes and activities. The self-evaluation survey sought to understand the net change in users' outcomes.

The survey was extended to English as a Second Language (ESOL) and Literacy Aotearoa, as these organisations account for a large part of the activity in the sector, and, further reflect its diversity. A total of 595 learner responses were collected from across the seven organisations.

The responses were collected using a semi-stratified sampling technique. According to this technique, the responses received from the seven case organisations' users were weighted according to their 'representational' impact in relation to the entire sector based on provider type and total number of participants for each provider.

Estimating the Social and Economic Value of Outcomes

The next step involved is to estimate the social and economic value of the outcomes. A model was developed that estimated the economic values of a selected set of outcomes being achieved by the ACE sector and its users. The estimate was based on a survey of ACE learners and a number of assumptions confirmed at the workshops with ACE sector organisations.

The model built was based on previous models for the COMET and VAVA projects.⁴² The model applied data from the workshop findings, the input and output data collected from the case study organisations, the survey of users and information gathered during the literature scan.

The data from the 595 user surveys was extrapolated across the entire ACE population. To test for the reliability of the results, sensitivity analysis was conducted on the total number of users within the sector, and across a range of statistical confidence intervals and discount rates.

When assigning economic values to the outcomes, the literature search, survey responses and the ACE case study organisations provided key information. PwC's *outcomes framework* is designed to make the basis of calculation transparent and references all assumptions applied to estimate the economic value of an outcome.

The modelling of assumptions is such that as more data becomes available, the outcomes framework can be updated and assumptions replaced with verifiable fact and time series data

⁴² PwC Report (2006), COMET - Manukau Family Literacy Programme, Outcomes Valuation Project. PwC Report (2007), Value Added by Voluntary Agencies (VAVA) - COUNTING FOR MORE, Phase 2 – A Pilot Study: Measuring Outputs and Outcomes

connected over several periods. Where there is no pre-existing data, the application of well documented assumptions allows a start to be made on estimating outcomes values. This means that economic and social benefits can be understood and can assist in specifying the key data requirements to be reported to improve performance.

Qualifications

There are a number of qualifications to take into account when analysing the results. While they do not negate the estimated value or the approach and methodology used in this project, taking them into account is important to understanding the context within which the economic benefits of ACE outcomes have been estimated.

Three key qualifications are explained briefly below.

- (i) Attribution – the survey asked about the effect of the ACE programme or activity on the achievement of particular outcomes or set of outcomes. It is important to recognise, however, that the ACE programme or service is seldom *solely* responsible for the result of those outcomes. It is likely there are a range of factors and environmental variables that contribute to the achievement of an outcome. In all cases, this study attributed up to a maximum of 50% of an outcome's value to the ACE programme or activity, and depending on the strength of the relationship indicated by the user and evidenced in the literature, the attribution rate assigned has often been lower than 50%.
- (ii) Completeness of Data – the survey was of 595 users from across the “sector”; a good sample size. Even so, this survey was not random and could not be guaranteed to be entirely representational. Instead, it was a semi-stratified survey, with results weighted according to our best estimate of the sector's overall size and characteristics.
- (iii) Averages - the results of the survey were averaged and then extrapolated across the sector to arrive at a sector-wide value. This method of averaging and extrapolating assumes a relatively heterogeneous population within the ACE sector.

PwC Outcomes Framework

A strength of the methodology is that it pulls together the information about a service that is known now so that it is possible to estimate the value of outcomes, even in cases where the information about a sector's activities is limited. This will allow the ACE sector to set in place recording, reporting, monitoring and evaluation processes earlier so that its performance can be fairly assessed, performance-based outcomes indicators can be identified AND the organisation can begin to improve its performance.

Economic Impact of ACE

The key to estimating the economic impact lies in identifying the ACE economic outcomes. It is these outcomes which give the sector its economic impact. Again, there are a large number of other social impacts which have economic consequences. To ensure simplicity and accuracy, the number of economic variables has been limited. It is important to emphasise that adding further economic variables is unlikely to significantly increase the estimated economic impact, as the variables selected account for at least 80% of the economic impact of the ACE sector.

