

Learning about environmental sustainability practices

Professor Erica Smith, Associate Professor Annette Foley &
Morgan Wise

Federation University Australia, Ballarat campus

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What's it about?

- The paper shows initial results from the 'Learning to be greener' project. The project studied the way in which Australian adults are learning about specific changes in recycling and waste practices.
- During 2018, Australians' daily lives changed due to changes affecting plastic shopping bags and recycling practices. We were interested in how people learned about these changes and how people changed their behaviour.

What were we recycling in our research?

- This a sequel to the RAVE (Researching Adult and Vocational Education) research group's 2009 project ['Learning to be drier,'](#) led by Barry Golding, which examined how people living in various regions of Victoria learned how to manage with drier conditions and how they changed their behaviour.
- Also inspired by Crowther and Mackie (2015)'s study of people learning about the Scottish independence referendum, presented at SCUTREA 2015.

A hot topic internationally

Australia in 2017-18



England in 2019:

- ‘Recycling bin wars’ in Huddersfield- blamed on poor education of the public: ‘An anonymous dustman said “Even I’m confused”’ (Times, 20 June)
- David Attenborough at Glastonbury festival-praised the ‘no plastic bottle’ policy.

Berlin, Paper Cup installation in anti-waste display,
Herrfurthplatz in Tempelhof, June 2019.



Our study had two topics:

1. No more free plastic bags in shops



2. Stricter recycling rules

... due to overseas governments refusing to accept our contaminated recycling

Scene from Manila, Philippines:

