Environmental sustainability practices: How adults learn  

Erica Smith, Federation University Australia

Abstract

This paper reports on a small research project which investigated how adults in Australia learn about, and adapt to, developments in environmental sustainability practices. The project was based on two major changes in Australia in 2018: the cessation of free ‘single-use’ plastic bags in many shops, particularly the major supermarket changes; and a gathering momentum towards more rigorous recycling practices. These changes, particularly the first, have affected the daily lives of most Australians. The research, consisting of a focus group, an expert interview and an on-line survey was undertaken with staff working for a regional university based at several campuses across the State of Victoria. This paper reports on preliminary results from the project, including analysis of the initial set of results from the survey. The results so far show that people learn from a range of sources, but some are much more common than others. Among media sources, two-thirds of the survey respondents learned from television, and around 40% from social media and the internet more generally; and among other sources, friends and family were information sources for two-thirds of people, while community information and public notices in shops or on litter bins were used by around half of the respondents. Some respondents were passionately engaged with the topic. The paper presents the responses to a number of key questions in the survey and analyses by age, and gender; and makes some suggestions about the effectiveness of learning sources on sustainability practices. The paper addresses the conference themes of formal and informal learning; adult political education; and community learning and engagement.

Introduction

The project was inspired by, and draws upon, two previous studies. A research project ‘Learning to be drier’ was carried out in 2009 in rural communities in Victoria during a severe drought, examining how community members adapted to drier conditions in their domestic life as well as in farming practices, and how they learned about new practices (Golding, Brown, Foley, Smith, Campbell, Schulz, Angwin & Grace, 2009). The researchers in the current project led two of the case studies in that research; and one followed up with a study of the educative role of the local newspaper in one of the sites, the Wimmera-Mallee wheat farming area (Campbell, Smith & Siesmaa, 2011). The second study of relevance, presented at the SCUTREA conference in 2015, was about adults’ learning and education about the 2014 Scottish independence referendum (Crowther & Mackie, 2015; Crowther, Boeren & Mackie, 2018). Data were gathered in that project through an on-line survey of adults.

Recently in Australia, large supermarket chains and some other shops have ceased providing free plastic bags for packing consumer items, instead offering reusable, supposedly environmentally friendly, bags. This change has come about in an effort to reduce plastic waste. For some time, customers had been offered canvas bags for sale, and many brought those when shopping. In addition, Australia is currently facing a challenge regarding recycling materials, with China reportedly no longer importing Australia’s recycled waste. It has been reported that there is poor practice in the
sorting of household waste into recyclable and non-recyclable bins (Planet ARK, 2017). People are said to find the rules about recycling confusing (Downes, 2017). These matters are not, of course, confined to Australia. Recent studies have been carried out in, for example, in Brazil looking at changes in waste management in a hospital (Paniza and Cassandri, 2018); and in Malaysia looking at the implementation of a plastic bag ban (Little, Lee and Nair, 2019).

It is well-recognised that waste, particularly plastic waste, is a major threat to the environment (United Nations, 2019). Micro-plastics affecting marine life have been featured in recent months as an important problem. Awareness of the two issues covered in the current project is growing, partly because of a TV series ‘War on Waste’ by a well-known comedian Craig Reucassel (https://www.abc.net.au/ourfocus/waronwaste/) In particular, the ban on free plastic bags in supermarkets has raised a great deal of public discussion. It was therefore an opportune time to gain a better understanding of how people learn about recycling and the avoidance of plastic bags when shopping in order for education campaigns to be better targeted in the future.

The Crowther, Mackie and Boeren study (2015, 2018) showed that adults used a range of information sources to inform themselves about the issues relating to the Scottish referendum. The internet was the most popular source followed by social media (both generic and specifically about the campaign), followed by friends and family and then newspapers1. There were variations among age groups, which showed young people more likely to mention friends and family; and older people more likely to mention newspapers and attending meetings, for example.

Research method

Using participants from a university meant a potentially diverse sample because of the range of workers: teaching, professional, administrative, services and maintenance. The university was dual-sector, operating in Higher Education and in Technical and Further Education (TAFE), providing further diversity of staff. In addition the spread of campuses of the university potentially elicited a population living in each of metropolitan, regional and rural areas. 1952 staff were employed at the university at the time of the survey, in May 2019.

University ethics committee approval was obtained for the project. In late 2018, a focus group with eight staff, and an expert interview with a Business School lecturer who was formerly the Director of the university’s sustainability centre, were undertaken to discuss the issues and to help advise on questions for the university-wide survey. The on-line survey, using Survey Monkey, was then developed. The ‘sources of information’ list in the Crowther & Mackie survey (2015) was used as a basis for the relevant questions, with additional items included. In the first week of administration, 81 responses were received, of which 79 responses were within scope as employees. The survey was designed with a screening question so that people not employed at the university who tried to access the link were ‘bumped out’ of the survey at the beginning, to maintain the integrity of the sample.