Another important note is that in many cases averages have been used to estimate the cost of an impact. For example the cost of crime has been calculated on an average cost basis. Further, the likelihood of an event occurring in all cases has been assumed to be equal across the population. This ignores individuals' differing propensities to be involved in an event, and assumes that all individuals regardless of their ethnicity, age or gender, have an equal chance of a particular event occurring. For example, all individuals are given an equal chance of being involved in a crime.

The number of participants in the ACE sector and the broad learner categories they fall into are important variables in estimating the economic impact of the entire sector, particularly as averages are used to extrapolate across the entire sector. Given the difficulty in determining the exact size of the ACE sector in terms of discrete participants, a range of values has been calculated, based on varying estimates of sector participation.

The results of the survey yielded the following economic impacts for each of the economic variables included in the model:

Table 7-1: Summary of Present Value of Estimated Economic Benefits Attributable to ACE

Economic Variable (\$million)	PV of the Net Economic Benefit					
	Most Likely		Lower Bound		Upper Bound	
ACE Sector Participation	409,000		327,200		490,800	
Discount Rate	10%	15%	10%	15%	10%	15%
Increase in direct income (PV of net increase in after tax income over an individual's remaining working life)	2,204	1,749	1,762	1,398	2,646	2,099
Savings in Govt benefits (PV of savings in avg. benefit as a result of increased private earnings)	739	551	591	441	887	662
Marginal increase in income from Further Education (PV of net increase in expected earnings as a result of highest level of education intended to complete)	1,398	998	1,118	798	1,679	1,198
Marginal increase in income due to improved self-confidence (Increased earnings due to increase in self-confidence resulting in higher earnings growth)	56	47	45	37	67	56
Savings from a reduction in family violence (PV of savings in the cost of family violence as a result of improved home/family life)	159	123	127	99	191	148
Savings in Health (PV of savings in health costs over the individuals working life as a result of improvements in health)	199	149	159	119	239	179
Savings from crime reduction (PV of the savings in the cost of crime as a result of reduced likelihood of an individual being involved in crime)	254	171	203	137	305	206

Economic Variable	PV of the Net Economic Benefit					
Added value due to enhanced community involvement (The economic contribution as a result of individuals participating in the community as volunteers)	417	327	334	261	501	392
Net increase in taxes due to higher incomes (The PV of the tax on the net increase in an individuals incomes and future earnings due to further study)	915	698	731	558	1,098	838
Total Economic Benefit (\$ million)	\$6,341	\$4,814	\$5,071	\$3,849	\$7,612	\$5,778

Table 7.1 above shows that under the most likely scenario, where the ACE participation is estimated at 409,000 discrete individuals, the estimated **economic benefit attributable to ACE is between \$4.8 and \$6.3 billion dollars annually**. Much of this benefit is derived from increases in individuals' net earnings due to higher paid employment, further education and increases in wage growth. Savings in government unemployment benefits and increases in tax are also a significant proportion of the overall benefit. A detailed description of how each economic variable is calculated and the assumptions and data used is included in Appendix A. The proportion of the total benefit attributable to public and private benefit is illustrated in Table 7-2 below.

Table 7.2

	Gross Economic Benefit \$million	Funding \$ million	Net Economic Benefit \$million	NEB: Per Dollar Return
Private	\$3,759 - \$4,903	\$22	\$3,737 - \$4,880	\$167 - \$219
Government	\$1,142 - \$1,526	\$66	\$1,076 - \$1,460	\$16 - \$22
Total	\$4,902 - \$6,429	\$88	\$4,814 - \$6,341	\$54 - \$72

The ACE sector receives total funding of approximately \$88 million annually. Of this approximately \$66 million comes from government sources. The return on investment from this funding is illustrated in Table 7.2 above.

Overall the sector generates **a total return of between \$54 - \$72 for every \$1 invested** and the **return on government investment is between \$16 - \$22 for every \$1 invested**.

This return is higher than that found in previous outcomes studies in the education sector, such as the COMET Report which showed a return of approximately \$9 for every \$1 invested.⁴³

It is important to note that there remains a number of other economic benefits as a result of ACE which have not been measured. These other benefits include:

⁴³ The reason for the higher return in this study is the larger number of economic variables estimated, namely, savings in health and value added through community participation. It is also important to note that the COMET report used average age rather than actual age of individuals. COMET also receives a lot of its funding for the child education component, which has a lower economic benefit, due to the time lag to adult life and beginning employment.

