

26TEN STRATEGY

The Socio-Economic Impact of Tasmania's Investment in Adult Literacy and Numeracy

JULY 2018 - JUNE 2019





26TEN

Get the tools for life

The socio-economic benefits of Tasmania's investment in adult literacy, 2018-19

The socio-economic return on investment

For every **\$1 invested** by the Tasmanian Government, businesses, communities and individuals,

at least \$5.20 is returned to Tasmania



The socio-economic and cultural value of the 26TEN Strategy to Tasmania in 2018-19 is conservatively estimated to be

\$27.2 million



Activity by adult literacy clients



Each client spent on average,

4.3 hours

learning outside their tutor sessions each week

Each client participated in about

50



literacy sessions

and is still going strong

The benefits for adult learners

+90%

of adult learners say they have **improved** their opportunities for **employment & education**



"I have a better chance of getting a job"



+90%

of adult learners say they have **improved** their **quality of life**



"I can read to my children"

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Authors: Paul Muller and Don Knapp, Institute of Project Management (2020)

Executive Summary

Tasmania leads Australia with its long-term approach to improving the functional levels of literacy and numeracy in its adult population.

Research findings presented here help measure the progress of *26TEN Tasmania – Tasmania’s strategy for adult literacy and numeracy 2016-2025* by quantifying its socio-economic impact in the 12 months from July 2018 to June 2019.

Worldwide, little research has measured the return on investments (ROI) to improve functional adult literacy. This study makes an original contribution to this area of understanding by modelling the discrete costs and benefits of an adult literacy strategy (26TEN) in a defined region (Tasmania).

The estimate of benefits is conservative as the study has focused on the impact of investment through one specific 26TEN program (the 26TEN grants) and the activities of one significant 26TEN member organisation (Libraries Tasmania). It has not assessed public or private investments in adult literacy influenced by 26TEN but made outside of the 26TEN grants or Libraries Tasmania literacy programs and the benefits that have led from these. Flow-on effects from 26TEN activities prior to July 2018 have also not been measured.

The overall return from the 26TEN Strategy can therefore be assumed to be even greater.

Key findings

This research found a positive multiplied return on government and wider-community investment in improving adult literacy and numeracy as a result of the 26TEN Strategy.

The socio-economic value created by the 26TEN Strategy in 2018-19 is estimated to be at least \$27.2 million.

This was the sum of productivity benefits (enjoyed by employers) worth \$22.3 million and civic benefits (enjoyed by individuals) valued at \$4.9 million.

With a combined investment of at least \$5.3 million in 2018-19, a return of \$27.2 million means that for every dollar invested by government, industry, community groups and individuals in the 26TEN Strategy, at least \$5.20 in benefits were returned to the Tasmanian community in 2018-19.

This also represents a return of at least 6.6:1 on the original investment of the State Government (\$4.1 million in 2018-19). The study further found that the financial investment by the Government motivated at least another \$1.1 million in community contributions and \$1.3 million in savings (through donations of volunteers’ time) to enable the Strategy.



More findings of note

In examining in detail the specific impact of the 26TEN grants programs and the activity of Libraries Tasmania as a 26TEN member providing literacy support, the research found that:

- In 2018-19, 860 adult Tasmanians were directly supported by 26TEN grants and the Libraries Tasmania literacy service to improve their literacy.
- Over 80 per cent of Libraries Tasmania literacy clients surveyed said that their opportunities for employment and further education had improved as their level of literacy improved.
- Over 90 per cent of Libraries Tasmania literacy clients indicated that their quality of life has improved as a result of improved functional literacy.
- Libraries Tasmania literacy clients completed an average of 50 literacy sessions. The majority were reluctant to put an end date on their participation, and many observed that each goal they achieved led to new aspirational targets.

I am confident that after five years 26TEN is in a sound position to help more and more Tasmanians improve their literacy and numeracy. Speed is not the be-all and end-all with a program like this one. Results are what count. And indeed, we can literally count hundreds of adult Tasmanians who have benefited from 26TEN, who otherwise would still be struggling and victims of usually unintended social stigma.

Her Excellency Professor the Honourable
Kate Warner, AC, Governor of Tasmania.

Introduction



26TEN is a long-term strategy for all of Tasmania. It sets a framework for action by the whole state – business, community groups, government, education and training providers, and individuals who want to live in a state where all adults have reading, writing and numeracy communication skills they need for life.

This quote comes from the *Tasmanian Adult Literacy Action Plan 2010-2015*, the first plan in the State to address adult literacy issues. This plan was a response to a national survey conducted in 2006 that found that nearly half of Tasmania’s adult population were functionally deficient in literacy and numeracy skills – those same skills needed for work and life.

The plan set a number of goals, with a focus on:

- establishing a statewide network of 23 adult literacy coordinators through Libraries Tasmania, and
- recruiting and training volunteer adult literacy¹ tutors, now numbering more than 1,300 since the program began.

It also established what is now known as 26TEN, to:

- raise awareness about the extent of the problem, and
- attract business and community partners to form a network of supporters.

The 26TEN Strategy is supported by the 26TEN Coalition. The Coalition includes leaders from a broad range of sectors (law, health, adult literacy, community, local and state government). Coalition members lead business, community and government organisations to work together to improve adult literacy and numeracy. They also promote the use of plain English in Tasmania. They work to expand the 26TEN Network, building community ownership and working with government, business and the community to change community attitudes towards adult literacy.

At an operational level, Libraries Tasmania provides literacy coordinators and volunteer tutors who deliver the adult literacy program. They are located around the State. Other 26TEN Network member organisations, including TasTAFE, registered training organisations, and business and community groups, all invest in and support workplace and community literacy programs.

¹ In this report, adult literacy includes numeracy and is defined as, “...the skills needed by individuals to participate fully in society. It involves listening, speaking, reading, writing, numeracy and using everyday technology to communicate and handle information.” (National Adult Literacy Agency, Ireland).

DGS Consulting conducted a review of the 2010-2015 Plan and found it had been delivered successfully. During that period, literacy support was provided to over 7,000 Tasmanian adults. This was achieved through:

- the new 26TEN grants program
- the literacy network of LINC Tasmania (now called Libraries Tasmania), and
- the more than 100 organisations and businesses that committed to take action to improve adult literacy in the workplace.

The current *26TEN Tasmania: Tasmania's Strategy for Adult Literacy and Numeracy 2016-2025* (the 26TEN Strategy) built on this success and set ambitious targets for growth, including:

- increasing awareness of adult literacy and numeracy
- increasing adult literacy and numeracy levels statewide
- increasing commitment to clear communication, and
- obtaining and broadcasting more stories to highlight how improved literacy skills improve people's lives.

The research presented in this report aims to measure the impact of the 26TEN Strategy at its midpoint, after five years of effort and investment in the program. Specifically, this report will identify the combined economic, social and cultural value to Tasmania of its investment in the 26TEN Strategy and the programs it enables.

Using cost-benefit methodology, we identified the opportunity cost associated with the expenditure, as well as the costs and benefits to stakeholders. Cost-benefit analysis is the preferred approach by governments to evaluating policy choices. This study is the first known valuation of adult literacy as an economic and cultural ecosystem within a defined region. As such, this study is as much exploratory as it is conclusive. Further research in a number of areas is encouraged.

Yet, the report makes significant findings and these have the potential to influence the direction of Tasmania's adult literacy investments. The report provides:

- quantification of the social, economic and cultural contribution that the Strategy makes to program participants, businesses and the broader community
- robust social and economic information and advice to help stakeholders make strategic decisions about the future allocation of resources
- comparative data about the outcomes of the 26TEN Strategy in Tasmania and the barriers to participation
- a basis to make representations to state, federal and other community stakeholders for partnerships, and
- evidence-based data for future marketing and public relations.

Methodology

At the heart of any public investment decision is this basic question: **does the planned activity lead to a net increase in social welfare?**

Adult literacy research takes many approaches to valuation. Each considers a different aspect of the problem of the true worth of endeavours. The challenge is integrating these approaches into a coherent framework that is equally logical to both economists and laypeople. Cost-benefit analysis comes closest to doing that.

