

**Cost-Benefit Analysis of Adult and Community  
Education in New South Wales**

Prepared for the  
**NSW Board of Adult and Community Education**

**A**pplied **E**conomics

**January 2007**

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## Acknowledgements

We wish to acknowledge the support of the adult and community colleges that took part in the survey of participants in the colleges and particularly the support of the principals of these colleges who made the survey possible. We would also like to acknowledge the administrative support from Helen de Silva Joyce (Director of Community and Migrant Education in the NSW Board of Adult Education) and the technical assistance in questionnaire design by Michelle Circelli (Senior Research Officer with the National Centre for Vocational and Education Research). Both were most helpful to this work. Applied Economics remains responsible for any views expressed in this report.

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## **Executive Summary**

This report describes the benefits of Adult and Community Education (ACE) for typical client groups and provides a cost-benefit analysis of ACE for seven colleges in New South Wales. Although the results are presented in this report for each college individually as well as collectively, the colleges are not identified in this report.

The benefits of ACE courses are based on a survey of 566 ACE students from 74 courses in the colleges. The survey examined both student aims and benefits from ACE and student perceptions of third-party (community) benefits to their households and employers, and to other members of the community. The costs are based on the financial records of the colleges.

### **Main results of the student survey**

The main results of the survey of ACE students are summarized in Chapter 2. More details are shown by college in Appendix B. We have also provided the detailed results by course and college in a separate report to the NSW Board of Adult and Community Education (Applied Economics, 2007).

Some of the main findings are as follows.

- A high proportion of students had participated in previous courses or planned to participate in more courses.
- In answers to questions about course goals, over 80 per cent of respondents rated improvement of general skills, personal development and personal enjoyment as of high or medium importance. Slightly lower proportions considered acquisition of technical skills and personal as having high or medium importance.
- A high percentage of students indicated that the courses had achieved their goals to a high or medium extent.
- About half the students responded that they expected to make new friends and half that they expected to join new groups or activities a result of the courses.
- Students paid for about 75 per cent of the courses. Employers and other parties each paid for about 12.5 per cent of the courses.
- In answer to a question about the value of each course relative to its price, on average, students indicated that the value was 10 per cent more than the course fee.

- A significant number of respondents thought that other parties would benefit from the courses that they were taking. Sixty-three per cent of respondents thought that other members of their household would benefit a lot or a little from the course. Thirty-nine per cent of respondents considered that their employer would benefit. Forty-three per cent thought that another member of the community would benefit.
- Fifty-eight per cent of respondents are 40 years of age or more. Seventy-two per cent of respondents are female. Sixty-two per cent of respondents are Australian-born.
- Nearly two-thirds of students are employed. Of those not employed, 41 per cent are looking for work.
- Nearly half of all respondents indicated that they had no education beyond Year 12. Over a third of students have an income of less than \$20,000.

### **Cost-benefit analysis**

The study reports estimated costs and benefits of the operations of seven ACE colleges in 2005. There is minimal capital expenditure. This means that one year's expenditures may be taken as broadly typical of annual costs.

The costs of ACE are the operating expenses of the colleges. These expenses represent expenditure on resources that could produce other goods or services of broadly equivalent value to the amount of expenses. Therefore, the core issue is whether the benefits of the courses provided by the colleges are of equivalent, or higher or lower, value.

The benefits of the ACE courses are (i) the benefits to students and (ii) the benefits to third parties. The third parties are the households and employers of the students (as applicable) and other members of the community.

Based on quantitative answers to the survey, students were found to derive an average net benefit (or surplus) from their course equal to 10 per cent of the course fee if they or a friend or relative paid for the course and an average net benefit equal to 40 per cent of the course fee if the employer paid.

The responses of the students also enabled us to make estimates of the value of the courses to the various third parties, depending on whether the third party was considered to gain a lot or a little (or nothing) from the course. Drawing on student responses, including their qualitative answers, the following third party benefits are assumed:

- Households reported to gain a lot: benefit = 30 per cent of course fees.
- Households reported to gain a little: benefit = 15 per cent of course fees.

- Employers reported to gain a lot: benefit = 40 per cent of course fees.
- Employers reported to gain a little: benefit = 20 per cent of course fees.
- Other people reported to gain a lot: benefit = 30 per cent of course fees.
- Other people reported to gain a little: benefit = 15 per cent of course fees.