- Increase in productivity – there are a number of economic benefits attributable to improvements in workforce productivity. Research shows that improved adult education has a strong impact on workforce productivity, and productivity gains have a significant impact on economic growth.⁴⁴ While the first round order of productivity is reflected in the measured increase in incomes, the multiplier effect of this increase has not been measured.
- The effect of increased self-esteem/self-efficacy on health – these factors can have positive effects on the health and wellbeing of participants. Research has shown that measures of self-esteem and self-efficacy can result in improved health and future maintainable earnings (FME) of participants.⁴⁵
- Peer effects – there also exist peer effects of improved adult learning and education. These effects can have noticeable benefits on other family members and community members, particularly children. It has been shown that while changes in education, incomes and aspirations can have some negative effects particularly in Pasifika and Māori communities in the short term, the longer term benefits can lift entire communities from poverty through just one person.⁴⁶

⁴⁴ Economic Development Indicators 2005. Ministry of Economic Development & The Treasury.

⁴⁵ Emler, M. 2005. Self-esteem: The costs and causes of low self-worth. Joseph Rowntree Foundation. Birmingham.

⁴⁶ Pasifika Women's Economic Well-Being Study (Final Report). 2006. Ministry of Womens Affairs; Influences of Maternal Employment and Early Childhood Education on Young Children's Cognitive and Behavioural Outcomes. 2004. Ministry of Women's Affairs.

8 Discussion

It is clear from analysis of the added value of the outcomes that the ACE sector makes a significant contribution. The evaluation is based on a quantification of the social and economic benefits gained by participants in ACE courses. The sector has a large number of adult learners and by extrapolating the economic benefit based on the survey, it is estimated that the sector's benefit is between of \$4.8-\$6.3 billion. This equates to an average of \$11,700-\$15,500 in added value over each individual's lifetime.⁴⁷ It is important to put these estimates in context. They have been done as a range to indicate that the results are assumption and estimate driven at this stage. This is a necessity because ACE providers have not generally been able to fully resource administration systems to cover data collection for recording, reporting and monitoring outputs and outcomes. The data that is collected has tended to focus on the limited range of inputs costed for budgetary purposes.

The assumptions that have been used to estimate the value added from ACE is based on the literature search that found several studies that corroborated our findings about the social and economic added value of the sector. This, combined with the survey information, provided the evidence used to populate the *PwC outcomes framework* to quantify the return on investment to the sector at this point in time. A further check of the results is the work done with ESOL and Literacy Aotearoa which also supports the conclusions.

When compared to other social activities resourced by the government, ACE is likely to be amongst those with the higher added value in economic terms. This is because it is largely focused on improving people's productive lives through learning, i.e. increasing the employability of adults who may currently be without jobs and productivity of those with jobs. The benefits of greater learning are known to have the potential to add positive net benefits in all areas of an individual's life.

In addition, the profile of ACE participants indicates that they tend to be from a lower socio-economic demographic. As a result, there is a greater marginal return because improving the outcomes for these individuals achieves considerable added value per person.

While increasing the number of participants is one way of increasing the return the sector generates, even greater returns may be generated through leveraging additional engagement of the adult learners who already participate. In other words, targeted spending on those parts of ACE provision that make the greatest contribution to improved social and economic outcomes will result in increased return on investment.

Another feature of the ACE programme that levers a higher return on investment is the involvement of in-kind and volunteer inputs.

⁴⁷ At first sight, the ACE sector contribution appears large when extrapolated across the large number of adult learners who participate in it. Nevertheless, with greater resources for more routine regular recording and reporting, the likelihood is that this estimate is conservative. A key reason for this is that the focus of the estimate is on the economic benefits gained by working age adults, up to the age of 65. Current population trends indicate that the average working age is shifting upwards beyond 65 and in addition, those people who attain the age of 65 have increasingly longer life expectancy, including longer years of good physical, mental and intellectual health.

Most ACE programmes and activities are delivered free of charge, and the subsidised government and private cost of delivering these programmes and activities does not reflect actual market costs. This is because the voluntary contribution of in-kind goods and service inputs are “free” or at below market rates. If ACE courses required resources to cover the full market rate of in-kind and volunteer inputs, the return is likely to be much reduced.