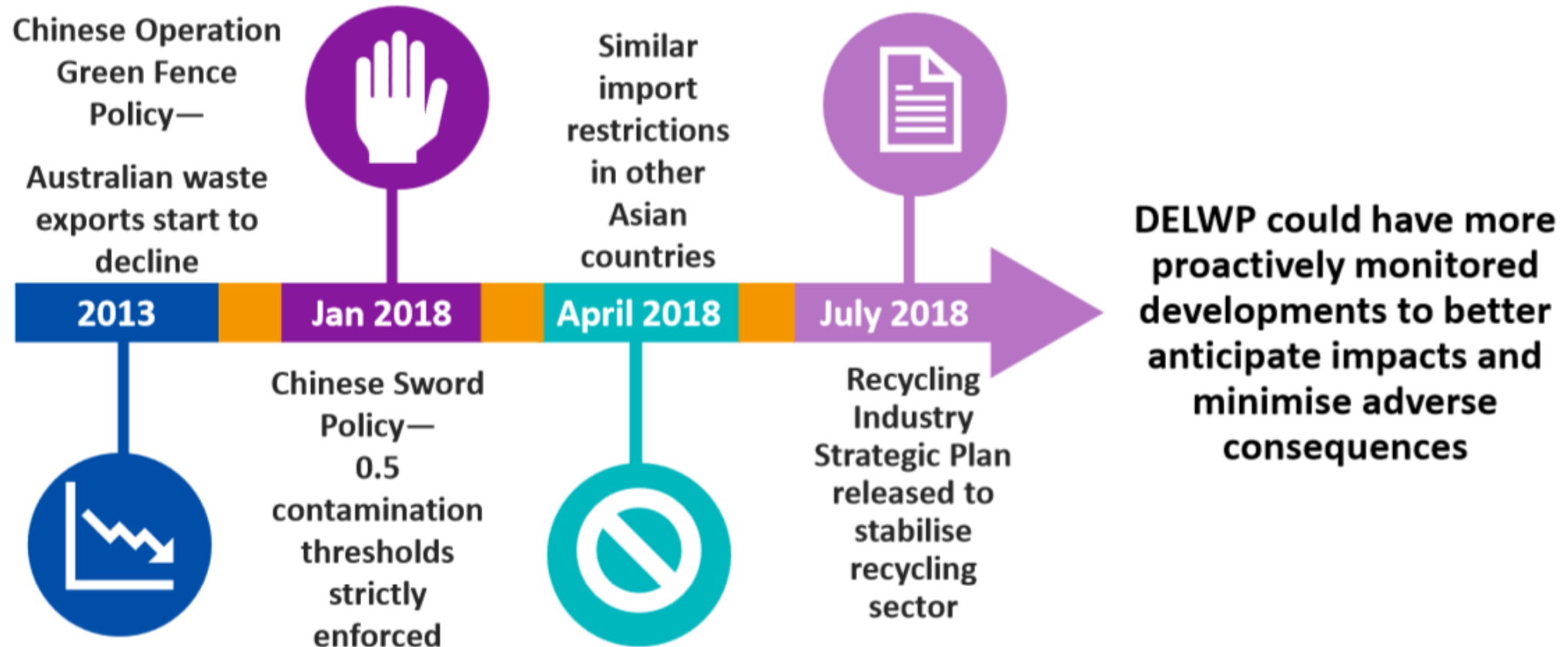


The background

- 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.
- 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).

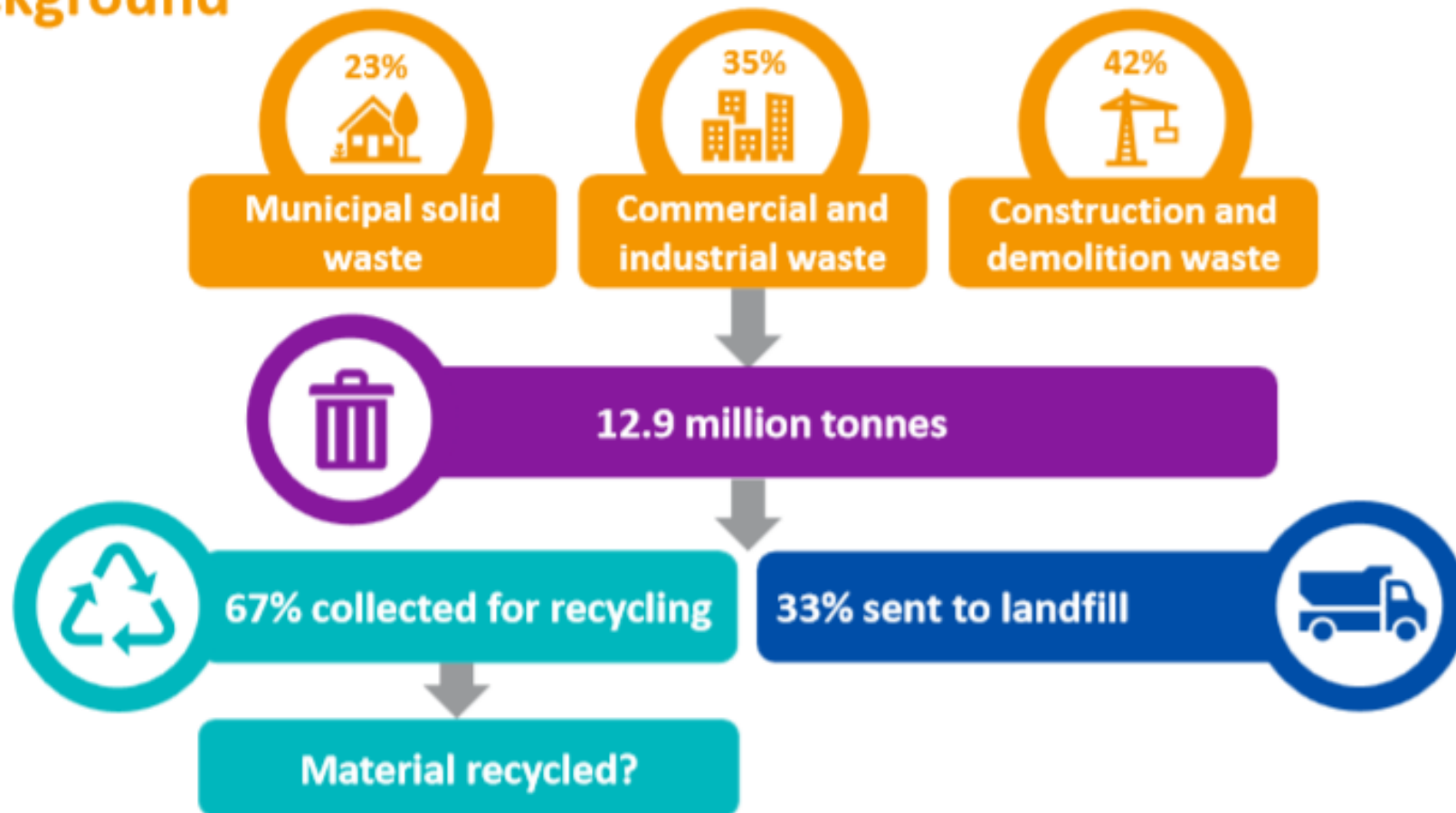
State of Victoria Auditor General's report shows the timelines

Response to waste issues is reactive



What is the waste and where does it go?

Background



So, how are people learning? (if even the 'dustmen' in England are confused!)

- Our project was undertaken in 2018-9 with staff (of all types) at a regional multi-campus university (n=1952, 147 responses)
- A focus group with eight staff; and an expert interview with a Business School lecturer, formerly the Director of the university's sustainability centre - to discuss the issues and to help advise on questions for the university-wide survey.
- On-line survey administered 2019. The 'sources of information' list in the Crowther & Mackie survey was used as a basis for the relevant questions, with additional items included. Upon completion of the survey, 151 responses were received, of which 147 responses were within scope as employees, and were analysed for this paper.

Survey- 4 sections, 35 questions, 147 responses

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).

Survey was completed to the end by almost all people, even the qualitative questions.

Focus group (5 female, 3 male)

- Those who volunteered for the focus group, held at the largest campus of the university, were people who were aware of, 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 which materials were recyclable and which were not.
- They recounted their own and others' problems with the management of the withdrawal of plastic bag provision in supermarkets. It was agreed that sometimes this created inconvenience, but nevertheless there was general support. Some said that the environmental education of school-children informed the family and broader community about environmental sustainability practices. Others mentioned social media.
- Participants were also keen to discuss other related issues such as illegal dumping of household waste in rural areas.

Sustainability expert interview

- Provided useful information about state and local government initiatives.
- These included TAFE (VET) 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.
- We learned that recycling is the domain of local councils in Australia; and the systems for what can and cannot be recycled was reported to depend on the individual council, leading to confusion about recycling among the general public and businesses, and to inconsistency across the country.

Survey respondents

- 78.9% female, 20.4% male;
- 8.2% aged 20-29, 16.3% aged 30-39, 29.9% aged 40-49, 30.6% aged 50-59, 15.0% aged 60 or more;
- 63.9% worked full-time at the uni, 36.0% worked part-time or casually;
- 40.8% academics or TAFE (VET) teachers, 23.1% professional, 30.6% administrative/clerical, 2.0% services, trades and technical; 3.4% computing and technical.
- 8.8% identified as senior managers, 27.9% as 'supervisor or co-ordinator', and 63.3% as 'other';
- Two-thirds of respondents lived in a regional city, one-quarter in rural or remote area; 3.4% in metropolitan areas, mostly in outer metropolitan areas.

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

Gender* Response	Male		Female		All respondents	
	No.	%	No.	%	No.	%
High	20	66.7	86	74.8	106	73.1
Medium	10	33.3	25	21.7	35	24.1
Low	0	0.0	4	3.5	4	2.8
Total	30	100.0	115	100.0	145	100.0

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

Gender	Male		Female		All respondents	
Response	No.	%	No.	%	No.	%
High	14	46.7	59	51.3	73	50.3
Medium	12	40.0	50	43.5	62	42.8
Low	4	13.3	6	5.2	10	6.9
	30	100.0	115	100.0	145	100.0

What were their practices?

- **69.2% 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 almost identical for recycling: 69.9% of people always sorted materials very carefully and chose appropriate bins wherever they were, and 25.3% 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. 41.8% of respondents were 'much more likely' to take their own bags to shops compared with 12 months ago, with 15.0% saying 'more likely'. In contrast, for recycling, only 15.8% were 'much more careful' with their recycling practices and 35.6% were 'more careful', i.e. changes were less dramatic.

More people (48.6%) reported 'no change in recycling practices' compared to 43.2% who reported 'no change' in relation to bringing their own bags to shops.

Differences among respondents

- Some differences **by gender**; men's awareness of both issues had increased more than women's, but not to the same extent, compared with 12 months ago.
- By age, **younger people (in their 20s)** were more likely to have changed their practices in relation to plastic bags than other age groups, but were still the least likely age group to take bags with them.
- Younger people were less likely than any other age group to sort materials carefully for recycling.
- Younger people reported the lowest level of understanding of both issues.

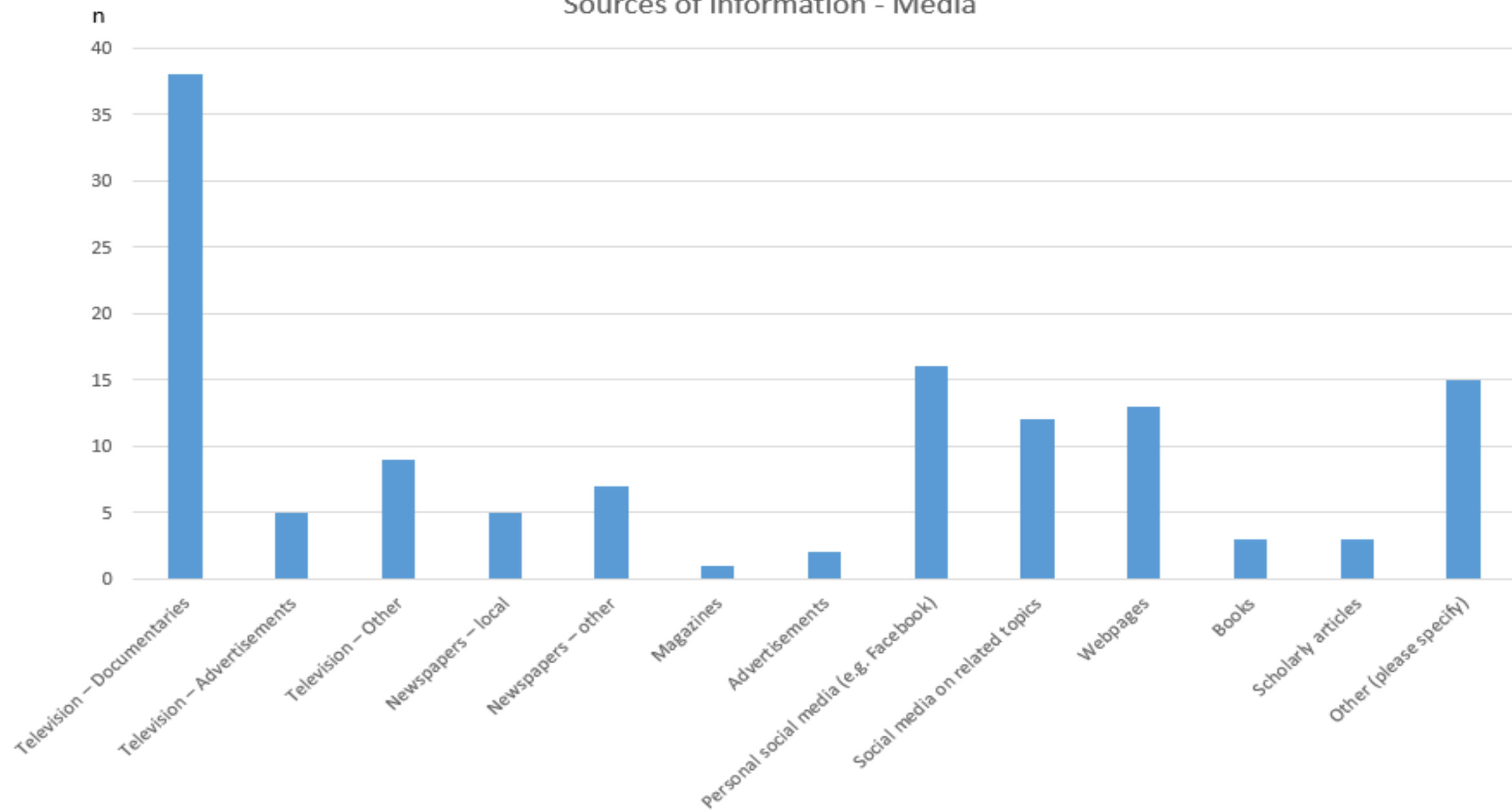
Which sources of information have informed you about these changes?

(from provided choices)

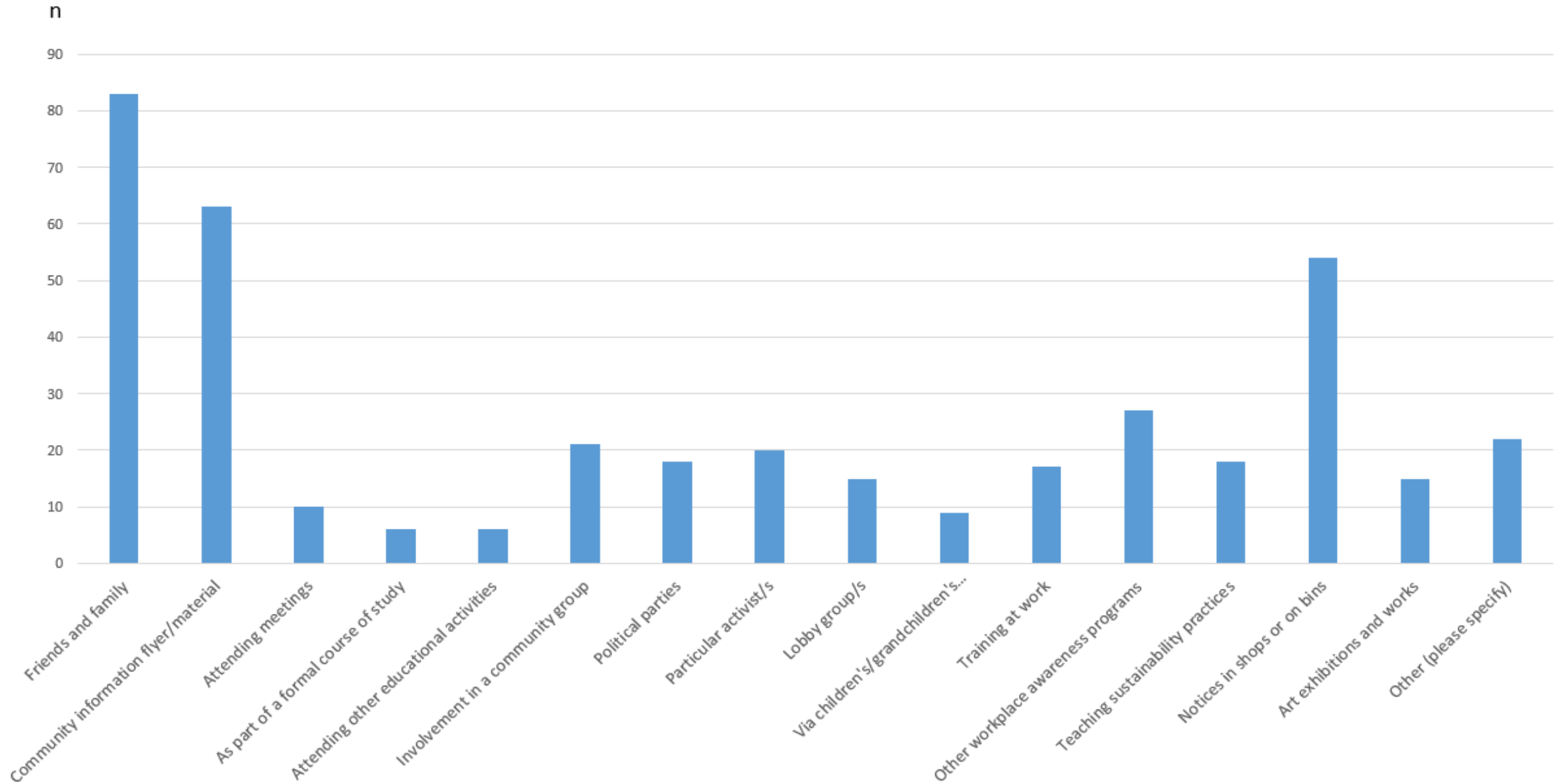
1. Media

2. Other sources

Sources of information - Media



Sources of information - Other



What was the **single most important source?**(from 'media' sources and from 'other' sources?)

- **'Television documentaries'** was the most important media source, chosen by 29.5% of respondents, with a long gap between that and the next single most important source, which was 'personal social media', selected by 12.4%.
- There was more diversity among the 'most important' sections for other sources with **'friends and family' coming first** but selected by only 27.1% of people, and 16.3% selecting community flyers and materials.
- The **TV documentary 'War on Waste'**, mentioned earlier, was mentioned specifically by several respondents'.

A typical comment

'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.'

Lots to say!!

'Any other comments on the topic?' One response – 570 words: 'Putting in extra effort to take special hard to recycle items to the correct place (e.g. e-waste, soft plastics, batteries etc) and buying package free etc is something that takes more time and sometimes more money and thus really only something easily available to more privileged people and/or those with less other things to worry about in their lives. This is not the majority of people. And so long as the majority of people are not doing something a percentage of those that more easily could, won't even bother as they will perceive that as an individual their actions don't make much difference. For this reason only systemic changes like legislation that bans plastic bags (properly, thicker weight bags that are still quite cheap are not enough) and unnecessary plastic packaging, are needed along with a cash for containers recycling scheme which has proven success elsewhere (such as SA where I observed people being involved because they wanted to support their local footy group who were using it to raise money so then some people then recycled their containers even if they didn't particularly care much about the environment). Plastic waste is important and other recyclables. A huge waste issue though not being properly addressed which has an easy and proven solution is organics. Organics make up a large amount of general waste and have a measurable impact on greenhouse gas emissions. Commercial scale composting is needed in all urban areas where many people could not and will not do home composting. Home composting is also not a guarantee to lock up carbon if it is not done correctly, plus commercial hot composting can do a wider range of organics than is easy to do at home, so putting that on the individual alone does not recognize the big picture and what will bring the best results. This will have a positive impact by sequestering carbon, reduce landfill volume and can offset some of the chemical fertilizers needed and in doing so have an even more positive impact (climate wise) in the whole life cycle. It absolutely should not be burnt in waste to energy. Municipal composting through the green bin systems accepting food scraps has been proven to work in Adelaide. I think the true cost and embodied energy and resources of materials needs to be truly valued which I think would only come with legislation. So many things contain non-renewable resources which technology does exist to recycle but which isn't economically viable at this time because we make it too easy to go off and extract more virgin materials without considering the true cost. We need to change the dialogue of waste. It is not waste. It is valuable materials that need to be fashioned in technology in a way that makes recycling more easy, only used when there is a true need for it and considered within a closed loop system. It requires some really big picture thinking to create this system and no amount of making sure individuals are properly recycling will fully fix this problem although that is also very important and required as well. People will care more I think as individuals if they re-frame waste as valuable resources and perhaps things like cash for containers creates the economic environment where things are given a physical value in the same way as a cash for containers scheme but for all items that create waste.' **(Female, rural, in her 30s, academic)**

Analysis of responses to: How do they think others could learn?

Type of learning idea	Examples (direct quotes from respondents)
1. Promulgation of powerful images.	<ul style="list-style-type: none">• 'Bins of shame' (Photos of recycling bins with rubbish in them)• 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
2. Information at point of sustainability decision-making.	<ul style="list-style-type: none">• A sign on a rubbish bin in England was great: "For fish's sake, Don't drop litter"• Stickers on the garbage bins from the council.• Signage knowing where to empty food scraps at the workplace.• 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.	<ul style="list-style-type: none">• 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.

Conclusions

- The 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** (i.e. 'Type 3' learning)
- While television documentaries were the most powerful source of information in our study, the relative importance of some of the other sources is similar to the Crowther and Mackie study. The importance of television in disseminating information is interesting (in view of its perceived decline) and is perhaps because of its role in **providing powerful images**, i.e. Type 1 learning. (*For more powerful images, see next slides*)
- In the year 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.

Municipal waste: Photo by artist Liu Bolin, Exhibition at Ballarat Art Gallery, September 2019



'Plastic Palace', Installation by Raffaello Rosselli

Exhibition at the Murray Art Museum, Albury, January 2019.



Plastic Palace represents 5 weeks of hard plastic collection from Albury Waste Management Centre.

More information?

Project web site

<https://federation.edu.au/schools/school-of-education/research/research-groups/rave-researching-adult-and-vocational-education/current-research>

Contact author: Erica Smith - e.smith@federation.edu.au

Other team members: Annette Foley and Morgan Wise.

References

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