The cost-benefit results for all seven colleges are shown in Table 1 below. This table indicates a collective benefit-to-cost ratio of 1.03. This implies that the estimated benefits were marginally greater the costs.

More detailed results for the seven colleges are shown in Table 2, Section 3.4. The estimated benefits exceed the costs for five of the seven ACE colleges, but in one case the benefit-cost ratio is only 1.01. Estimated costs exceed estimated benefits for the other two colleges.

The cost-benefit analysis examines implicitly whether the net benefits to students (the consumer surpluses) plus the benefits to third parties (the community benefits) are sufficient to justify the shortfall in fee income that has to be met from other sources, mainly from government grants.

**Table 1 Summary of Results: Seven Colleges**

Costs and Benefits	Total
<b>Costs</b>	
Total expenses	10,926,741
<b>Benefits</b>	
Gov't payments for services	3,150,678
Course fees	5,205,604
Consumer surpluses	
Own payments	395,570
Employer payments	252,036
Other payments	61,981
Total consumer surpluses	709,588
Community benefits	
Benefits to household	734,073
Benefits to employer	822,212
Benefits to community	483,681
Total community benefits	2,039,967
Other income from services	184,389
Total benefits	11,290,226
<b>Benefits – costs</b>	363,485
<b>BCR</b>	1.03

For the seven colleges collectively, estimated student net benefits are valued at 13.6 per cent of course fees. In other words, students value the courses at 13.6 per cent more than the fees that they (or their friends and relatives) pay. Estimated third party (community) benefits sum to 18.7 per cent of course fees.

These benefits together equal about one-third of course fees. This implies that so long as college expenses do not exceed course fees by more than a third, there is likely to be a net social benefit from ACE courses.

We conclude that the benefits of ACE colleges are broadly in line with or marginally greater than the costs. This conclusion is based on our interpretation of the results of the student survey and the assumptions about student and community benefits that we have drawn from the survey.

Finally it may be noted that this cost-benefit study does not allow for distributional or equity considerations. As reported above, based on the survey, nearly half of ACE respondents have no education beyond Year 12 and over a third has an income of less than \$20,000. The low level of education or income of a significant proportion of ACE students could be seen as a separate reason for public support of ACE colleges.

# **1 Aims and Approach of Study**

## **1.1 Aims of the Study**

The overall purpose of this study is to provide a better understanding of the costs and benefits of Adult and Community Education (ACE) in NSW to inform public policy and provider practice.

More specifically the aims are to identify:

- the benefits of ACE for typical client groups, and
- the costs of servicing these groups relative to outcomes.

In addition, the study is intended to provide some particular outcomes, namely:

- A conceptual framework for considering the various costs and benefits of ACE.
- A concise cost-benefits analysis for each college.
- An overall cost-benefit analysis across the individual case studies.

These aims have largely been achieved. The study has collected a great deal of information about the nature of ACE client groups and the benefits of students in seven colleges. Although information about third-party or community benefits is more difficult to obtain and further work may be warranted in this area, the report also contains a fair amount of information on possible third-party benefits.

These data on benefits along with college financial data enable us to develop cost-benefit assessments for seven ACE colleges and for the seven colleges as a group.

## **1.2 General Approach to the Study**

The initial plan, as per the study brief, was to conduct a detailed analysis of the costs and benefits of three or possibly four colleges. This analysis would be based on consultant consultations with

- College management and staff
- Individual students
- Local firms
- Local economic development groups
- Other education and training providers

The consultant held detailed consultations with three colleges at the start of the study, from which two main points emerged. One point was that the major beneficiaries of ACE are the students. Although many courses are vocational, many courses are principally lifestyle or

recreational with only indirect impacts on local firms and local economic development groups. This meant that the major focus of the study should be on the experience of the students.

The second main point was that most colleges provide a highly diversified set of courses and often a large number of courses. Some colleges run over 1000 courses. Meeting a few students from each college would provide limited and non-representative qualitative information that would be of little use for quantitative cost-benefit analyses. Likewise, although interviewing a few selected local employers could produce useful insights into the value of some ACE courses, it would provide few data that could be used in cost-benefit studies.

It should also be noted that many colleges administer student satisfaction surveys for their courses. However, while the surveys often contain a question on overall satisfaction, most questions relate to the quality of the inputs to the course (such as enrolment process, course structure and length, venue quality, trainer preparedness and so on). They are of limited use for cost-benefit estimates, which are based on the value of course outcomes.

We made these points in our initial inception report in May and recommended that a questionnaire for students be developed that would attempt to elicit the key data required for a cost-benefit study and related information. These data would include information on:

- student participation in ACE courses and student objectives;
- student benefits from the courses;
- student perceptions of third-party benefits; and
- student attributes.

At that stage it was still envisaged that the Consultant would administer the survey in three or four colleges, with perhaps 60 to 80 interviews per college across a cross-section of courses, and complement the information with some local interviews.

However, after the survey was designed and successfully piloted in two colleges, it seemed sensible to maximize its use. In the end, eight colleges participated in the survey and a total of 565 responses were received and analysed.<sup>1</sup> Given the size of the survey and the number of responses, the further decision was made to exploit the information in the survey as far as possible and not to conduct a small number of interviews with employers and local economic groups that would inevitably be selective rather than representative and that would probably add little, if anything, to the information provided through the survey.

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<sup>1</sup> One college provided responses from only 12 students in two courses. These responses were included in our overall analysis of the responses (as College H in Appendix B), but were an insufficient basis to warrant analysis of the college.

Thus, our estimates of the benefits of ACE colleges are based on student responses to our questionnaire as described in detail in Sections 3.3 and 3.4 below.

On the other hand, our estimates of the costs of ACE colleges are based simply on the expenses recorded by the colleges in their annual accounts. These expenses are indicative of the value of resources used in ACE courses.

The general aim of the study is then to determine whether the sum of benefits to students and to third parties (other members of the community) exceed the costs for each college.

### **1.3 Implementation of the Study Program**

Following acceptance of the proposal in our inception report to carry out a major student survey, we further developed the survey with some assistance from the National Centre for Vocational and Education Research in Adelaide and piloted the survey in two colleges. The pilot was successful and only minimal nominal changes were required for the full survey. The final questionnaire is shown in Appendix A.

Accordingly in early August we sent the survey out to a further six colleges. The timing reflected the ACE term timetable. The object was to get lecturers to hand out the questionnaire to students about two-thirds of the way through their courses. This would ensure that students had fair experience with their courses but not leave the questionnaire to the end of the term when few people might attend.

The participating college Principals agreed to aim for a representative sample of the courses they offered, including accredited and non-accredited vocational and educational training courses and lifestyle courses. It was not considered practical to insist on a random selection of courses in each college.

Responses to the questionnaire were received progressively though mid-September to mid-October, 2006. Data for the 566 responses (involving nearly 20,000 data entries in all) were recorded in the following four weeks. The initial analysis was completed in November.

## **2 Results of the Survey of ACE Participants**

### **2.1 Introduction**

In this chapter we describe the main results of the student survey. This summary draws on the responses of 566 students from 74 courses in eight ACE colleges.

The detailed quantitative results of the survey for each question for each college are shown in Appendix B. We also draw on individual qualitative answers to three questions that are shown in Appendix C.

The quantitative results of the survey for each question for each course for each college are available in a separate volume (Applied Economics, 2007).

An important general issue is the extent to which these responses are an unbiased representation of student views of a representative set of courses.

As shown in Applied Economics (2007), the survey covered 74 courses of considerable variety in eight colleges. The principals were asked to provide a representative set of courses. However, the courses selected by the principals were not random. About one-third of the courses are vocational and educational training courses. Most of the rest are recreational / lifestyle courses. This reflects broadly the content of adult and community college courses overall. Prima facie, the courses appear to be a broadly representative group, but we have not validated this statistically.

A second issue arises because the responses are supplied by students attending the courses some two-thirds of the way into the term and do not include responses from students who drop-out of the course. There may therefore be a bias towards more positive views of the courses. The extent or effect of this is not known.

### **2.2 Student Participation and Objectives**

The first part of the student survey (questions 1 through to 6) involves student participation, objectives and overall satisfaction with their courses. As will be seen, many students participate actively with the colleges (with repeat courses), usually achieve their objectives, and report a fair level of satisfaction.