Providing services using volunteers and sponsors from the local community also enhances the awareness of the ACE programme with potential adult learners from the relevant social demographics. Because of this greater local understanding of what motivates the engagement of adult learners, the involvement of volunteers potentially leverages greater engagement of adult learners than would otherwise be the case through other tertiary education providers. This also contributes to the return on investment to funders of the ACE programme.

Appendix A: Variable Calculation Rationale/Assumptions

Variable	Rationale/Assumption	Variable Value/Attribution ⁴⁸	Reference
Increase in direct income	<p>This is the PV of the net increase in after tax income over the individual's remaining working life (to the age of 65). This is based on survey respondents' indication of the net change from past to current income weighted at 100% and change from current to future earnings expectations weighted at 50%. Where future expected earnings are expected to begin in 3 years, earnings growth is assumed at 3%.</p> <p>Because the survey is based on respondents' <i>expectations</i> of their change in future income, the predictive power of expected earnings is used based on research (see expectations of future earnings below).</p>	Attribution 50%	<p>ACE Survey Data</p> <p>Using Expectations Data to Study Subjective Income Expectations. Journal of the American Statistical Association, Vol 92, 1997.</p>
Savings in Govt Benefits	<p>This is the PV of savings in the average WINZ unemployment benefit over the individual's remaining working life as a result of increased earnings, and further study leading to a likely increase in future earnings.</p> <p>This is calculated as a function of whether an individual is receiving a benefit and whether their income has increased, or is likely to increase due to further education.</p>	Attribution 50%	ACE Survey Data
Marginal increase in income from Further Education	This is the PV of an individual's net increase in expected earnings as a result of the highest level of education they intend on completing, after adjusting for tertiary drop out	Attribution 50%	ACE Survey Data

⁴⁸ Attribution indicates what % of the total variable value is attributed to ACE based on literature and sector workshop assumptions. This accounts for the possibility of other environmental factors which may have affected the achieved outcome.

Variable	Rationale/Assumption	Variable Value/Attribution ⁴⁸	Reference
	<p>rate, the average private cost of tertiary education which is calculated and subtracted, and a 50% likelihood of actually participating in further education.</p> <p>Increase in earnings are not expected for an average of 5 years, due to time required to complete further study.</p> <p>The net increase in earnings is based on the PV of average level of earnings for a person depending on their expected level of education over the individual's remaining working life. An income growth rate of 3% is assumed over that time.</p>		
<p>Marginal increase in income due to improved self-confidence</p>	<p>Research shows that an increase in self confidence and self esteem has a direct effect on an individual's earnings potential. A high level of self confidence is shown to have an effect of increasing lifetime earnings by up to 10%.</p> <p>An individual's marginal increase in income is calculated as a function of a 10% increase in an individual's net income over their remaining working life, and their level of improved self-confidence/self-esteem (individuals who have not had an increase in income as a result of ACE are excluded).</p> <p>Where survey results indicate a significant increase in self esteem/self-confidence 50% of the marginal increase in income is attributed to ACE. Where individuals have some increase in self-esteem/self-confidence 25% of this value is attributed to ACE.</p>	<p>Attribution 25%-50%</p>	<p>The effects of gender, education, and personal skills self-confidence on income in business management.</p> <p>Tsui, L., Sex Roles: A Journal of Research. March 1998.</p> <p>PwC report (2006), COMET - Manukau Family Literacy Programme Outcomes Valuation Project.</p>