1 In the published papers by Crowther et al, no overall percentages are provided; only a breakdown by age. The overall order that we mention is inferred from the tables in the papers, but as we do not know the proportion of respondents in each age group, it may not be quite correct.
The focus group participants were as follows (Table 1)

Table 1: Focus group participants (n=8)

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Administrative</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

The survey comprised four sections:
1. ‘About you’ (demographic data, job role, education level, home location [rurality]);
2. ‘About your engagement with communities’ (digital, political and local);
3. ‘About your engagement in specific sustainability practices’, i.e. plastic bags in shops and recycling (understanding, practices, and changes over the previous twelve months);
4. ‘Learning about specific sustainability practices’ (using a provided list of (a) media sources and (b) other sources; and a number of qualitative questions).

The survey included a total of 35 questions. Seven were purely qualitative, and several of the quantitative questions provided space for further comment. The survey was trialled with 12 staff, and administered via a link in the daily staff e-newsletter. The survey took people between 10 and 15 minutes to answer with an average of 12 minutes.

The 79 eligible respondents had the following characteristics:
- 87.3% female, 12.7% male;
- 11.4% aged 20-29, 15.2% aged 30-39, 31.7% aged 40-49, 34.2% aged 50-59, 7.6% aged 60 or more;
- 63.33% working full-time at the university, 36.7 working part-time or casually;
- 27.9% academics or TAFE teachers, 27.9% professional, 40.5% administrative/clerical, 3.8% services, trades and technical;
- 8.9% identifying as senior managers, 21.5% as ‘supervisor or co-ordinator’, and 69.6% as ‘other’;
- Two-thirds of respondents reported living in a regional city, one-quarter in rural or remote area, and only 8% in metropolitan areas, most of those in outer metropolitan areas.

All but five respondents had completed all the years of secondary schooling (12 years); and respondents’ highest qualification levels were well distributed across the different levels of vocational education and training (VET) and higher education qualifications. The quantitative questions were completed by all respondents (with one drop-out after section 1), except that 9 people did not completed the final section, about learning.

In this paper the findings from the focus group and interview are reported, together with the results of the first week of administration of the on-line survey (n=79). The survey will continue to be available, with reminders planned and special efforts to be made to include responses from under-represented groups. For example, males form just over a third (37.5%) of the university’s workforce, and so the low proportion of responses from males (only 10 people – 12.7%) is clearly a limitation of
the responses so far. Academic staff (both higher-education and TAFE) are also under-represented so far.

Findings

In this section the findings from the focus group and expert interview are reported first, followed by the survey results.

Qualitative component

It is not surprising that those who volunteered for the focus group (which was advertised by notices in the School of Education at the largest campus of the university, and by personal invitation) were people who were committed to environmentally sustainable practice. The discussion indicated that participants were aware and committed to environmentally ethical behaviour (Cherrier, 2006) associated with recycling and using eco-friendly carry bags when shopping. They had a commitment to recycling practices both at home and at the work place. But they felt confused regarding identifying which materials are recyclable and which are not. The focus group participants recounted their own and others’ problems with the way the withdrawal of plastic bag provision in supermarkets was managed. It was agreed that there were circumstances in which this created inconvenience, but nevertheless there was general support. Participants mentioned initiatives being developed such as replacement or recycled bags such as ‘Boomerang Bags’ and bag recycling bins indicating public commitment to the changes. They reported active use of social media as a way of staying informed about environmental and ecofriendly information and activity. Several participants said that the environmental education of school-children worked to inform the family and broader community about environmental sustainability practices. Participants were also keen to discuss other related issues such as illegal dumping of household waste in rural areas.

The interview with the sustainability expert, who was male, provided useful information about state and local government initiatives. These included TAFE courses in green skills, training council employees on sustainability, rebates for insulation and solar panels for private homes and recycling through local council rubbish collection. Recycling was traditionally the domain of local councils in Australia and the systems for what can and cannot be recycled depended on the individual council, and this was said to create confusion about recycling among the general public and businesses, and leading to inconsistency across the country.

Survey findings

As with the focus groups, the responses so far display a high level of commitment to sustainability. This is evidenced by the fact that even the qualitative questions which were non-compulsory were answered by most people, with over 60 responses (from a total of 79 respondents) to nearly every qualitative question.