#### *Student participation*

Most students have, or expect to have, repeat participation in ACE college courses. Responses to Question 1 (Q.1) indicate that half of all students have done previous courses. On average, these students have participated in 2.5 earlier courses. For students doing a course for the first time, nearly 90 per cent indicated that they expect to do another course.

### *Student goals*

Students were requested in Q.4 to rate their goals for each course. Specifically they were asked about their goals in terms of technical / vocational aims, improving general skills, personal development / fulfilment, personal well-being / health, and personal enjoyment. In each case the goals were to be rated as high, moderate, low or not applicable.

In their answers, students tended to rate all these goals as important for most courses. General skills, personal development and personal enjoyment rated very highly. There was slightly less emphasis on technical skills (as some courses clearly are not technical) and on personal well-being and health.

Thus 84 per cent of all responses for all courses rated general skills as of high or medium importance. Eighty-nine per cent of respondents considered personal development and 91 per cent considered personal enjoyment as of high or medium importance. The percentages for technical skills and personal well being were 76 per cent and 67 per cent respectively.

Our classification of goals followed Clemens et al. (2003, *ACE Outcomes* prepared for NCVET) who suggest that outcomes can be classified as: technical and vocational skills, cognitive development (primarily improved numeracy and literacy), personal development or fulfilment (including health benefits), and community enrichment. However, the point was made in our early consultations that lifestyle courses may enhance productivity in the workplace by enhancing self-esteem or communication skills or by similar personal development activities. They may also lead someone to develop skills such as craft skills that have commercial use. Our survey suggests that students either rate most of these goals as important in most courses or have some difficulty in distinguishing between these goals.

### *Goal achievements and course ratings*

In Q.5, students were asked to what extent they had achieved the five course goals discussed in Q.4. In Q.6, students were asked how they rated the course overall relative to their expectations.

Most students indicated that the courses had achieved their goals to a high or medium extent. About 80 per cent indicated that they had achieved their vocational or general skills goals to a high or medium extent. Some 90 per cent stated that they had achieved their personal development or enjoyment goals to a high or medium extent. Two-thirds of respondents expressed similar satisfaction with regard to personal well being

In terms of overall course rating, 63 per cent stated that the courses were well over or above their expectations. Only 2 per cent of students responded that their course fell below expectations.

## 2.2 Economic Benefits of the Courses

The second main set of questions, from Q.7 to Q.17, relate in one or other way to the economic benefits from the courses. The first few questions relate primarily to the benefits to the students. The following questions attempt to elicit views on benefits to family, employers and other members of the community.

### *Making friends and joining new groups*

Q.7 and Q.8 are introductory questions. Almost exactly half the students responded that they expected to make new friends and half that they expected to join new groups or activities a result of the courses. Naturally many respondents answers both questions either yes or no, but there was not a complete correspondence.

The quite high numbers of people expecting to make new friends or to join new groups indicates the role of the colleges in creating social capital (trust, belonging and cohesion). However, this is arguably no different from many other local sporting, recreational or cultural societies.

### *Who paid for the course?*

Students themselves paid for about 75 per cent of the courses. Employers and other parties each paid for about 12.5 per cent of the courses.

### *Student valuations of the courses*

Fifty-eight per cent of students who paid for their own course thought that the value of their course was about equal to its price. 6 per cent of these students thought the value was less than the price. 36 per cent thought that the value was greater than the price.

To estimate the overall average value-price ratio for students who paid for their course, we took the mid-point of the answers. For example, if someone responded that the value was between 5 and 20 per cent above the price, we assumed that the average value was 12.5 per cent above the price. On this basis, for the whole sample (of 366 students), the average value was 10 per cent more than the course price. This was quite representative as the average value-price ratio varied from 7 per cent for one college up to 14 per cent for the college with the highest ratio.

When employers paid for the course, students were asked (Q.11) what they would be willing to contribute to the course if required. The average was 41 per cent. This indicates that the collective benefit from the course is well over the benefit to the employer.<sup>2</sup>

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<sup>2</sup> This assumes that the employer payment is additional to the normal wage and not deducted from the wage.

As another measure of the benefit that students derive from the course, Q.12 asked students whether they would prefer a friend to gift them the course or an equivalent dollar amount to spend at a restaurant of their choice. Eight-two per cent said that they would prefer to be given the course as a gift. This indicates that the courses offer some premium value.

### *Benefits to third parties*

A significant number of respondents thought that other parties would benefit from the courses they were taking. Sixty-three per cent of respondents thought that other members of their household would benefit a lot or a little from the course (Q.13). Thirty-nine per cent of respondents considered that their employer would benefit. Forty-three per cent thought that another member of the community would benefit. We draw on these qualitative responses to make estimates of third party benefits for the cost-benefit analysis.

In each case where these claims of benefit were made, the student was asked to provide an explanation (in Q.14, Q.16 and Q.18 respectively). These answers are shown in Appendix C. These provide some credibility to the claims. However, in most cases the nature of the benefit claimed is modest.

## **2.3 The Nature of the Students**

The third set of questions (Q.19 to Q27) deal with attributes of the students. The following are some of the main findings.

- 58 per cent of respondents are 40 years of age or more. Only 14 per cent of the students are 15 to 24 years of age.
- 72 per cent of respondents are female.
- 62 per cent of respondents are Australian-born.
- 69 per cent of students are married or partnered; 31 per cent are single.
- Nearly two-thirds of students are employed.
- Of those not employed, 41 per cent are looking for work.
- 29 per cent of respondents have lived in their local area for 5 years or less.
- Nearly half of all respondents indicated that they had no education beyond Year 12. Twenty-nine per cent left school before Year 12.
- Nearly half of all respondents indicated that they have an income of less than \$35,000. Thirty-nine per cent of students have an income of less than \$20,000.

## 3 Cost-Benefit Analysis of ACE Colleges

### 3.1 Overview of Cost-Benefit Analysis

A cost-benefit analysis attempts to estimate the full costs and benefits of a program or project to whomsoever bears the costs or gains the benefits.<sup>3</sup> In this study we estimate the costs and benefits of the operations of seven ACE colleges in 2005 in then current dollars. Given that the colleges have minimal capital expenditure (see Applied Economics, 2006), the costs and benefits in 2005 are quite typical of those in other years (although of course some operating changes may occur from one year to another).

The costs of ACE are basically the operating expenses of the colleges. These expenses represent expenditures on resources that could have been used to produce other goods and services. In other words, they represent the value of other goods and services foregone by the community.

When expenses do not reflect the real cost of the resources used, an adjustment may be required. It is sometimes suggested that the colleges provide some presenters with income that they would not otherwise earn. If true, the benefit to these presenters is the difference between what the colleges pay them and the minimum payment they require as compensation them for giving up other work or leisure, as the case may be (this minimum payment is known as their opportunity cost). In a competitive market for teaching, payments are usually close to these minimum amounts. From our consultations it appears that the teaching market is competitive and that payments to presenters are quite low and tend to reflect opportunity costs. Thus, in the analysis below, we make no adjustments to recorded college expenses.<sup>4</sup>

It may also be noted that in economic studies of education and training it is often necessary to include the opportunity cost of a student's time in the estimates of costs. This is not necessary here where most students are paying the course fees. In this case the net benefit to students (the gross benefit less all costs) is the amount that they would be willing to pay for the course in excess of the fee. This implicitly accounts for the opportunity cost of student time.

Turning to the benefits, the total benefit of ACE is the sum of benefits to students and third parties.

In many studies of the value of education and training to students, estimates of income and/or employment generated as a result of the education or training program are taken as measures of benefits. Examples include Applied Economics (2002), Access Economics (2005) and Allen Consulting Group (2006). However, individual ACE VET courses have a

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<sup>3</sup> In this report we use the terms cost-benefit analysis and economic evaluation interchangeably.

<sup>4</sup> Except for one case, where we excluded \$30,000 allowed as provision against future needs.

relatively small marginal impact on workplace skills and there is no clear income measure of benefit. Other, non-VET, courses are mainly designed to enhance lifestyle rather than income, though they may have incidental income benefits. Accordingly in this study, as described below, we base our estimates of student benefits on student responses to our survey.

Third party benefits may accrue to the student's family or household, employers, or other members of the community. These benefits are closely related to the concept of social capital. There is a widely held view that education contributes to the social capital (or social relations) of a society and that this in turn has many positive welfare and economic impacts. For example, OECD (2001a, 2001b) and Wolfe and Haveman (2001) report that an increase in schooling achievements:

- Raises the schooling received by one's children;
- Improves one's own health status;
- Improves the health status of one's family members;
- Raises the efficiency of one's consumer choices;
- Reduces crime (see also Chapman et al. 2001, for Australia);
- Generally increases social interactions and contributions to the community.

Conversely, low levels of education and training are linked to anti-social behaviour, crime, black market activities, homelessness, and so on. Havemann and Wolfe (1984) estimated that the non-market benefits of one more year of schooling may be of the same order of magnitude as estimates of the earnings-based effects.

Almost certainly ACE has some of these effects. As noted above, our survey indicated that half the participants in ACE expect to make more friends as a result and half (not exactly the same half) expect to join new activities as a result of their course. On the other hand, many participants in ACE are well established local persons. Nearly 60 per cent are over 40 years of age and some 70 per cent have lived in their local area for over 5 years. Therefore the impact of ACE on social capital would not be expected to be as substantial as (good) schooling.

Again in this study, we draw below on responses to our student survey to estimate some third party benefits, inclusive of some of the benefits associated with social capital.

### **3.2 Estimating Benefits of ACE Courses to Students**

Students benefit when they put a value on a course greater than the fee they pay. This is the concept of consumer surplus. As we have seen, students pay for about 75 per cent of their courses, with employers and other parties paying half each of the other courses.

We have also seen that students, on average, would be willing to pay 10 per cent more than the course fees. While the average premium varies a little between colleges, the differences between average college premiums are small and may simply reflect variations between

courses in the sample rather than variations between colleges.<sup>5</sup> Therefore we adopt a 10 per cent premium for all colleges.

This seems a plausible value. We understand the most colleges set prices according to what the market will bear. In general, this net benefit to students is related inversely to the availability of substitutes. Thus the net benefit is likely to be higher for a vocational course for which there are few alternative providers than for a yoga course in an inner city area where there are many other providers.

For the 12.5 per cent employer-funded courses, students responded that on average they would be willing to pay some 40 per cent of the course fee. This 40 per cent represents their consumer surplus.

For the 12.5 per cent employer-funded courses, we have no direct stated measure of surplus. However, 80 per cent responded that they would prefer the course to an equivalent dollar gift for a restaurant meal, which implies some surplus. Given that students could have had the meal as a gift instead, the surplus is the difference in value. We assume that this surplus would be equivalent to the 10 per cent premium observed for the students' own fee payments.

Thus the surpluses can be represented by the following formulae:

- Surpluses from own fee payments = course fees  $\times 0.75 \times 0.10$
- Surpluses from employer fee payments = course fees  $\times 0.125 \times 0.40$
- Surpluses from other fee payments = course fees  $\times 0.125 \times 0.10$

The main caveat about these estimates is that they reflect the views and preferences of students who continue to participate in the courses rather than of those that drop out, who would presumably have lower course valuations.

On the other hand, students may be inclined to understate what they are willing to pay for courses even when the survey is conducted on a confidential basis.

### **3.3 Estimating Benefits of ACE Courses to Third Parties**

In our survey, we also asked students about the perceived benefits to their households, employers, and other members of the general community. As we saw above, for the whole sample of respondents, nearly two-thirds considered that their households would benefit. About 40 per cent thought that their employers would benefit and about 40 per cent thought that other parties would benefit.

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<sup>5</sup> This hypothesis could be examined, but this has not been done in the time available.

Although the responses were qualitative (indicating that the third party obtained a large or a little benefit or none), we believe that modest quantitative findings can be inferred from these responses. As noted, the students were asked to provide some supporting information (see Appendix C).

We adopt the following assumptions about third party benefits.

- Households reported to gain a lot: benefit = 30 per cent of course fees.
- Households reported to gain a little: benefit = 15 per cent of course fees.
  
- Employers reported to gain a lot: benefit = 40 per cent of course fees.
- Employers reported to gain a little: benefit = 20 per cent of course fees.
  
- Other people reported to gain a lot: benefit = 30 per cent of course fees.
- Other people reported to gain a little: benefit = 15 per cent of course fees.

Our estimates for each college are based on the responses for each college. Thus the estimation formula for the first household group is:

- Benefits of households reported to gain a lot = course fees  $\times$  % of households reported to a lot  $\times$  0.30

A similar formula, with variations in the benefit percentage assumed, applies to the other third party benefits.

#### *Government revenue*

The Australian government gains revenue from GST payments on non-exempt courses, mainly lifestyle courses. However, if students were spending a similar amount on other goods, government would also gain GST revenue. On balance, government does not appear to be a net gainer from expenditures on ACE courses.

### **3.4 Results of Economic Evaluation**

The results of the economic evaluation are shown in Table 2. The estimated benefits exceed the costs for five of the seven ACE colleges, but in one case the benefit-cost ratio is only 1.01. Estimated costs exceed estimated benefits for the other two colleges.

In essence these results reflect the ratio of college course fees to total expenses. The cost-benefit analysis examines implicitly whether the benefits to students (the consumer surpluses) plus the community benefits (the benefits to third parties) are sufficient to justify the shortfall in fee income that has to be met from other sources, mainly from government grants.

**Table 2 Cost-Benefit Analysis for Selected ACE Colleges for 2005 (in 2005 \$s)**

	A	B	C	D	E	F	G	Total
<b>Costs</b>								
Total expenses	1603882	323589	1120233	1158217	900252	5107420	713148	10926741
<b>Benefits</b>								
Gov't payments for services	0	21145	0	0	0	3120278	9255	3150678
Course fees	714681	173052	931859	735276	421814	1715814	513108	5205604
Consumer surpluses								
Own payments	46673	10866	81717	55420	35457	151935	13503	395570
Employer payments	23337	4829	28673	30728	9781	62870	91819	252036
Other payments	18961	5232	4301	10426	4279	3929	14853	61981
Total consumer surpluses	88970	20927	114690	96574	49517	218734	120175	709588
Community benefits								
Benefits to household	94338	30087	133612	108821	65106	209355	92754	734073
Benefits to employer	105773	40763	145260	145094	79472	169020	136829	822212
Benefits to community	60033	25368	80167	73528	29344	145972	69270	483681
Total community benefits	260144	96219	359040	327443	173922	524348	298853	2039967
Other income from services	16589	16507	160	82164	0	61853	7116	184389
Total benefits	1080384	327850	1405749	1241456	645253	5641026	948507	11290226
<b>Benefits – costs</b>	-523498	4261	285516	83239	-254999	533606	235359	363485
<b>BCR</b>	0.67	1.01	1.25	1.07	0.72	1.10	1.33	1.03

For the seven colleges collectively, estimated consumer surpluses are valued at 13.6 per cent of course fees. Estimated third party (community) benefits sum to 18.7 per cent of course fees. Thus these benefits together equal about one-third of course fees. This implies that so long as college expenses are less than one-third higher than course fees, there is likely to be a net social benefit from ACE courses.

However, this is a general finding. Third party benefits are probably most valuable when the course is paid for, or useful, to employers. For some recreational courses the benefits are largely private ones and the community benefits are relatively low. The student survey would provide some data for this, but this has not been analysed at this time.

It should also be noted that the low ratio of benefits to costs for two colleges reflects to some extent the grants that they receive. This enables these colleges to charge lower fees and/or to run more courses than they otherwise would and to operate on a lower fee income to cost ratio. From the perspective of these colleges, this is a rational response to the level of subsidy and doubtless reflects a social service that the grant providers wish to support.

We conclude from this analysis that the benefits of ACE colleges are broadly in line with or marginally greater than the costs. This conclusion is based on our interpretation of the results of the student survey and the assumptions about student surpluses and community benefits that we have drawn from the survey. As we have stressed, in a number of cases we have drawn quantitative conclusions from qualitative data. However, we believe that the assumptions are quite conservative and defensible.

Finally it may be noted that this cost-benefit study does not allow for distributional or equity considerations. As reported above, based on the survey, nearly half of ACE respondents have no education beyond Year 12 and over a third has an income of less than \$20,000. The low level of education or income of a significant proportion of ACE students could be seen as a separate reason for public support of ACE colleges.

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