Variable	Rationale/Assumption	Variable Value/Attribution ⁴⁸	Reference
Improved Family/Home Life	<p>Improvements in the family/home environment are shown to have a significant effect on reducing the chances of domestic/family violence occurring.</p> <p>An average cost of domestic violence was calculated and the likelihood of domestic violence occurring was also calculated. Depending on the level of improvement in home/family life indicated by respondents, this likelihood was reduced, thereby reducing the average cost.</p> <p>A significant improvement in the home/family life is assumed to have an effect of decreasing the likelihood of family violence by 50%, some improvement was assumed to have an effect of reducing the likelihood by 25%.</p>	Attribution 25%-50%	<p>ACE Survey Data</p> <p>Lockhart L. L. (1999). A re-examination of the effects of race and social class on the incidence of marital violence: A search for reliable differences. <i>J Marriage Fam.</i> 1987; 49:603-610.; Demetrios, Anglin, & Taliaferro. (1999). Risk Factors for Injury to Women from Domestic Violence. <i>New England Journal of Medicine.</i>; Centerwall BS. Race, socioeconomic status, and domestic homicide, Atlanta, 1971-72. <i>Am J Public Health.</i> 1984; 74:813-815.</p> <p>1 McCauley, Kern, Koldner & Schroder. (1995). The "battering syndrome": prevalence and clinical characteristics of domestic violence in primary care internal medicine practices. Johns Hopkins University School of Medicine, Baltimore, Maryland, USA.</p>
Savings in Health	<p>This is the PV of savings in health costs over the individual's remaining life till the age of 75 as a result of improvements in their health. Individuals indicated the effect of the programme on certain aspects of their health, including, fitness, eating habits, smoking, and alcohol consumption. Depending on the level of improvement indicated by individuals this was assumed to reduce the annual average health cost per individual over their life time.</p> <p>A significant improvement in health across all health factors indicated was assumed to have the effect of reducing the annual average health costs of the individual by 25%, and</p>	Attribution 10%-25%	<p>ACE Survey Data</p>

Variable	Rationale/Assumption	Variable Value/Attribution ⁴⁸	Reference
	<p>some improvement by 10%.</p> <p>Improvements in literacy also reduce health care costs by decreasing the chances of taking medications incorrectly and understanding doctor's advice.</p>		
Savings in Crime	<p>This is the PV of the savings in the average cost of crime as a result of an individual being involved in full time employment, participating in higher education, improving their self confidence, and being more involved in their community.</p> <p>Research shows that all these factors have an effect on reducing a person's likelihood of participating in a crime by up to 50%.</p> <p>Depending on the level of improvement in the above indicated factors, this is calculated as the PV of the reduction in the average costs of a crime multiplied by individual's likelihood of being involved in a crime (where everyone above 15 in NZ is given an equal likelihood of being involved in a crime).</p>	Attribution 50%	<p>ACE Survey Data</p> <p>Lochner, L. (1999). Education, Work, and Crime: Theory and Evidence. Rochester Center for Economic Research.</p>
Added value due to enhanced community involvement	<p>This is the economic contribution as a result of individual's participating in the community as volunteers. This is calculated as a function of the Statistics NZ Not-for-profit economic value of formal unpaid work and the individual's level of increase, in participation in community activities/events over their remaining life to the age of 75.</p> <p>A significant increase in participation is assumed to be equivalent to 25% of the annual average economic contribution of a volunteer, and some increase equivalent to 10%.</p>	Attribution 10%-25%	ACE Survey Data

Variable	Rationale/Assumption	Variable Value/Attribution ⁴⁸	Reference
Net increase in taxes due to higher incomes	The PV of the tax on the <i>net</i> increase in an individual's income as calculated in this study. Includes future earnings due to higher incomes, further study, and earnings increase due to improved self-esteem/self-confidence. Calculated at the 2007-2008 tax rates.	100%	IRD
Expectation of Future Earnings	An individual's expectations of future earnings is likely of predicting up to 50% of the actual value of future earnings with a 3 year period of validity.	50%	Using Expectations Data to Study Subjective Income Expectations. Journal of the American Statistical Association, Vol 92, 1997.
Discount Rate	The rate at which all earnings and savings are discounted for NPV calculations. Determined by Treasury.	10%-15%	Treasury
Total Population Of NZ	Taken from Statistics NZ.	4,265,198	Statistics NZ
Population over 15 years	Taken from Statistics NZ.	3,379,808	Statistics NZ
Working Age Population	Taken from Statistics NZ, defined to be ages 15-64.	2,690,250	Statistics NZ
Future earnings as a result of further education.	The yearly average earnings based on highest level of education: Secondary Only.	\$11,000	Statistic NZ
	Further Literacy.	\$15,000	Statistics NZ
	Diploma Tertiary.	\$19,500	Statistics NZ
	Bachelor or higher Tertiary.	\$24,000	Statistics NZ
Remaining Working Life	To age 65.		Survey Data
Earnings Growth	Level of annual income growth over working life. Assumed to equal inflation rate.	3%	Treasury
Higher Education Drop Out Rate	Tertiary student drop out rate for 2006 year.	65%	Ministry of Education
Average Private Cost of Tertiary Education	Average student loan balance for students at Universities, Polytechnics and Colleges of Education.	\$16,833	IRD 2006.
Effect on Income of Improved Self confidence	Research shows that an increase in self confidence and self esteem has a direct effect on an individual's earnings potential. A high level of self confidence is shown to have	10%	The effects of gender, education, and personal skills self-confidence on income in business management. Sex Roles: A Journal of Research,

Variable	Rationale/Assumption	Variable Value/Attribution ⁴⁸	Reference
	an effect of increasing lifetime earnings by up to 10%.		March, 1998 by Lisa Tsui
Effect on Crime of Improved Self confidence	Has an effect of decreasing the likelihood of crime by 50%	50%	Lochner, L. (1999). Education, Work, and Crime: Theory and Evidence. Rochester Center for Economic Research.
Likelihood of Domestic Violence Occurring	Based on the number of families in NZ (1,125,000) and the number of incidences of family violence (62,470), the likelihood of family violence occurring was calculated. This assumes that every family in NZ has an equal likelihood of being involved in family/domestic violence.	6%	Statistics New Zealand Ministry of Justice, 2007
Average Cost of Domestic Violence per Case	Domestic violence was estimated at a cost of \$1.2 billion per year in 1994. This has been inflated out 12 years to give a total cost of ~\$1.71 billion. Based on the total number of reported cases in 2005 of 62,470 an average was calculated.	\$27,373	Snively, S. (1994) The New Zealand economic cost of family violence. Family Violence Unit. Department of Social Welfare. Wellington.; Beckett, T. & Chapple S. (2006) An estimation of the costs of family violence and neglect to New Zealand. Ministry of Social Development. Wellington Ministry of Justice, 2007
Average Cost of a Crime	The per offence cost of crime (excluding domestic/family violence) in NZ. Calculated as total annual cost (public and private \$9.1 billion) of crime divided by total number of offences (379,530).	\$21,954	Ministry of Justice, 2007.
Likelihood of being involved in a crime	Assumed that every individual over the age of 15 has an equal likelihood of being involved in a crime. Likelihood calculated as total number of criminal offences (361,664) divided by total population over 15.	8.5%	Statistics NZ
Average WINZ Unemployment Benefit	The average yearly before tax unemployment benefit paid by WINZ for an individual over 25.	\$ 9,281.48	http://www.workandincome.govt.nz/get-assistance/main-benefit/unemployment-benefit.html
Total benefits paid	Obtained from Treasury \$17.8 billion.	\$17.8 billion	Treasury

Variable	Rationale/Assumption	Variable Value/Attribution ⁴⁸	Reference
Total Taxes	For year ended March 07 from IRD.	\$48.6 million	IRD
% of GDP made up of income	Obtained by 2006 proportion of income to total GDP.	44%	IRD
Annual Average Health cost per individual	The total annual health cost in NZ is \$9.2 billion. Dividing by the number of individuals in New Zealand this gives an annual per capita health cost.	\$ 2,163	Ministry of Health, 2007. Statistic New Zealand
Annual Average Economic Contribution of a Volunteer	This is the economic value of total formal unpaid work in the NFP sector divided by the number of volunteers in the sector.	\$3,310	Non-profit Institutions Satellite Account: 2004, Statistics NZ

Appendix B: Survey Instrument

ACE Survey
1. INTRODUCTION
<p>Dear Participant,</p> <p>Thank you for taking part in our survey which we are doing on behalf of ACE Aotearoa.</p> <p>We wish to establish a clearer understanding of the value that you have gained through doing one or more of our activities, programmes or courses.</p> <p>All the personal information you provide will remain confidential to the researchers and will be completely anonymous.</p> <p>The questionnaire has three parts and will take about 15-20 minutes to complete</p> <p>Section A is about background information.</p> <p>Section B gathers specific information that relates to you BEFORE the programme, SINCE the programme, and NOW.</p> <p>Section C allows you to write down any further comments you feel are relevant that have not been covered by the questionnaire.</p> <p>THANK YOU FOR YOUR TIME AND ASSISTING US WITH THIS SURVEY</p> <p>Margaret Roberts and Israel Cooper PricewaterhouseCoopers</p>

ACE Survey

2. SECTION A Background questions

1. Name of organisation you are attending to do your activity, course or programme:

- | | |
|---|--|
| <input type="radio"/> Literacy Aotearoa | <input type="radio"/> Te Aroha Noa |
| <input type="radio"/> ESOL | <input type="radio"/> Rauawaawaa Trust |
| <input type="radio"/> Aranui CLC | <input type="radio"/> Waitakere WEA |
| <input type="radio"/> Wairarapa REAP | |

Other (please specify)

2. Age:

- | | |
|-------------------------------|-------------------------------|
| <input type="radio"/> 16 - 20 | <input type="radio"/> 46 - 50 |
| <input type="radio"/> 21 - 25 | <input type="radio"/> 51 - 55 |
| <input type="radio"/> 26 - 30 | <input type="radio"/> 56 - 60 |
| <input type="radio"/> 31 - 35 | <input type="radio"/> 60 - 65 |
| <input type="radio"/> 36 - 40 | <input type="radio"/> Over 65 |
| <input type="radio"/> 41 - 45 | |

3. Gender:

- | | |
|----------------------------|------------------------------|
| <input type="radio"/> Male | <input type="radio"/> Female |
|----------------------------|------------------------------|

4. Which ethnicity do you identify with?

- | |
|---|
| <input type="checkbox"/> Asian |
| <input type="checkbox"/> Māori |
| <input type="checkbox"/> Pacific Islander |
| <input type="checkbox"/> Pakeha/European |
| <input type="checkbox"/> Other |

Please specify ethnicity if not listed above and if Māori, if possible please list Iwi:

5. Do you have internet access at home?

- | |
|---------------------------|
| <input type="radio"/> Yes |
| <input type="radio"/> No |

6. Name of the activity/course/programme (that you are attending now):

ACE Survey

7. Location of Course:

- | | |
|-------------------------------------|--|
| <input type="radio"/> Northland | <input type="radio"/> Wellington/Hutt Valley/Wairarapa |
| <input type="radio"/> Auckland | <input type="radio"/> Nelson/Marlborough |
| <input type="radio"/> Bay of Plenty | <input type="radio"/> West Coast |
| <input type="radio"/> Hawke's Bay | <input type="radio"/> Canterbury/South Canterbury |
| <input type="radio"/> Waikato | <input type="radio"/> Otago |
| <input type="radio"/> Taranaki | <input type="radio"/> Southland |
| <input type="radio"/> Manawatu | |

8. Date activity/course/programme started:

9. How many hours per week is your activity/course/programme?

- | | |
|-----------------------------|-----------------------------|
| <input type="radio"/> 1-5 | <input type="radio"/> 16-20 |
| <input type="radio"/> 6-10 | <input type="radio"/> 21-25 |
| <input type="radio"/> 11-15 | <input type="radio"/> 25+ |

10. Please state the number of weeks your activity/course/programme runs for:

- | | |
|-----------------------------|-----------------------------|
| <input type="radio"/> 1-5 | <input type="radio"/> 16-20 |
| <input type="radio"/> 6-10 | <input type="radio"/> 21-25 |
| <input type="radio"/> 11-15 | <input type="radio"/> 25+ |

11. Study Type:

- | | |
|---------------------------------|---------------------------------|
| <input type="radio"/> Full time | <input type="radio"/> Part time |
|---------------------------------|---------------------------------|

ACE Survey

3. SECTION B Specific information about the activity/course/programme

1. Please rank the following reasons for doing your activity/course/programme in order of importance (1=main reason, 2=next most important reason, etc). ONLY MARK THOSE REASONS THAT APPLY TO YOU, e.g. you may only have one or two reasons rather than the whole list.

Improve employment prospects/get a new job

Improve self esteem/self confidence

To help get into further study

To become more involved in my community

To improve fitness and health

For enjoyment

Asked or have been told to do activity/course/programme

To achieve other personal goals

2. If you chose "other personal goals" in question 1, please state these goals below:

3. Is your participation in your activity/course/programme helping you achieve your objectives?

- Yes
 No
 Partly

Please describe how/why the course is or is not helping you

ACE Survey

4. Has your activity/course/programme improved any of the following skills for you?

	No Change	Some Change	Significant Change
Working with and understanding numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speaking English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading Māori	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing Māori	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speaking Māori	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to use computers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to use the internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other, please specify the skill and state the significance of change

5. Has your activity/course/programme in any way changed the following aspects of your life?

	Negative Change	No Change	Some Positive Change	Significant Positive Change
Self-Esteem/Self Confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public Speaking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to communicate with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Independence/ability to do things by yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Happiness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall Quality of Life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home/family life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other aspects, please list:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please list any other aspects and extent of change:

6. HOW has your participation in the activity/course/programme changed anything in your home/family life?

ACE Survey

7. Do you intend to do further learning?

- No further study
- Yes, Other activity/course/programmes with this organisation
- Yes, Other activity/course/programme with another community provider
- Yes, Other Certificate
- Yes, Other Diploma
- Yes, Other Bachelor

8. Has your activity/course/programme improved your expectations for your:

	No Improvement	Some Improvement	Significant Improvement
Future income	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Future career	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health/fitness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spouse/partner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home ownership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Has your participation in the activity/course/programme affected your health?

	Negative Change	No Change	Some Positive Change	Significant Positive Change
Smoking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alcohol Consumption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mental Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eating Habits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fitness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall Health & Wellbeing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ACE Survey

10. How much has your participation in the activity/course/programme changed, or is likely to change, your use of the following services?

	Use More	No Change	Use Less	Don't Use Anymore
Work & Income (WINZ)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Child, Youth & Family (CYF)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doctor/Health Professional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Police	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social/Youth Worker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other employment services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Early childhood education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Support Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Womens Refuge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Libraries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Do you believe that your participation in the activity/course/programme has increased your opportunities in life?

- No Increase
 Some Increase
 Significant Increase

12. Do you believe that your participation in the activity/course/programme has increased opportunities in the life OF YOUR FAMILY?

- No Increase
 Some Increase
 Significant Increase

13. Please tick your total average weekly income (from all sources) for each column:

	Before beginning the course/programme	Currently	Expected or known in future as a result of doing this course programme
<\$100 wk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$100-\$200 wk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$200-\$300 wk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$300-\$500 wk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$500-\$700 wk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$700-\$900 wk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$900 - \$1000 wk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$1000 + wk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ACE Survey

14. Do you receive a benefit?

Yes

No

15. Has your participation in the activity/course/programme changed your AWARENESS of one or more of the following community services?

	No Change in Awareness	Some Change in Awareness	Significant Change in Awareness
Employment Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Community Based Educational Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Womens Refuge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Has your participation in the activity/course/programme changed you or your family's USE of one or more of the following community services?

	Use Less	No Change in Use	Use More
Employment Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Community Based Educational Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Womens Refuge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Has your participation in the activity/course/programme increased your involvement in community activities/events?

No Increase

Some Increase

Significant Increase

18. Has your participation in the activity/course/programme made you more AWARE of cultures and beliefs?

	No Change in Awareness	Some Change in Awareness	Significant Change in Awareness
Your Own Culture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Cultures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Beliefs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Ways of Life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ACE Survey

19. Has your participation in the activity/course/programme made you change your ACCEPTANCE AND UNDERSTANDING of other cultures and beliefs:

	No change in acceptance and understanding	Some change in acceptance and understanding	Significant change in acceptance and understanding
Your Own Culture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Cultures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Beliefs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Ways of Life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Has your participation in the activity/course/programme changed your UNDERSTANDING of community and/or national issues? e.g. civil unions, climate change, use of party pills, availability of housing etc.

- Decrease
- No Change
- Some Increase
- Significant Increase

21. Has your participation in the activity/course/programme changed your INTEREST in community and/or national issues?

- Decrease
- No Change
- Some Increase
- Significant Increase

22. Has your participation in the activity/course/programme changed your INVOLVEMENT in community and/or national issues?

- Decrease
- No Change
- Some Increase
- Significant Increase