We were aware that several factors were likely to affect people’s preferred information sources, and in this initial paper we focus on gender and age. We also asked about level of engagement in national, local and digital communities but have not yet analysed those responses.
Tables 2 and 3 show the responses to questions about the level of understanding of the issues, with a breakdown by gender.

Table 2: No plastic bags in shops: What is your level of understanding of the issue?

<table>
<thead>
<tr>
<th>Gender*</th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
<th>All respondents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>High</td>
<td>7</td>
<td>70.0</td>
<td>54</td>
<td>79.4</td>
<td>61</td>
<td>78.2</td>
</tr>
<tr>
<td>Medium</td>
<td>3</td>
<td>30.0</td>
<td>13</td>
<td>19.1</td>
<td>16</td>
<td>20.5</td>
</tr>
<tr>
<td>Low</td>
<td>0.0</td>
<td>1.5</td>
<td>1</td>
<td>1.3</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
<td>68</td>
<td>100.0</td>
<td>78</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* A gender option of ‘prefer not to identify’ was provided, but nobody in the first set of respondents selected this option.

Table 3: More rigorous recycling practices: What is your level of understanding of the issue?

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
<th>All respondents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>High</td>
<td>4</td>
<td>40.0</td>
<td>36</td>
<td>52.9</td>
<td>40</td>
<td>51.3</td>
</tr>
<tr>
<td>Medium</td>
<td>6</td>
<td>60.0</td>
<td>27</td>
<td>39.7</td>
<td>33</td>
<td>42.3</td>
</tr>
<tr>
<td>Low</td>
<td>0</td>
<td>0.0</td>
<td>5</td>
<td>7.4</td>
<td>5</td>
<td>6.4</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
<td>68</td>
<td>100.0</td>
<td>78</td>
<td>100.0</td>
</tr>
</tbody>
</table>

These tables indicate that understanding about the new plastic bags regime was much higher than that of the momentum towards more rigorous recycling: nearly four-fifth had a high awareness of the former, but only just over one-half had a high awareness of the latter.

Other questions showed that nearly 70% of people always took bags with them even when not intending to shop, with one-quarter at least taking bags when planning to shop. These proportions were fairly similar for recycling: just over two-thirds of people always sorted materials very carefully and chose appropriate bins wherever they were, and 28% either sorted very carefully at home only; or were fairly careful. However there were different results when asked about changes in practice over the previous 12 months, when both these matters had come to public attention. 39.7% of respondents were ‘much more likely’ to take their own bags to shops compared with 12 months ago, with 16.7% saying ‘more likely’. But these percentages were reversed in relation to care with recycling practices.

There were some slight differences between men and women; women were slightly more aware of both issues (Tables 2 and 3), but considering the low numbers of male respondents at this point it is difficult to draw firm conclusions. By age, younger people (in their 20s) were more likely to have changed their practices than other age groups, with relation to both issues; and showed the least level of awareness of both issues. Those who described themselves as active in their local community were the group most likely to have a high level of understanding of both topics. Those
who described themselves as ‘politically aware but not active’ at a national level were more likely than the politically active to say they understood the single-use plastic bags topic.

In terms of learning, Figures 1 and 2 below indicate the sources of information that had informed the survey respondents about both the issues. Because of the large range of potential sources of information, two questions were asked, each listing a potential number of sources: media sources (12 options plus ‘other’); and other sources (also 12 options plus ‘other’). Respondents were asked to list all that they had used. As can be seen in Figure 1 below, ‘television documentaries’ was the most frequent media source of information, selected by almost two-thirds of respondents, with various internet sources somewhat behind. ‘Friends and family’ was the most often listed ‘other’ source of other information, again with two-thirds of respondents listing that source.

Figure 1: Which of these media sources of information have informed you about these changes?
When asked which was the single most important source (Figure 2), ‘television documentaries’ was the most important media source, chosen by 30% of respondents, and with a long gap between that and the next single most important source, which was ‘personal social media’, selected by 11%.

There was more diversity among the ‘most important’ sections for other sources with ‘friends and family’ coming first but selected by only 26% of people, and 21% selecting community flyers and materials. The TV documentary ‘War on Waste’, mentioned earlier in this paper, was mentioned specifically by several respondents.

Respondents were invited to comment on why they had chosen the single most important source that they did. Some typical responses are listed below and illustrate the greater diversity of responses under the ‘other sources’ category.