Cost-benefit analysis is employed most frequently when the signals normally provided by market prices are either absent or inadequately reflect the opportunity cost of the resources involved.

Commonwealth of Australia, 2006

Cost-benefit analysis is the preferred approach of governments to evaluate policy choices. A cost-benefit approach is required to identify the opportunity cost associated with an expenditure, as well as the costs and benefits that may accrue to society and/or the environment.

The cost-benefit approach also requires the identification and distinction of the recipients of benefits and/or the bearers of costs. This is particularly important when considering costs and benefits that are not traded at market prices.

An example in the context of this report is in the valuation of volunteer labour. One hour spent volunteering incurs a cost to the volunteer, regardless of how that cost is quantified. The same hour of work represents a benefit to the organisation for which they volunteer and/or for the individual they directly assist. This does not, however, mean that the value of that hour is the same in both contexts. Different valuation methods may be appropriate in each case.

In this study, the beneficiaries of the 26TEN Strategy and the bearers of costs are divided into four categories:

- individuals, including:
 - program clients, and
 - program volunteers
- businesses (employers)
- government, and
- the community.

Cost-benefit analysis is not a static valuation technique. It is a comprehensive means of comparing one alternative to another, and therein lie its limitations for the purpose of standalone valuation.

This study is concerned primarily with estimating the value of the 26TEN Strategy to Tasmania. This value is defined here to be the sum of lifetime benefits achieved as a result of participants' engagement over a fixed period – in this case, one year. The net value (meaning the total of the benefits minus the costs) is only relevant to the extent that it allows the process of how value is created to be shown, and to observe whether resources are allocated efficiently.

As a result, the substitutability of the costs and benefits is less relevant than it would be in traditional cost-benefit analysis. This is because this study is not directly aimed at comparing 26TEN with a 'do nothing' approach, although the value arrived at could be used as a basis for comparison in the future.

In valuing the 26TEN Strategy, this study is only measuring the overall contribution to the community. Although other events might fill the void in the absence of a 26TEN Strategy in Tasmania, this is a hypothetical presumption. It should not alter our understanding of the value of the Strategy at the point in time in which it is measured. After all, valuation is not a zero-sum game.

This does not, however, give us licence to be casual with our estimates – if anything, it imposes a higher standard of rigour, especially regarding the risk of over-estimation. We have therefore adopted a conservative position by tending, where necessary, to overestimate costs and underestimate benefits.

Data collection

Five 26TEN stakeholder cohorts took part in and contributed to the findings of this research project:

Stakeholder group	Valid sample size (n)	Response rate
Clients (program participants)	82	13.4%
Volunteer tutors	64	22.2%
26TEN grant recipient organisations (supported by training providers)	9	81.8%
Literacy coordinators	17	73.9%
Coalition members and their respective organisations	6	66.7%

Literacy coordinator interviews were conducted during two Skype meetings held at Hobart Library on 16-17 August 2019. The sample size of participating Libraries Tasmania adult literacy coordinators was seventeen (n=17). Each Skype meeting took approximately one hour and 45 minutes to complete.

The interview methodology was mixed. The interviewer asked questions and provided an opportunity for each participant to respond in turn. Most questions were open-ended, and often followed up with a probing or clarifying question. Literacy coordinators’ answers were recorded in writing.

The 26TEN Coalition members actively provide advice and support to the Strategy. They represent many of the key industry and community organisations that are part of the 26TEN Network. Member interviews were conducted one-on-one, face to face or over the phone with the six available members. The interview methodology was similar to that used for interviews with Libraries Tasmania literacy coordinators, though questions posed to Coalition members were more open-ended.

Volunteer tutors and grant recipient organisations were engaged via a standard, online survey in September 2019. 26TEN client data was gathered via in-person interviews conducted by the volunteer tutors who entered it online. This was necessary given the literacy issues clients faced.

All survey instruments were subject to extensive consultation and piloting before release, and a sample is reproduced at *Appendix A*.

26TEN Strategy



In this section, we describe the activity directly undertaken in Tasmania by the 26TEN Strategy in the 12 months from July 2018 to June 2019. The key activities we review are the Libraries Tasmania adult literacy program, the 26TEN employer and community grants program, and the member and supporter network which involves community and business organisations, and state and local government agencies.

The statistics that follow are the basis of the economic analyses presented in this report.

Out of the scope of this report are the public and private investments made in adult literacy that connect to or are influenced by the 26TEN Strategy. These include the direct and indirect investments made by member organisations that were not specifically in support of the 26TEN grants they might have received. It is highlighted here that this is an important inclusion for future research.

Activity

The Strategy has three main quantitative measures of success:

1. Increased number of 26TEN members and supporters
2. Aspirational targets for the percentage of adult Tasmanians with literacy skills at or above OECD Level 3, and
3. Increased number of organisations committed to plain English.

The charts below provide a snapshot of the cumulative and progressive growth of the number of 26TEN members and supporters, as well as measuring other related 26TEN activity.

Total number of 26TEN members and supporters – cumulative

26TEN Network (members and supporters)	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Mar 2019	Jun 2019	2025 Target	% Target reached
	111	450	822	879	906*	915*	1000	91%

* This cumulative figure is adjusted to reflect supporters who have withdrawn from the register. (The total at June 2019 comprises 164 members organisations and 751 supporters.)

Breakdown of 26TEN member organisations June 2019

	North	North West	South	Total
Community	17	7	47	71
Government	5	3	26	34
Business	13	7	39	59
Total	35	17	112	164

26TEN members' plain English commitment

Number of member organisations who have hosted one or more plain English workshops	28
Number of member organisations who have committed to plain English on their 26TEN Action Plan	78

26TEN activity from launch of 26TEN Tasmania in October 2015 to 30 June 2019

	Oct-Dec 2015	2016	2017	2018	Jan-Mar 2019	Apr-Jun 2019	Total
Plain English Workshops delivered*	8	52	34	35	7	10	146
Literacy Awareness Workshops delivered*	6	31	50	25	9	13	134
New stories published	2	15	91	71	12	11	202

* Since the launch of 26TEN Tasmania in October 2015, 3,823 Tasmanians have either attended plain English or literacy awareness workshops.

These activities support the Strategy's implementation to the extent that they raise awareness of adult literacy issues in the community and influence/educate stakeholders on the actions they can take in response.

Other activity, such as the 26TEN Chat campaign and the 26TEN employer and community grants program, are intended to directly connect or provide literacy services to at-risk individuals.

The extent to which the percentage of adult Tasmanians with literacy skills at or above OECD Level 3 has changed over the life of the Strategy cannot be measured until the OECD re-runs the Programme for the International Assessment of Adult Competencies (PIAAC) survey. The results from that survey will be published in 2023.

Clients

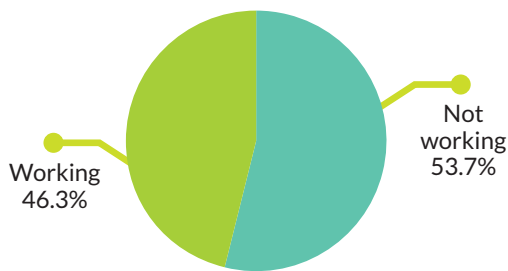
Libraries Tasmania program

A focus of this research is the adult literacy program operated through Libraries Tasmania, a critical 26TEN Network member. At each location, a dedicated literacy coordinator supports a team of volunteer tutors delivering one-on-one adult literacy support tailored to the needs and goals of 'clients' (program participants).

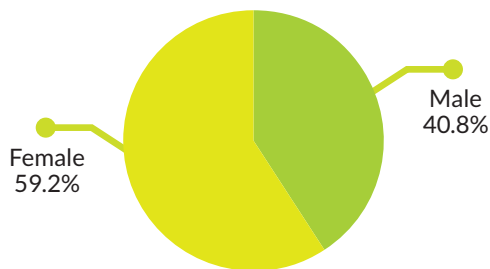
The many clients who benefited from activities backed by the 26TEN employer and community grants are not included in the analysis immediately below. Grant recipient benefits are addressed on page 13.

Our research has revealed that clients of the Libraries Tasmania program skew slightly towards being female, not working, but of all ages. These data are illustrated in the charts that follow.

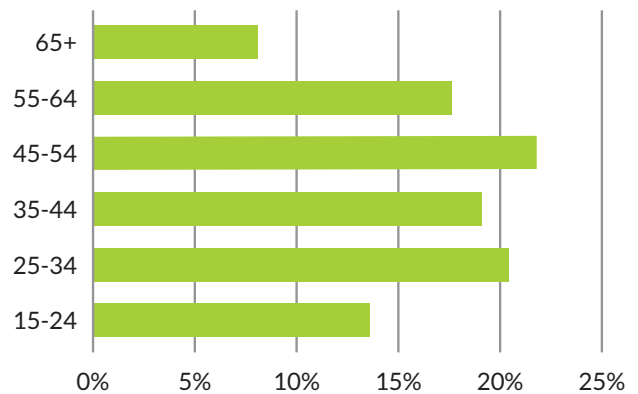
Libraries Tasmania program clients by work status



Libraries Tasmania program clients by gender



Libraries Tasmania program clients by age



Another finding of interest was that clients spent an average of 4.3 hours per week (some individuals spent nearly 30 hours per week) in self-directed learning outside their tutor sessions.

Clients had also attended an average of 50 sessions in total at the time of the survey. The majority were reluctant to put an end date on their participation, with many observing that each goal they achieved led to new aspirational targets.

As would be expected given this high retention rate, largely enthusiastic responses were recorded against the following questions:

	Not at all	A little	A lot
How does the adult literacy program benefit or add value to your employment (or employability)?	20.0%	13.8%	66.2%
How does the adult literacy program benefit or add value to your family life?	7.7%	20.0%	72.3%
How does the adult literacy program benefit or add value to your community participation / engagement?	7.6%	21.2%	71.2%

- “I was referred to the program by UTAS”
- “I was introduced to the program by a friend”
- “It was not difficult. One of the staff at the Child and Family Centre organised it for me”
- “My doctor told my husband I should get help at my library”

Other clients acted after seeing 26TEN marketing material or after a visit to their library. Examples include:

- “I saw an advertisement on TV, and it was easy from there”
- “I was able to contact library staff”
- “Very easy. I saw a pamphlet in the library and contacted a literacy coordinator”

And many clients used their own initiative to get started. Examples include:

- “I knew I needed help with improving my reading and writing skills”
- “Not difficult, but I had put it off. I had it on a list of priorities for a while”
- “I was keen to get started when I heard about 26TEN”

Clients who may have been hesitant to get started at first were soon made to feel comfortable.

Examples include:

- “At first, but everyone was so helpful it was easy to join”
- “I was scared at first, but I soon felt welcome and comfortable”
- “I didn’t like school and was not good at reading and writing, but then I met my literacy coordinator and it was easy”
- “It was difficult, but I knew I had to improve my spelling to get a job”

Clients who had the most difficulty getting started identified several key reasons. Examples include:

- “I was not very confident about coming and didn’t think it would go well. Now it is good, and I am getting along well with my tutor”
- “English is not my first language and I did not understand anything about the program”
- “I didn’t know anyone and was a bit scared, but I feel comfortable now”
- “I feel nervous about making mistakes”

This is evidence of the successful promotion of 26TEN and that marketing material is creating an awareness that influences many clients to attend the adult literacy program. Libraries themselves are also very effective at promoting 26TEN and referring clients to literacy coordinators, while secondary referrals are coming from a variety of individuals and service agencies.



Importantly, once a client gets started with the program, even if hesitant at first, they are soon made to feel welcome and comfortable by literacy coordinators and their tutors. This is also the case with those most reluctant to take the first step.

Finally, when asked, “What do you think prevents people signing up for adult literacy programs?” the most commonly used words were embarrassment, lack of confidence, nervousness and fear. Some examples include:

- “Embarrassment and shame, too much baggage from previous bad experiences”
- “They have been embarrassed in classrooms before and don’t know this is one-on-one”
- “Embarrassed about not being able to read and write”
- “Fear of ridicule by the community”

A variety of other responses were offered including:

- “Not aware of the program”
- “Too busy with work and life”
- “Don’t value education and don’t care”
- “Getting no encouragement from friends or family to do the program”

The respondents were anticipating what others might say, so there is a degree of projecting occurring. This revealed that the respondents are very aware of the stigma attached to low literacy. It also revealed how they felt about being stigmatised.

Libraries Tasmania prison program

Included in the public numbers is a small cohort of clients currently incarcerated at Risdon Prison. These clients are also voluntary program participants but they have unique circumstances and motivations that deserve separate consideration.

Only one of the seven survey respondents indicated that they would end their involvement with adult literacy upon parole; the majority intended to stick with it beyond the terms of their sentence through the libraries-based program.

Risdon respondents valued the program at its highest rating in terms of how it might impact their future employability. These responses broadly reflected the attitudes and motivations of all survey respondents; of interest were the inmates’ perceived benefits and belief in the program, including:

- “It helped a lot – being able to gain employment will be my benefit”
- “It’s hard to get a job without qualifications”
- “I can read to my children”
- “I have more confidence with English, and I can read and write better than I was”
- “Helping my children”
- “I can read better and spell better and am more confident filling in forms”
- “I have a better chance of getting a job because I can read and write better”

For those experiencing incarceration, the relationship between the tutor and client is about building trust. Once established, a trusting relationship accelerates learning.

Libraries Tasmania adult literacy coordinator

26TEN grant recipients

In 2018-19, just over \$500,000 was allocated in the 26TEN budget to be distributed through grants that promote and deliver workplace and community adult literacy. This funding pool was shared by 11 Tasmanian businesses, local councils and not-for-profit organisations, namely:

- Geeveston Community Centre
- West Tamar Council (with TasTAFE)
- Peppers Cradle
- Fonterra (with TasTAFE)
- Forest Practices Authority (with TasTAFE)
- Huon Aquaculture
- Corumbene (with Aged & Community Services Australia-Tas)
- TasFoods Ltd
- Break O' Day Council
- Devonport City Council
- Glenorchy City Council

A number of the funded projects targeted system-wide policy development and administrative support for adult literacy programs. It is nonetheless evident that at least 250 employees benefited as clients.

Some barriers to program initiation cited were:

- “Our organisation has four departments who operate very differently. Applying this across the departments requires a rework of the approach we took with the department we focused on in the project”
- “Time constraints for staff”
- “Having the necessary resources to deliver literacy and numeracy programs”
- “Employees not willing to embrace change. Interference by some employees”
- “Initially it was awareness of the program and understanding of the support available. As the program has been running for 12 months this issue isn't really an issue”
- “Encouraging employees to seek help where required”

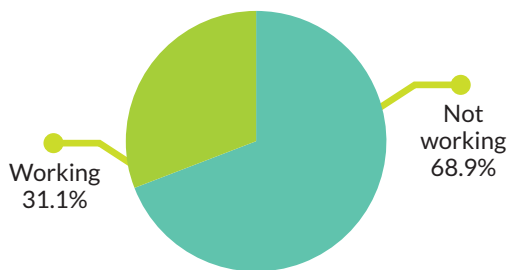
Overall, the grant recipients were (perhaps unsurprisingly) very supportive of their programs. Benefits of adult literacy cited by organisations are clearly relevant to improved workplace productivity, including:

- “Better understanding of the requirements of a job, increased safety, better overall comprehension. In wider terms, people are more able to engage”
- “Greater engagement in the workplace”
- “Greater personal satisfaction and ability to carry out normal life skills eg using computer”
- “Increased performance, increased efficiency, decrease in errors and opportunities for staff to take on higher level jobs including supervisory and management roles etc.”
- “Safety, ownership and job security”
- “Improved productivity”
- “Better engagement, improved accuracy of work, confidence within the workforce, stronger workplace documentation”

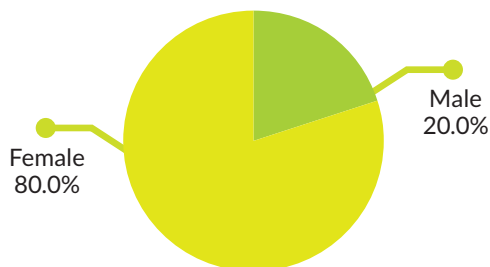
Libraries Tasmania volunteer tutors

Volunteer tutors are the lifeblood of the 26TEN collective impact approach. Volunteer tutors serve as the personal interface between clients and the Libraries Tasmania program. Volunteers are predominantly older, female and not currently working.

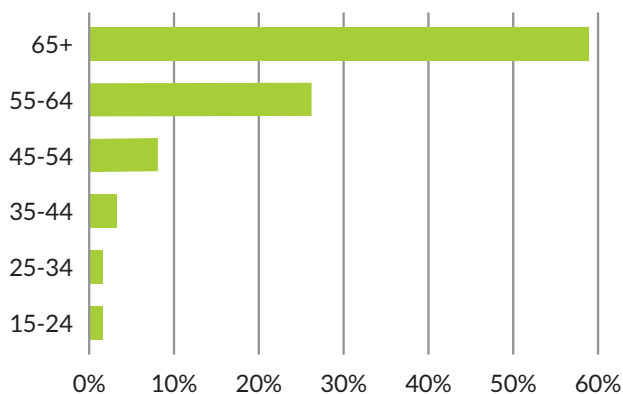
Libraries Tasmania volunteer tutors by work status



Libraries Tasmania volunteer tutors by gender



Libraries Tasmania volunteer tutors by age



They delivered nearly 12,500 tutorial sessions in the last year at an average of 3.6 per month.

Sessions ran for between 45 minutes to three hours, for an average of about 80 minutes. Volunteers spent on average an extra 60 minutes preparing for each session (up to four hours).

This totalled nearly 29,000 volunteer hours in the last year.

Volunteers, too, had very positive experiences of the program. They collectively expressed the intention to increase their commitment by up to 40 per cent in the coming 12 months (to five sessions per month). Indeed, very few were able to foresee an endpoint to their engagement.

Several respondents expressed pride in the fact that Tasmania was leading the way nationally in addressing and actioning the campaign to improve adult literacy levels. Of the many, lengthy responses to the question about the value of the program, all were positive, many effusively so.

Just over 80 per cent of volunteers indicated that other commitments were the main reason they were unable to donate more time to 26TEN. Examples include:

- “Other personal commitments”
- “Family commitments and grandchildren”
- “Other interests and activities”
- “Caring for elderly parents and grandchildren as well as volunteering for 26TEN”
- “Travel and other hobbies”

Five respondents indicated as a barrier that they were still involved in paid work, and two mentioned they would volunteer more, but did not have enough clients. Three were volunteering for other organisations as well as their commitment to Libraries Tasmania adult literacy tutoring, and this created time limitations.

It does seem then that volunteer tutors are very busy and active people! The time the cohort contributes to 26TEN currently is manageable for most respondents, who balance other activities with volunteering; and no respondents expressed concern about the amount of time donated to 26TEN.

When asked, “What do you think prevents more volunteers supporting adult literacy tutoring?” the most cited barrier was the skill set required to be an effective adult literacy tutor, and the perception that volunteering required a teaching background. Examples include:

- “They think they need to be English teachers or experts in a particular field”
- “Understanding they don’t have to be teachers or academics to become tutors”

Others referred to personal matters such as:

- “Lack of confidence”
- “Not feeling confident in their own ability”
- “Lack of empathy for those who could benefit from help”
- “Lack of time or interest”

A general lack of awareness about the volunteering opportunity through the Libraries Tasmania adult literacy program was also identified as a factor in preventing more volunteers coming forward.

Volunteers and clients provided similar responses about factors that prevent potential clients from participating in adult literacy programs. Most volunteer respondents (over 70 per cent) indicated that many potential clients avoid 26TEN because of a lack of confidence, embarrassment, the stigma associated with poor literacy skills, low self-esteem, fear of the unknown and not wanting to admit they need help. Examples include:

- “The social shame of having to admit there is a problem”
- “Stigma and embarrassment of having to discuss their problem with a stranger”
- “Lack of confidence in their ability to learn and bad previous experience with education”

Other factors preventing client participation included lack of awareness of the program and not realising it was free, lack of motivation, lack of time, too busy with work and family commitments, and the general challenges of life. Examples include:

- “Shyness, embarrassment”
- “People are ashamed to admit they cannot read or write”
- “People not believing they need to change”
- “Lack of knowledge about what help is available free of charge”



When asked, “What do you think prevents existing clients participating more?” most volunteers stated that “life in general” was the biggest constraint. Work and family commitments were also frequently mentioned.

Several also indicated that if there is a mismatch between the tutor and clients, or they do not get along, the clients may drop out of the program. Logistical and scheduling issues were also mentioned. Examples include:

- “Lack of time versus other commitments”
- “Other commitments – family, work and other interests”
- “Time constraints of tutors”
- “Time and transport issues”
- “Tutor availability and hours of service”

Personal problems clients present with were also identified as potential blockers to participation, including:

- “Lack of motivation”
- “Inability to organise time” and “time management”
- “Dealing with family problems can cause late cancellation of sessions”

In remote farming areas where school as well home education for people 16yrs + is lacking, future development of these regions more and more relies on investments from outside, local employment for young people is getting harder to find.

Also, (many) mature adults are very computer illiterate, when more and more activities now move to digital area including government agencies, this group of people are struggling with using the technology, and very often, they can't find help.

26TEN is crucial for promoting adult learning, including literacy, numeracy and computer basics, and is also important to help those who are illiterate to find a way to deal with the ever so fast-moving society.

Libraries Tasmania volunteer tutor

Other benefits

The range of capital benefits enjoyed by clients of the Libraries Tasmania adult literacy program and 26TEN grants was broad and highly individualised. Examples of social and human capital cited included:

- “I can now score a football match”
- “I want to write songs, now I can”
- “I want to enrol in a Bachelor of Nursing program”
- “I can actively participate and help my children for their education and can handle day-by-day activities efficiently”
- “Now it is much easier for me to understand the Aussie accent in the workplace”
- “I can read and send text messages now”
- “Getting help with my Cert III meant I got a better job”
- “I got a promotion at work”
- “I finally got a job”
- “I can write my name, address and phone number and know what change to get when I shop”

For many it was the ability to achieve basic, functional literacy levels enabling them to perform important, life-changing tasks.

For Libraries Tasmania literacy coordinators and volunteers, the word most often used to describe the positive aspects of the 26TEN Strategy was “confidence”. Literacy coordinators reported that the keys to success were the individualised nature of the program and matching client needs with volunteer skills. Ensuring the program sessions are not threatening or judgemental was also viewed as important and a critical factor in fostering trusting client and volunteer bonds.

There was also evidence of increased library usage as clients gained confidence and improved literacy skills. These factors combined to contribute to the overall positivity towards the program. Literacy coordinators and volunteers consistently expressed passion, commitment and pride in the positive outcomes of the 26TEN Strategy.

Client stories told by literacy coordinators included:

Client 1, a lifelong sufferer of ADHD with a history of drug and alcohol abuse, anger issues and no previous learning opportunities, is now able to follow his mental health plan – this has significantly improved his quality of life.

Client 2 now reads stories to her children and is committed to ensuring they grow up learning to read and write.

Client 3 improved her reading skills so that she was able to complete Cert I and II (Gardening) and has since landed two part-time jobs (Bunnings and Hospitality).

Client 4 believes he can make his prison experience of value if he learns to read and write and aspires to get a job upon release.

Client 5 got a promotion with his local council job owing to improved reading and writing skills.

Client 6 believes his family is a closer unit as he can now help his primary-aged children with basic maths homework.

Client 7 was able to pass a driver’s licence test and get a job owing to improved literacy skills.

Client 8 indicated that improved literacy skills had given them the confidence to engage in more community activities and have a social life.

Volunteers also enjoyed significant benefits from participating in the Libraries Tasmania literacy program. As indicated earlier, volunteer tutors are retired, having lived successful professional lives, and 26TEN provides renewed meaning and worth to their lives. Their participation also encouraged greater social and community engagement, and a stimulus for taking on additional volunteer roles. According to literacy coordinators:

- Volunteers get great satisfaction when they have a learning breakthrough with a client.
- Volunteers frequently mention that learning is a two-way process and that they learn from their clients as well.
- Volunteers and clients enjoy unique relationships and form strong bonds.
- Volunteers enjoy being able to use their skills, validate their abilities and serve a useful purpose in retirement.
- Volunteers often feel privileged to be part of the 26TEN program.
- One 26TEN volunteer was nominated for and won the 2017 Tasmanian Volunteer of the Year Award.
- Many volunteers report feeling that meaning has returned to their lives as a result of helping clients.
- Volunteers report feeling more active and alert as a result of getting out of the house to meet with clients.
- Several volunteers see their contribution as part of a big picture to help their clients, community and state to improve.
- It is always an aim to best match volunteer skills with individual client needs – good pairing improves the quality of learning and teaching for both.

Libraries Tasmania literacy coordinators emphasised that, although occasionally volunteers move on to other activities, they did not believe there was a dropout problem, and most did not have problems recruiting new volunteers (although some regional centres do experience volunteer shortages). It is evident that volunteers provide a key point of connectivity between clients and the local community, and through employer and community grants, collectively contribute significantly to building human, social and cultural capital.

Finally, there was broad recognition of the capital benefits of the 26TEN Strategy articulated by Coalition members:

- Literacy is a skill that all people should have a right to; improved adult literacy benefits the individual's quality of life, society, business, industry and general productivity.
- Apart from the clear individual, family, community and societal benefits, industry and economic productivity increases with improved literacy levels.
- Improved literacy is extremely important in respect to improving employability prospects, productivity and what I call the fabric of the community.
- 26TEN is supported because of the belief that improved literacy benefits employability, productivity and adds social and cultural value to Tasmania.
- We work closely with many clients who present with borderline functional literacy issues and see firsthand how improved literacy levels improve the quality of life. 26TEN has removed many barriers in dealing with adult literacy at community levels.

Improving adult literacy and numeracy is core business for TasTAFE. We are fully supportive of the 26TEN Strategy and support a long-term partnering approach towards improving adult literacy standards in Tasmania.

Jenny Dodd, CEO - TasTAFE



26TEN Strategy - costs

Inputs that enable and facilitate the 26TEN Strategy in Tasmania and their related outputs come at a cost. The direct costs cited here estimate the change in final demand attributable to 26TEN in Tasmania in 2019. These are the costs borne by individuals, organisations and government in the support of 26TEN activities and associated consumption.

To avoid double counts, intermediate inputs such as the costs of production are incorporated and not counted separately. In other words, the costs of staging tutorials are assumed in the final purchase price. Similarly, the equipment, labour and utility overheads of the related merchandise providers are assumed to be fully recovered by these purchases.

The total social and economic cost of the 26TEN Strategy in Tasmania in 2018-19 is estimated to be \$5.3 million. This includes direct government costs of \$4.1 million that motivated additional investments from individuals and participating organisations of \$1.1 million¹.

It should also be noted that TasTAFE, Libraries Tasmania and 26TEN member organisations deliver a broad range of adult literacy programs and services that are financed by other sources and not funded by the direct investments highlighted here. As such, they are out of the scope of this report.

Costs (\$'000)			
Government costs			
26TEN Strategy	\$1,202.6		
Libraries Tas Literacy Services	\$2,932.8	\$4,135.3	
Organisations' costs			\$590.7
Individuals' costs			
Clients	\$156.3		
Volunteers	\$386.1	\$542.4	\$5,268.5

Costs to government

In the 2018-19 financial year, the Tasmanian Government spent \$4.1 million to enable its 26TEN Strategy. This was made up of \$1.2 million directly to 26TEN as an entity and \$2.9 million to Libraries Tasmania literacy services (which included venue and literacy coordinator costs).

Costs to organisations

Included in the costs to government reported above, grants of just over \$500,000 were made to organisations to run internal adult literacy programs for employees and communities. Extrapolating from our sample of organisational respondents, beneficiary organisations reported making co-contributions of at least \$590,000 in support of these programs.

As indicated in the earlier discussion of what is out of scope in this report, this figure does not include expenditure made by non-recipient member organisations on literacy programs. The scope of these investments – such as those made by TasTAFE in adult/student literacy – was not considered by our study; for that reason, the figure reported here is likely to be an underestimate of the actual investments Tasmanian organisations make in this regard. This is therefore recommended as a direction for future research.

1 Due to rounding, numbers presented in this report may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

Costs to individuals

Related purchases

Libraries Tasmania clients reported directly spending just over \$156,000 enabling their own participation, at an average cost of \$12.57 per session. This mainly comprised public transport or motor vehicle expenses, meals and training materials.

From the responses to the volunteer survey, it is estimated that program volunteers spent a further \$66,000 in enabling 26TEN tutoring, at an average cost of \$5.38 per session.

Most volunteer costs were for transport (fuel and parking) and resource preparation (photocopying and printing). Other costs identified included buying relevant texts (newspapers and books) as well as occasionally buying lunch for clients!

The costs to grant recipient clients are assumed to be fully borne by the beneficiary organisation.

Donations of time

An opportunity cost is the value lost (or forgone) as a result of making a decision between mutually exclusive choices. It is therefore useful to consider what we might have gained by using the resources allocated to the 26TEN Strategy for their 'next best' ends.

In order to resolve the opportunity cost conundrum, this report supposes that there is no 26TEN Strategy in Tasmania, and that the assets presently devoted to it are put to alternative productive ends. The opportunity cost of the human resource allocations to 26TEN in Tasmania can be quantified by identifying the potential value in dollar terms of an alternative allocation.

Recognising that not all wages are equal, the opportunity cost of Libraries Tasmania volunteers' labour is estimated using the average weekly earnings for part-time and full-time workers in Tasmania, less a 35 per cent marginal rate of tax.

This approach applies a simple leisure/work trade-off model that identifies the opportunity cost of one hour of leisure by the income that could have been earned by working for an extra hour. This is consistent with a flexible labour model and assumes that additional work opportunity is available; therefore, we have not considered the opportunity cost of participants' time in this study.

From the 2019 State of Volunteering Report by Volunteering Tasmania we can infer the opportunity cost of one hour of volunteering in the State to be worth \$11.09. Therefore, the nearly 29,000 hours donated to the Tasmanian community by volunteers in 2019 came at an opportunity cost to donors of just over \$300,000.

We already know from other studies that investing in workplace literacy programs increases productivity. I have no doubt that those organisations, especially employers that support the 26TEN Strategy, would agree that the strategy is having a positive impact on productivity and, by extension, Tasmania's economy.

**Liz Jack, Executive Director –
Libraries Tasmania**

26TEN Strategy - benefits



The 2011-12 Programme for the International Assessment of Adult Competencies (PIAAC) is an international survey coordinated by the Organisation for Economic Co-operation and Development (OECD). It has been conducted in 23 OECD countries – as well as the Russian Federation – using survey instruments that adhere to a common set of technical and quality assurance guidelines.

In PIAAC, each respondent’s literacy and numeracy skill is estimated from a test score ranging from 0 to 500. Five skill levels are defined within this range. For most people, an increase in test score of 50 points is equivalent to one skill level, as the cut-offs between levels are 50 points apart.

In quantifying the benefits of the 26TEN Strategy, we assume that, as a result of their engagement, clients improve their combined literacy and numeracy skill by one PIAAC level.

In 2018-19, it is estimated that the 26TEN Strategy enabled between \$27.2 million and \$50.8 million of such benefits across the Tasmanian community. These were the sum of lifetime productivity and personal benefits enjoyed by clients and their employers, discounted for market and social risk factors.

For a full discussion on why benefits in this section are expressed as a range (and the rationale for the application of alternative discount rates), please see Appendix B – Net present value.

Benefits (\$'000) at the market discount rate of 7%			
Productivity benefit			
Fully employed	\$11,843.4		
Under-employed	\$7,051.6		
Unemployed	\$3,434.8	\$22,329.8	
Civic benefit		\$4,898.2	\$27,228.0
Net benefit			\$21,959.5
Benefits (\$'000) at the market discount rate of 3%			
Productivity benefit			
Fully employed	\$16,271.9		
Under-employed	\$9,688.5		
Unemployed	\$4,784.8	\$30,745.2	
Civic benefit		\$20,098.0	\$50,843.1
Net benefit			\$45,574.6

26TEN and adult literacy activities are fast becoming embedded into local councils, libraries and community services. This normalisation will be further advanced by the recently launched Chat tool, which is a bit like an “are you ok” checkpoint for those in need of help with literacy issues.

Simone Zell, Manager Community Sector Development – TasCOSS

Productivity benefits

It has previously been demonstrated that improvements in adult literacy and numeracy noticeably benefit employers by improving individual productivity and reducing a range of costs, including:

- Personnel costs
- Operational costs
- Human resources costs
- Other financial benefits, including:
 - Quality
 - Safety
 - Communication
 - Compliance
 - Further training, and
 - Promotion.¹

Although the gross value of these benefits is difficult to precisely quantify, the Australian Government's Productivity Commission has found that employers at least partially reveal their preference for these skills through preferential recruitment and the payment of a wage premium.²

The benefits differ depending on the prior employment status of the individual who has their literacy improved. The Productivity Commission found:

- An increase in adult literacy and numeracy is associated with higher wages. The marginal effects of literacy and numeracy skills are positive and statistically different from zero. For a given level of educational attainment, and controlling for other factors, a 50-point increase in average literacy and numeracy score is associated with an increase in wages of about 10 per cent, for both men and women.

- The marginal effects of literacy and numeracy skills associated with the probability of employment are positive and statistically different from zero. For a given level of educational attainment, and controlling for other factors, a 50-point increase in a person's average literacy and numeracy test score – equivalent to one skill level for most people – is associated with an increased probability of employment of about 2.4 and 4.3 percentage points for men and women, respectively.

These findings were consistent with complementary research conducted both in Australia and overseas.

Our own research revealed that 67.6 per cent of unemployed program clients believed 26TEN added a little or a lot of value to their employability. Assuming that 3.5 per cent of this cohort achieve minimum wage employment for the remainder of their working life, they would collectively enjoy between \$3.4 million and \$4.7 million in wage benefits as a result.

Similarly, under-employed clients – those who work less than full-time – could expect to receive the 10 per cent increase in wages. This would be realised as between \$7.1 million and \$9.7 million in equivalent benefits. In the same way, fully employed clients would receive between \$11.8 million and \$16.2 million.

Although equally enjoyed by 26TEN clients and their employers, these benefits – totalling between \$22.1 million and \$30.7 million – are likely to be an underestimate, as they do not include the compounding benefits of superannuation investments, avoided welfare costs and the surplus returned to their employers.

1 Brown, J., Taylor, M., McKenzie, P. & Perkins, K. (2015) *Investing in Workplace Literacy Pays*, Australian Industry Group.

2 Shomos, A. & Forbes, M. (2014) *Literacy and Numeracy Skills and Labour Market Outcomes in Australia*, Australian Government Productivity Commission Staff Working Paper.



Civic benefits

In as much as employers and employees enjoy a productivity premium from 26TEN, all client participants are able to improve the quality of their life. This is a civic benefit that is relevant to this study.

Significant work has been undertaken demonstrating the very strong correlation between literacy and life expectancy, especially for people starting with below-threshold (poor) literacy. The National Literacy Trust (UK), for example, recently evidenced a gap of over 20 years between the life expectancy of people with the lowest and highest levels of literacy in their country.³

In that study, low literacy was highly correlated with a number of health factors predictive of life expectancy, including:

- smoking and alcohol use
- poor diet and obesity
- poor mental health
- social isolation, and
- restricted access to health information and care.

Other studies have found this phenomenon replicated in national and cross-border settings.

It is therefore conservatively reasonable to assume that increasing a participant's PIAAC skill by one level would equate to increasing their life expectancy by at least 1.0 per cent. Controlling for the variable life expectancy of the two main genders, this equates to a life expectancy bonus of just under five months for the average 26TEN client from the time their skill level was raised.

So how can this benefit be quantified in economic terms?

Although putting a dollar value on a person's life may appear mercenary, it is a necessary and widely accepted practice in policy. Because there are only a finite number of resources available to society, trade-offs are inevitable.

For example, Australians accept that the costs of mandating the use of seatbelts in motor vehicles is justified by the (beneficial) lives saved; whereas, the welfare benefits gained from making everyone drive at 10 km/h is not deemed to be worth the productivity cost to society.

The statistical valuation of a human life is therefore an estimate of the financial value that society is willing to pay to reduce its average number of deaths by one. As it assumes that the life gained is free of injury, disease or disability, it is the government's proxy valuation of an individual's quality of life.

The Australian Government's Office of Best Practice Regulation (OBPR) stipulates the value of a statistical life is \$4.2 million, or \$182,000 (in 2014 dollars) for a statistical life year.⁴ Discounted for present value and indexed, in accordance with OBPR advice, to 2019 prices, the 26TEN enabled value of increasing life expectancy by 1.0 per cent is worth between \$4.9 million and \$20.1 million to participating clients.

3 Gilbert, L., Teravainen, A., Clark, C. & Shaw, S. (2018) *Literacy and Life Expectancy: An evidence review exploring the link between literacy and life expectancy in England through health and socioeconomic factors*, National Literacy Trust.

4 Office of Best Practice Regulation (2014) *Best Practice Regulation Guidance Note: Value of statistical life*, Department of Prime Minister and Cabinet, Australian Government.

Other benefits – volunteers' labour

The labour of volunteers is another civic contribution of the Libraries Tasmania adult literacy program. As already stated, it is estimated that volunteers donated 29,000 hours to the program in 2018-19. The replacement cost of this labour is determined by calculating what it would cost beneficiaries to employ people to perform the equivalent work.

It is presumed that each volunteer necessarily brings skills commensurate with their professional experience; therefore, it is not simply a case of replacing them with industry minimum-wage labour. The overhead costs of administration and capital must also apply to each hour of labour, and the additional costs of taxation (such as superannuation, workers compensation and payroll tax) should be allowed for.

Again, relying on the 2019 *State of Volunteering Report* by Volunteering Tasmania, the replacement cost of one hour of volunteer labour is estimated to be worth \$43.90, meaning that volunteers donated approximately \$1.3 million of labour to the Libraries Tasmania program in 2018-19.

For the purposes of cost-benefit analysis, this is less a benefit and more an avoided program cost, which is why we have not added it to the sum of benefits reported here.

That said, it can be noted that the 'true' cost of the 26TEN Strategy in 2018-19 (including the replacement cost of volunteer labour at market prices) was \$6.5 million, meaning that the actual cost of \$5.3 million reported earlier represented a **19.4 per cent saving** to government and the community thanks to volunteers.

26TEN has tri-partisan political support in the State of Tasmania and has had from the beginning; that is one of its greatest strengths in respect to sustainability, as 26TEN must be a long-term strategy to make a real difference.

**Siobhan Gaskell – 26TEN
Coalition Convenor**

26TEN Strategy - value



The value of the 26TEN Strategy to Tasmania, 2018-19

Costs (\$'000)			
Government costs			
26TEN Strategy	\$1,202.6		
Libraries Tas Literacy Services	\$2,932.8	\$4,135.3	
Organisations' costs		\$590.7	
Individuals' costs			
Clients	\$156.3		
Volunteers	\$386.1	\$542.4	\$5,268.5
Benefits (\$'000) at the market discount rate of 7%			
Productivity benefit			
Fully employed	\$11,843.4		
Under-employed	\$7,051.6		
Unemployed	\$3,434.8	\$22,329.8	
Civic benefit		\$4,898.2	\$27,228.0
Net benefit			\$21,959.5
	Benefit : Cost Ratio (all costs)	5.2 : 1	
	Benefit : Cost Ratio (government costs)	6.6 : 1	
Benefits (\$'000) at the social discount rate of 3%			
Productivity benefit			
Fully employed	\$16,271.9		
Under-employed	\$9,688.5		
Unemployed	\$4,784.8	\$30,745.2	
Civic benefit		\$20,098.0	\$50,843.1
Net benefit			\$45,574.6
	Benefit : Cost Ratio (all costs)	9.7 : 1	
	Benefit : Cost Ratio (government costs)	12.3 : 1	

The value of the 26TEN Strategy to the entire Tasmanian community is the sum of the benefits enabled. This study estimates these to be worth in 2018-19 between \$27.2 million (at the market discount rate) and \$50.8 million (at the more realistic social discount rate).⁵

These figures are significantly greater than previous estimates based on price or economic impact; however, they remain likely to be an underestimate given the limitations of the available data and forensic techniques.

On its own, \$50.8 million (or even \$27.2 million) is a somewhat meaningless sum. The power of numbers lies in their ability to provide a standardised basis for comparison, and – short of performing the same

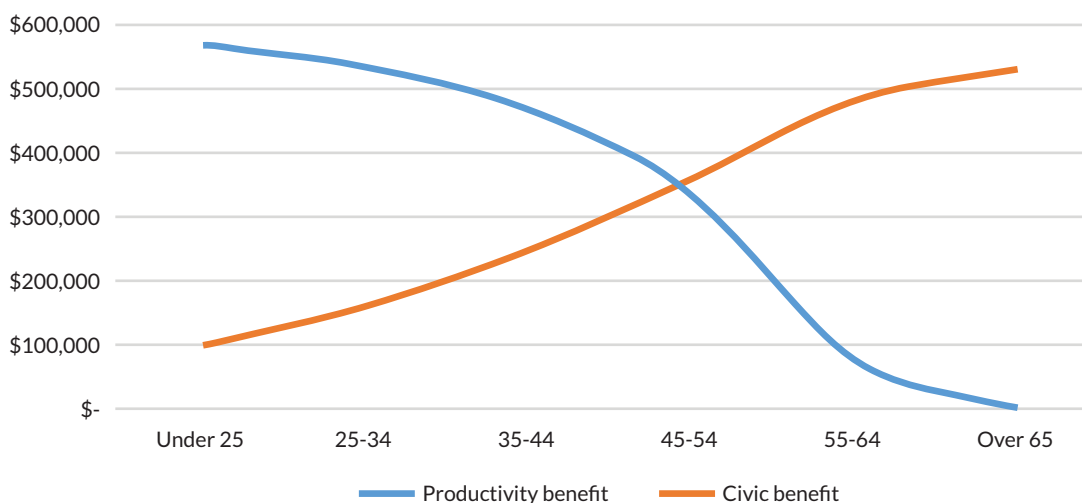
exercise for every other human activity – a top-line valuation of every human endeavour is impractical, if not impossible.

For that reason, this study contrasts the net value of 26TEN in Tasmania with the cost of inputs. It can be seen that for every dollar invested by the community, between \$5.10 and \$9.70 is returned. Therefore, because the external benefits of 26TEN exceed the social costs, the outcome is not inefficient, and there is a substantial social, cultural and economic ‘profit’ in the 26TEN Strategy.

Importantly, the 26TEN Strategy would not exist without the Tasmanian Government’s investment of \$4.1 million in 2018-19; and it is this investment that has motivated the additional \$1.2 million of community co-contributions and \$1.3 million of volunteer labour. On that basis, the net benefit gain of between \$22.0 million and \$45.6 million represents a healthy return of between 6.6 and 12.3 on the original investment by the State.

A final interesting finding is that the return dynamics (per individual) vary with age. As shown in the chart below, the younger a person is, the higher their return in productivity; whereas, the older the person is, the higher their return in quality of life.

This supports the moral argument that investments in adult literacy should not prefer one age cohort over another, as all benefit economically (albeit in different ways).



Conclusion

This study has ultimately revealed that those who donate their time and money to 26TEN are supporting the common good. It is hoped that this report can educate readers to the economically real and significant value of 26TEN to Tasmania.

Although there are limitations to the study that would benefit from future research, the potential now exists for decision-makers in both industry and government to leverage this framework for continual improvement in the marketing and delivery of their services.

Recommendations

It is beyond the scope of this report to provide recommendations as to how the 26TEN Strategy should be optimised for its next five years of delivery. Nonetheless, the economic law of diminishing marginal returns – whereby increasing the investment in 26TEN will not by default yield equivalent benefits – must be allowed for if the Strategy and its activities are to be enlarged.

For that reason, the barriers to participation raised by stakeholders in this report should be specifically targeted when looking to increase the impact of the program. After all, with a population of less than 1,000 clients across all Strategy initiatives, it is reasonable to assume there is significant unmet demand for adult literacy in the State.

For completeness, we also present here – without preference or prejudice – the sum of stakeholder observations as to how the 26TEN Strategy and its programs might be improved:

- Conduct research into tracking the progress of clients who leave a program
- Increase technological literacy provision for client use
- Match programs more closely to community needs, particularly in regional areas
- Better integrate 26TEN with the local communities
- Fully use current volunteer tutors to improve retention
- Celebrate our success and share our success through storytelling
- Commitment to a long-term strategy and support will result in growing success
- Ongoing, long-term stakeholder commitment to improving adult literacy
- Better measure improved productivity and the link to improved literacy
- Take greater pride in the fact that Tasmania is leading the way in Australia in its aims to improve adult literacy
- There is plenty of activity, support and enthusiasm for 26TEN, but perhaps we need a more targeted approach delivering adult literacy to those demographic groups that are most in need
- Improve program accountability and better report the positive impacts 26TEN has on productivity and employment using qualifiable metrics creating an evidence base of success – this is the best way to amplify (our) voice with government
- Must ensure there is long-term funding and support for 26TEN and continuous improvement approach to strategic planning program delivery to make real, measured improvements
- Design metrics to measure the longer-term residual value of the 26TEN Strategy to local communities and the State of Tasmania, and
- Accept that improving adult literacy is a slow process; with this in mind, the longer-term support and funding provided by the State Government is essential and represents persistence and sustainability.

Directions for future research

This study has identified a number of gaps in our understanding of the empirical impacts of the 26TEN Strategy in Tasmania. Future research is therefore encouraged in the following areas:

- Quantification of investment in adult literacy activities by 26TEN member organisations that are not current 26TEN grant recipients
- Empirical research into the socio-economic impact of changes in individual adult literacy on second-degree networks, including friends, family and co-workers
- The development of a more reliable adult literacy multiplier for what is defined here as the workplace productivity premium
- Quantification of the full range of adult literacy costs and benefits attributable to civil society (beyond the population health benefits), including:
 - criminal and social justice impacts
 - welfare services, and
 - civic engagement
- Baseline and measurement of the actual literacy improvements made by clients (ideally according to the PIAAC scale)
- The longitudinal/lifetime impact of improved adult literacy on program graduates
- Measurement of the extent to which one-off adult literacy grants motivate a long-term and sustainable change in organisational attitudes, investments and behaviours (for example, our research has revealed anecdotal evidence from past grant recipients that they continue to fund workplace adult literacy even after their grants have been acquitted), and
- Modelling of various efficiency-based scenarios that would better inform policymakers at all levels on the costs and benefits of future adult literacy investment in Tasmania.

Appendices

Appendix A: 26TEN client survey instrument

1. What gender do you most identify with?
 - Male
 - Female
 - Transgender
 - Non-binary
 - Not listed above
 2. What is your age?
 - Under 25
 - 25 to 34
 - 35 to 44
 - 45 to 54
 - 55 to 64
 - Over 65
 3. Do you identify as any of the following?
 - Aboriginal or Torres Strait Islander
 - Living with disability
 - Carer for someone living with disability
 - English is not my first language
 - Parent / legal guardian with school-age children at home
 - Parent / legal guardian with infant children at home
 - Homeowner
 4. What is your postcode?
 5. How many hours do you work per week?
 6. Approximately how many adult literacy sessions have you attended since you began the program?
 7. How long does a typical adult literacy class/ session last?
 8. Approximately how much time do you spend each week on adult literacy self-learning work outside of organised classes/sessions?
 9. Approximately how much money do you personally spend on supporting adult literacy activities each week?
This may be on things like transport, learning resources, books/magazines purchased, etc
 10. Do you intend attending classes/sessions every week?
 11. How many months do you think it will take you to finish the adult literacy program?
 12. What do you think prevents other people signing up for the adult literacy program?
 13. Was it difficult for you to get started with the adult literacy program? If yes, why?
 14. How have you benefited from being part of the adult literacy program (Not at all / a little / a lot)
 - To you personally?
 - Improves your value to your current employer (or increases the likelihood of you finding paid employment)?
 - Improves the quality of your family, and/or community life?
 - Other
- Please give examples*
- On behalf of the 26TEN Strategy for adult literacy and numeracy, thank you for your participation in this survey.*

Appendix B: Net present value

The discount rate is a critical parameter in cost-benefit analysis whenever costs and benefits differ in their distribution over time, especially when they occur over a long time period. In its *Guidance Note: Cost-Benefit Analysis (2016)*, the Australian Government's Office of Best Practice Regulation (OBPR) states:

The need to discount future cash flows can be viewed from two main perspectives, both of which focus on the opportunity cost of the cash flows implied by the regulation. The first perspective is the general observation that individuals prefer a dollar today to a dollar in the future. This is most obvious in the fact that banks need to pay interest on deposits to entice individuals to forgo current spending. This general preference for current consumption is known as the 'rate of time preference' and relates to all economic benefits (and costs), not just those that are financial in nature.

Since individuals are not indifferent between cash flows from different periods, those flows cannot be directly compared. For monetised flows to be directly comparable in a Cost-Benefit Analysis (CBA), those costs or benefits incurred in the future need to be discounted back to current dollar terms. This reflects society's preferences, which place greater weight on consumption occurring closer to the present.

The second perspective is that flows of costs and benefits resulting from a regulation also have an opportunity cost for investment. When regulations impose costs on individuals or businesses, those costs will need to be funded in some way. This funding imposes costs on the affected party, either through the interest paid for borrowing the money, or the returns forgone when the funds are not used for other purposes.

The regulation will therefore only be beneficial when it provides a return in excess of the cost to society of deferring consumption, or of the return that could have been earned on the best alternative use of the funds. By applying a discount rate to future cash flows, the required rate of return is explicitly taken into account in the net present value calculation.

Either approach demonstrates that the need to discount future cash flows can be viewed in terms of the opportunity cost of the cash flows, whether this is the cost of delaying consumption or the alternative investment opportunities forgone. Since most of the costs and benefits of regulatory proposals are spread out over time, and their value depends on when they are received, discounting is crucial to CBA.

The rate that converts future values into present values is known as the discount rate. If the discount rate were constant at r per cent per year, a benefit of B_t dollars received in t years is worth $B_t/(1+r)^t$ now.

Inflation is another reason that a dollar in the future is worth less than a dollar now. A general rise in the price level means that a dollar in the future buys fewer goods. Analysts conducting a CBA have the choice of whether to include future cash flows in terms of their actual monetary value at the future date (the 'nominal' value) or in terms of their current dollar value (the 'real' value). However, since all cash flows need to be converted to current dollar terms to be comparable in a CBA, it is usually simplest to adopt the latter approach.⁶

6 In this study we have estimated future dollar flows based on their current ('real') value.

CBA measures the value people place on various outcomes, preferably using their willingness to pay as revealed by their market behaviour. Consequently, the preferred approach is to base the discount rate on market-based interest rates, which indicate the value to the current population of future net benefits. Market interest rates determine the opportunity cost of any capital used by the Government's regulatory proposal – that is, what it would have produced in its alternative use.

There is uncertainty about the appropriate discount rate to use for regulatory proposals. It is uncertain what the alternative uses for capital used by a proposal would have been, and what the capital would have produced in those uses.

OBPR requires the calculation of net present values at an annual real discount rate of 7 per cent. As with any uncertain variable, sensitivity analysis should be conducted, so in addition to the 7 per cent 'central' discount rate, the net present values should also be calculated with real discount rates of 3 per cent and 10 per cent. If the sign of the net present value changes, the sensitivity analysis reveals that the choice of discount rate is important. This information should be highlighted in the summary of the CBA, as it is an important caveat for the analysis.

Our study has revealed that the civic benefits described are highly sensitive to variance from the central discount rate:

Benefits (\$'000)	7% discount rate	3% discount rate	Variance
<i>Productivity benefit</i>	\$22,329.8	\$30,745.2	1.38
<i>Civic benefit</i>	\$4,898.2	<u>\$20,098.0</u>	4.10
	\$21,959.5	\$45,574.6	1.87

As Harrison⁷ (who is cited by the OBPR as their authority on discount rates) argues:

If the sensitivity analysis reveals that the choice of discount rate is important (changes the sign of the project's net present value), then more consideration should be given to the choice of an appropriate rate – such as the risk characteristics of the proposal (for example, the extent of fixed costs and how costs and benefits vary with the state of the economy). Project flows that are more sensitive to market returns and other factors should have a higher discount rate, while projects that are less sensitive should have a lower one.

Drawing further on Harrison, the discount rates of 3, 7 and 10 per cent preferred by the OBPR effectively represent:

- 3.0 per cent – the weighted average riskless rate of return
- 7.0 per cent – the weighted average rate of return
- 10.0 per cent – a rate of return for a riskier investment (reflecting the marginal productivity of capital during the 2000s).

⁷ Harrison, M. (2010) *Valuing the Future: the social discount rate in cost-benefit analysis*, Australian Government Productivity Commission Visiting Researcher Paper.

Typical market risks include changes in equity or commodity prices, interest rate moves, foreign exchange fluctuations and adverse or catastrophic events. If realised, any of these risks can have an observable impact on labour demand.

As employability and wage inflation are the critical factors used to estimate the productivity benefit of 26TEN client engagement, it is appropriate that the discount applied is the OBPR default of 7 per cent.

The investment in the civic benefits is, however, inherently riskless. As improvements to an individual’s quality of life, they are enjoyed regardless of market conditions. There is also no trade-off in play, whereby an investment in improving the quality of life of an illiterate individual might come at the expense of or cost to the quality of life of another person. It is also widely noted in the literature that, all things being equal, benefits realised and enjoyed over a longer term should attract a lower discount rate than short-term gains.

For those reasons, it is far more likely that the true value of the civic benefits is revealed using the 3 per cent discount rate, whereas the productivity benefits should be discounted at 7 per cent. A circumstance that contemplates a higher risk scenario justifying the use of the 10 per cent discount rate cannot be reasonably foreseen.

For completeness, a cost-benefit valuation of the 26TEN Strategy using this approach is presented below, allowing us to make the following observations:

	Worst case	Most likely	Best case
The value of 26TEN (gross benefit)	\$27.2m	\$37.2m	\$50.8m
Benefit : Cost Ratio (all costs)	5.2	8.1	9.7
Benefit : Cost Ratio (government costs)	6.6	10.3	12.3



Costs (\$'000)			
Government costs			
26TEN Strategy	1,202.6		
Libraries Tas Literacy Services	2,932.8	4,135.3	
Organisations' costs		590.7	
Individuals' costs			
Clients	156.3		
Volunteers	386.1	542.4	5,268.5
Benefits (\$'000)			
Productivity benefit			
Fully employed	11,843.4		
Under-employed	7,051.6		
Unemployed	3,434.8	22,329.8	
Civic benefit		20,098.0	42,427.7
Net benefit			37,159.3
	Benefit : Cost Ratio (all costs)	8.1 : 1	
	Benefit : Cost Ratio (government costs)	10.3 : 1	