**Media sources:**

- I think documentaries are more in depth than most other media and they provide a simplistic view of research conducted by experts that might otherwise be out of reach for the average person.
- Unbiased news reports that provide the facts matter more to me than what’s trending or what political parties have endorsed.
- I trust investigative journalism such as Four Corners, or science shows like Catalyst, or The War Against Waste.
- I am time poor and dip in and out of Facebook as a one-stop-shop for personal/news updates. I don’t read the newspapers or watch TV.
- Because I engage with social media every day, and not with the others everyday
One response unknowingly summed up many other responses thus: ‘There are pros and cons associated with each that make it too hard to say whether one is better than the other. E.g., documentaries and scholarly articles carry with them a lot of weight, whereas social media may not but can be used to publish information in a more timely manner. One becomes more important for validity, while the other is for timeliness.’

Other sources:
- I believe that contemporary individual activists have the ability to reach many people if they’re charismatic and passionate about their cause. I feel that people respect and admire the words of individuals more than politicians and organisations who often have other agendas.
- We spend a significant proportion of each weekday in the office so appreciate seeing good community practice led/modelled by employer/colleagues.
- Yarra council has had detailed useful information on recycling on its newsletters.
- Books always tell me what I need to know, better than anything - as well as living on the land, as I do.
- Our whole community supports and educates each other.
- My studies had several days of focus on environmental sustainability and what you can do at a personal level to preserve resources and reduce waste and its long term impacts on the environment.
- ‘Staff news’ [workplace e-newsletter] item about change to separating paper recyclables from other recyclables.
- Notices in shops are very helpful to remind you to go back to your car to get bags (assuming you have arrived in a car).

These responses indicate people learning from a huge range of sources: from international activists, workplaces, local councils, studies and their day to day activities.

There was considerable diversity also in the responses to a qualitative question asking for ideas about how other people could be helped to learn about these two issues. Examples of three types of responses are provided in Table 4 below.

Table 4: Three types of responses to question ‘Please list up to two ideas for helping people learn about these specific issues.’

<table>
<thead>
<tr>
<th>No.</th>
<th>Type of learning idea</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Promulgation of powerful images.</td>
<td>• ’Bins of shame’ (Photos of recycling bins with rubbish in them)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Show some images created for ABC TV’s War On Waste program to illustrate some simple facts about negative impact of landfill on the short and long term health of the environment</td>
</tr>
<tr>
<td>2.</td>
<td>Information at point of sustainability decision-making.</td>
<td>• A sign on a rubbish bin in England was great: “For fish's sake, Don't drop litter”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Stickers on the garbage bins from the council.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Signage knowing where to empty food scraps at the workplace.</td>
</tr>
</tbody>
</table>
A sticker you could put on your bin would give you a chance to decide before you mix up recyclables.

3. Practical actions aimed at affecting practices or choices.
   - Provide more of a financial incentive at cafes for those bringing their own cup.
   - Reduce the frequency of curbside collections. This will encourage people to think more.

Analysis and conclusion

Our respondents’ relative confusion about recycling is in line with the Planet Ark (2017) report. There was much less confusion about the shift to using fewer plastic bags. There was a large shift in practice in relation to taking bags when shopping. This indicates that in fact changes in practice by shops has over-ridden any formal or informal forms of learning. This aligns with ‘Type 3’ of the learning ideas suggested by respondents (Table 4) – i.e. a change by external actors inevitably affects behaviour. ‘Type 2’ ideas might assist in education about recycling.

In the Crowther and Mackie study (2015) the internet and social media (both generic and specific) were the most popular source of information, followed by friends and family and then newspapers. Our survey split choices into two lists, and this or course affects a comparison between the two studies. Also, the issues are quite different. But while television documentaries were the most powerful source of information in our study, the relative importance of some of the other courses is similar to the Crowther and Mackie study. The importance of television in disseminating information is interesting list is sometimes seen as waning in its influence. Perhaps this is because of its role in providing powerful images, as with Type 1 of the suggested learning ideas.

In the six months since we first developed this research project there have been continual developments in these two fields. It would be interesting to repeat the project in two to three years’ time, when perhaps new aspects of environmental sustainability practices may have emerged.

Acknowledgement

I would like to acknowledge Annette Foley, the co-researcher on this project, who assisted with the focus group, interview and survey design. I would also like to thank Morgan Wise, Research Assistant, for his work putting the survey questions into Survey Monkey and undertaking the preliminary quantitative data analysis.

Further information about the project may be found at the web site of Federation University’s research group Researching Adult and Vocational Education (RAVE): https://federation.edu.au/schools/school-of-education/research/research-groups/rave-researching-adult-and-vocational-education (see ‘current research’)

9
References


Planet ARK (2017). *Ten years of recycling: the good the bad and the ugly*. Planet ARK Environmental Foundation. Sydney NSW.


Reference for this paper: