

Report of teacher assessments of the usability of websites and online resources which support Education for Sustainability

Advancing the implementation of Education for Sustainability in the Australian Curriculum - Views from the Classroom and Community

Prepared by the Australian Education for Sustainability Alliance

The Australian Education for Sustainability Alliance (AESA) is an alliance of organisations representing teachers and educators across the public and independent school sectors, university staff and students, and environmental organisations. Our vision is to help create a more sustainable Australia by ensuring that all Australians have the opportunity to learn the skills, practices, and values of sustainability through the formal education system and throughout life.

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Disclaimer

The views expressed here are those of the author and do not necessarily represent the views of the Australian Government Department of Education and Training.

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Executive Summary

Research by the Australian Education for Sustainability Alliance (AESA) in the previous phases of the Education for Sustainability Project (EfS Project) revealed that 40% of Australian teachers are aware of and supportive of EfS and expressed a need for assistance to get started in integrating sustainability into their teaching.

While online resources are readily available, high quality content cannot always be found quickly and easily. This is often due to website design and use-ability issues which can be very frustrating for busy teachers.

In this research, Australian teachers were consulted via online surveys and focus groups to help identify the most useful elements of website design, in order to inform resource providers and website designers on factors to help make their sites as accessible as possible.

The websites that teachers considered in this survey to be the **most comprehensive, easiest to navigate, most relevant, and most engaging for their students** were **Cool Australia** and ABC Splash. These websites were recommended by teachers already engaged in teaching sustainability for those teachers who were getting started on incorporating sustainability into their teaching.

Depending on the location of teachers around Australia other websites were also considered useful for getting started because of their regional or local relevance and relatively good use-ability. These sites included the Great Barrier Reef Marine Park Authority (especially in Queensland), Junior Landcare and the Murray Darling Basin Authority.

Teachers who identified themselves as already engaged in teaching sustainability (called “engaged teachers” in this report) also commonly use the Bureau of Meteorology and AuSSI websites. The Earth Hour website was also widely used during the period this survey was undertaken – coinciding with Earth Hour.

The main recommendations from these survey findings to enhance website use-ability include:

Being able to **search** by year level and subject area as filters will save teachers time.

Being able to quickly **navigate** through a site to locate resources they can use in their classrooms immediately.

Navigation should clearly identify if there are **teacher and/or student resources**.

A **comprehensive** site with materials for both teacher reference and student engagement on different subject areas, levels, themes and events.

A comprehensive range of subject areas, including **curriculum links** and identified links to the **Organising Ideas for Sustainability**.

Resources suited to a **wide range of student levels** within the same site were rated far higher than those for limited age groups.

Material on websites and within online databases needs to be **current and maintained** as teachers will quickly stop using sites which are not.

Teachers are looking for **diverse resource types** with units of work, activities, videos, games, apps, lesson plans and worksheets.

Resources should be easily identified by their **type**, e.g. video, activity, lesson plan, curriculum link.

Material that is **empowering** for students so that they can be part of a solution towards more sustainable patterns of living.

Sites which have made their resources **engaging and fun** also contribute to building teacher confidence to incorporate sustainability in their teaching.

Providing a range of **case studies** and illustrations of practice.

Introduction

Research by the Australian Education for Sustainability Alliance (AESA) in the earlier phases of the *Education for Sustainability and the Australian Curriculum Project* (EfS Project) revealed that 60% of Australian teachers are aware of and supportive of Education for Sustainability (EfS). Of this number 2 in 3 teachers also expressed a need for assistance on how to get started in integrating sustainability into their teaching practices¹. This means that 40% of Australian teachers support incorporating sustainability into their teaching, but need assistance to get started.

There is a vast range of websites and online databases which provide EfS resources for teachers, sometimes to a point that can be overwhelming for those getting started.

This report assesses the functionality and usefulness of a range of the websites and online databases which are available, in order to provide recommendations for organisations developing these tools to do so in a way which best supports the 40% of teachers who are keen to get started, but need some support to do so.

Methodology

In order to assess online resources, a combination of a national online survey of engaged teachers, and focus groups with those who had not yet engaged, were conducted.

Definitions used in the report

For the purposes of this survey and consistent with the findings of the earlier phases of the EfS Project:

Engaged teachers are defined as those who have integrated EfS into their current teaching practice.

Non-engaged teachers are defined as those planning to integrate EfS into their teaching practice but yet to do so, those aware of EfS but yet to plan to integrate it into their teaching practice or those with no awareness or comprehension of EfS.

National online survey of engaged teachers

The national online survey was conducted by Lonergan Research on behalf of the Australian Education for Sustainability Alliance (AESA) with engaged teachers of sustainability. The aim of the survey was to gather opinions on best practice websites and resources from those teachers who currently include EfS in their teaching practice. They were asked to comment on the quality and usefulness of online sustainability resources with view to their value to non-engaged teachers of sustainability, as a tool to assist them in starting their journey of teaching EfS.

Details of national online survey:

- An email invitation was sent to Australian teachers through the Australian Education Union (AEU), the Independent Education Union (IEU), the Australian Association for Environmental Education (AAEE), and Catholic Earthcare Australia (CEA).

¹ Australian Education for Sustainability Alliance, *Education for Sustainability and the Australian Curriculum Project: Final Report for Research Phases 1 to 3*, AESA, Melbourne, 2014
<http://www.educationforsustainability.org.au/publications/final-report-for-phases-1-3-education-for-sustainability-and-the-australian-curriculum-project/>

- Only those teachers who identified as teaching Efs were asked participate.
- Surveys were conducted between 23rd March and 15th May of 2015.
- A total of 255 survey responses were collected.
- Engaged teachers who completed the national online survey have been teaching about sustainability for an average of 4.4 years or more.

Respondent demographic data can be seen in *Table 1* below.

- The majority of respondents were from AEU (56%)
- The majority of respondents were from Queensland (50%)
 - 95% of respondents from Queensland are AEU members.

Table 1: Respondent data for national online survey.

State	%	n=	Teachers' Union	%	n=
Queensland	50%	128	AEU	56%	143
New South Wales	19%	49	IEU	26%	67
Victoria	16%	42	AAEE	18%	45
Western Australia	5%	13			
South Australia	4%	10			
ACT	2%	6			
Tasmania	2%	5			
Northern Territory	1%	2			

Focus groups with non-engaged teachers

Focus groups were held with teachers who had not yet engaged with sustainability in their teaching practice.

Details of focus groups with non-engaged teachers of sustainability:

- An email invitation for non-engaged teachers to participate in focus groups went out through the AEU, IEU, AAEE and CEA networks in the relevant states.
- Focus groups with non-engaged teachers were held in Melbourne, Sydney and Brisbane.
- Focus groups were held in late April in 2015.

Further research

Further research was gathered through the development of the guide *Getting Started with Sustainability in Schools*² and through earlier research conducted in *Phases 1-3 of the Education for Sustainability in the Australian Curriculum Project*³.

² Getting Started with Sustainability in Schools website due to be live by October 2015.

www.sustainabilityinschools.edu.au

³ Final Report for Phases 1-3 Education for Sustainability and the Australian Curriculum Project

<http://www.educationforsustainability.org.au/publications/final-report-for-phases-1-3-education-for-sustainability-and-the-australian-curriculum-project/>

Barriers and Motivators to EfS

To understand the usefulness of online resources, it was first important to identify the barriers and motivators to teaching EfS.

Barriers to integrating EfS

In the initial research for *Phases 1-3 Education for sustainability in the Australian Curriculum Project* teachers identified that they had a lack of knowledge and comprehension of EfS. This was reinforced in the focus groups with non-engaged teachers who again identified this as a key barrier to incorporating EfS into their teaching practice.

The message which teachers conveyed in all phases of research for this project is that they;

- are extremely time poor;
- feel pressure to teach things which are measured such as literacy and numeracy; and
- have a perception that the curriculum is crowded.

Four main barriers were identified by those teachers -

- lack of resources;
- lack of time;
- lack of knowledge; and
- lack of support from leadership team/principal.

A further barrier for non-engaged teachers to incorporate EfS into their teaching practice was a perception that this would be difficult and would take them a large amount of time to incorporate into current topics which they teach.

These barriers all contribute to the usability factors for teachers. When utilising websites they are looking for classroom ready resources which will engage their students, save them time, enable them to incorporate EfS easily into subject areas, whilst also improving their knowledge and comprehension of EfS. It is also important that these resources link directly to the curriculum and are based on current educational thinking, and therefore gain the support of principals and leadership teams.

Motivators to integrating EfS for non-engaged teachers

Teachers in both the focus groups and the national online survey felt the key motivators for non-engaged teachers to commence integrating EfS into their teaching practice would be:

- the availability of teacher and student resources for EfS which are ready to be used in the classroom. This could include lessons plans, student worksheets or instructional sheets and teacher resources;
- resources should be easy to apply to subject area and year level;
- resources which are developed should be electronic, online, apps (anything interactive to engage students at different levels.);
- professional development (this could be webinars or skype);
- blogs/forums (to discuss with others what they are doing);
- resources which require minimal work input from teachers due to their time pressures; and
- case studies/illustrations of practice demonstrating how to incorporate EfS into their teaching practice.

Reviewing the breadth of websites used by Australian teachers

The national online survey began with broad questions, in order to draw out the full scope of websites and online resources used by Australian teachers. It then focused on a specific sub-set of websites, in order to analyse details and characteristics around website usability whilst minimizing demand on the respondent's time.

This section of the report focuses on the full scope of online websites and resources used by Australian teachers.

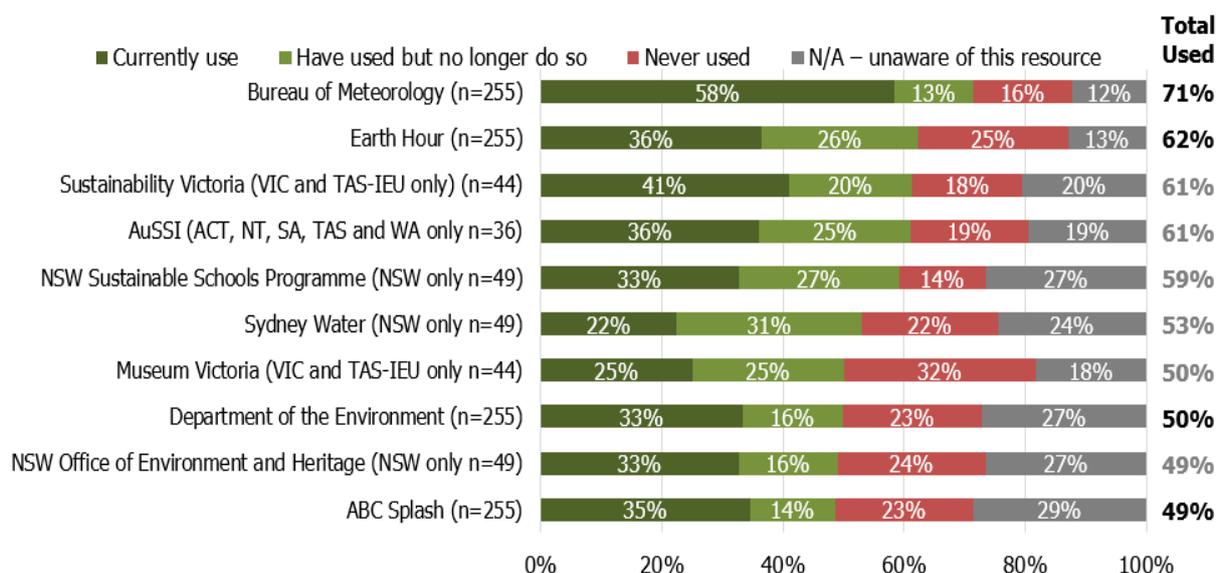
Online resources currently used by engaged teachers

Teachers who identified themselves as already engaged in sustainability, and completed the online survey, were asked to select which sites they current use, or have used, to find EFS resources.

Figure 1, below, shows that the most widely used online resources teachers have used to incorporate sustainability were the Bureau of Meteorology (71%) and Earth Hour (62%). Sustainability Victoria and the Australian Sustainable Schools Initiative (AuSSI) ranked equal third having been used by 61% of the smaller samples of teachers in their relevant states.

Results showed that those teaching six or more subjects were slightly more likely to have used ABC Splash (53%) than the average (49%).

Figure 1: Online resources currently used by engaged teachers



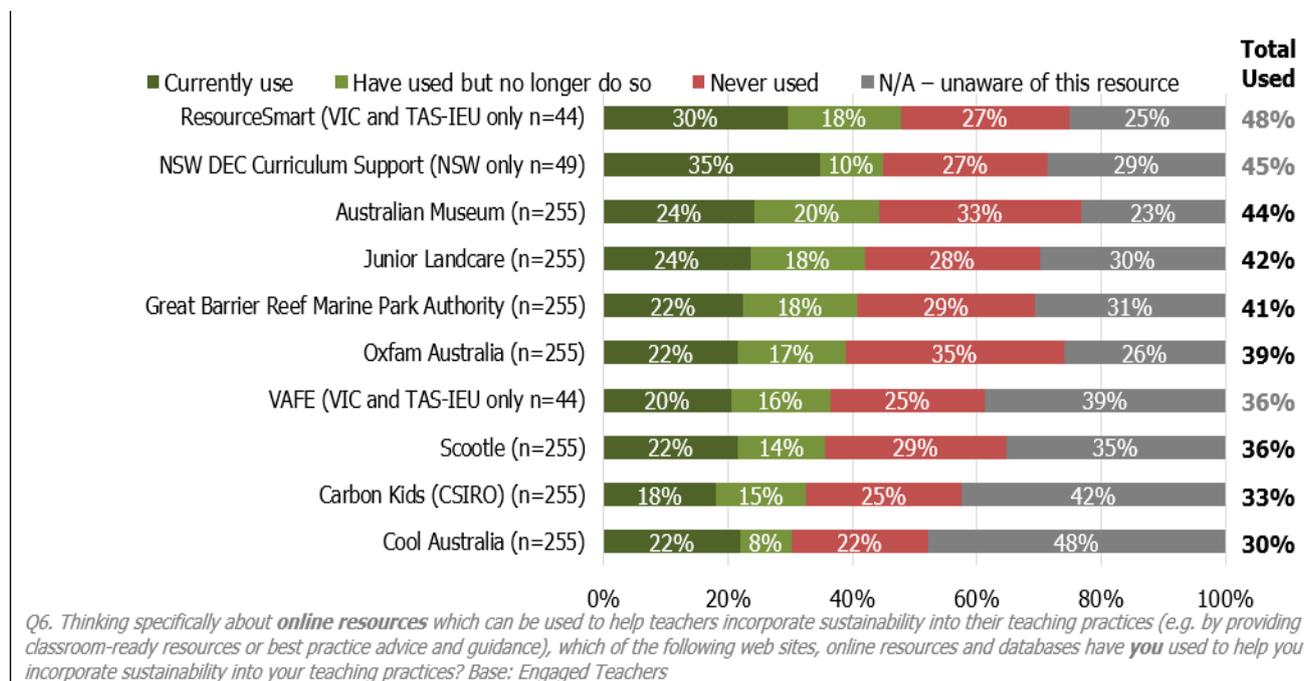
Q6. Thinking specifically about **online resources** which can be used to help teachers incorporate sustainability into their teaching practices (e.g. by providing classroom-ready resources or best practice advice and guidance), which of the following web sites, online resources and databases have **you** used to help you incorporate sustainability into your teaching practices? Base: Engaged Teachers

It should be noted here that the timing of the national online survey and Earth Hour may have impacted on these results.

Also note that Primary teachers teaching six or more subjects were more likely to have used ABC Splash than secondary teachers.

As the list continues through to *Figure 2*, we see that only half (48%) of engaged teachers were aware of Cool Australia. This is an interesting point as Cool Australia rates very highly further on in website usability.

Figure 2. Online resources currently used by engaged teachers (continued)

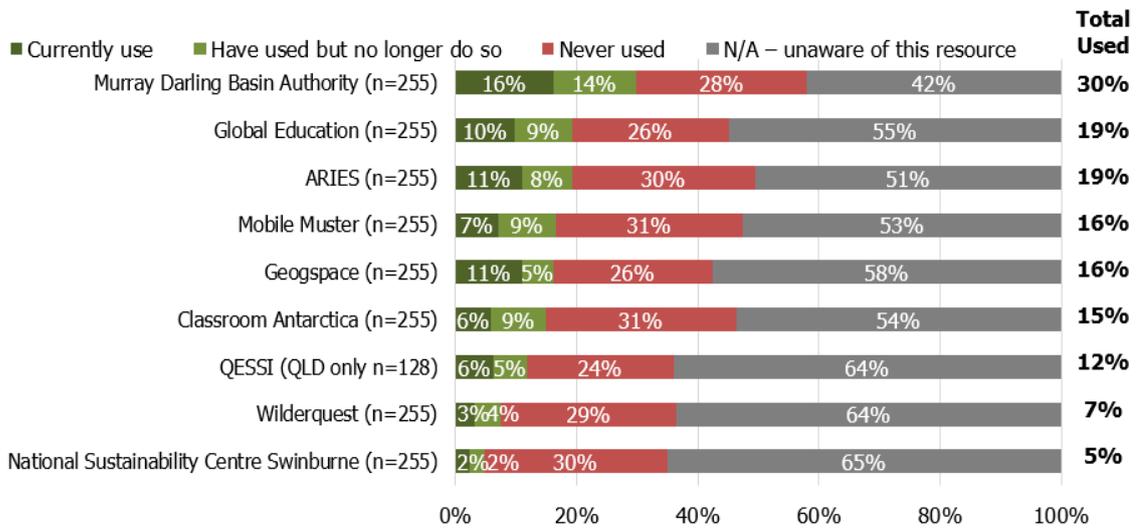


State-based breakdowns of the data from *Figure 2* show that -

- New South Wales teachers were more likely to use Scoutle than other states (53% cf. Vic 33%, Qld 24%).
- **Victorian teachers were more likely to have used Cool Australia than other states (50% cf. NSW 31%, QLD 17%).**
- Queensland teachers were more likely to have used the Great Barrier Reef Marine Park Authority website than other states (56% cf. NSW 36%, Vic 14%).

The list of responses continues in *Figure 3*. The combined list comes to 29 online resources which engaged teachers identified as currently using, or having used at some point, to incorporate sustainability into their teaching practices.

Figure 3. Online resources currently used by engaged teachers (continued)



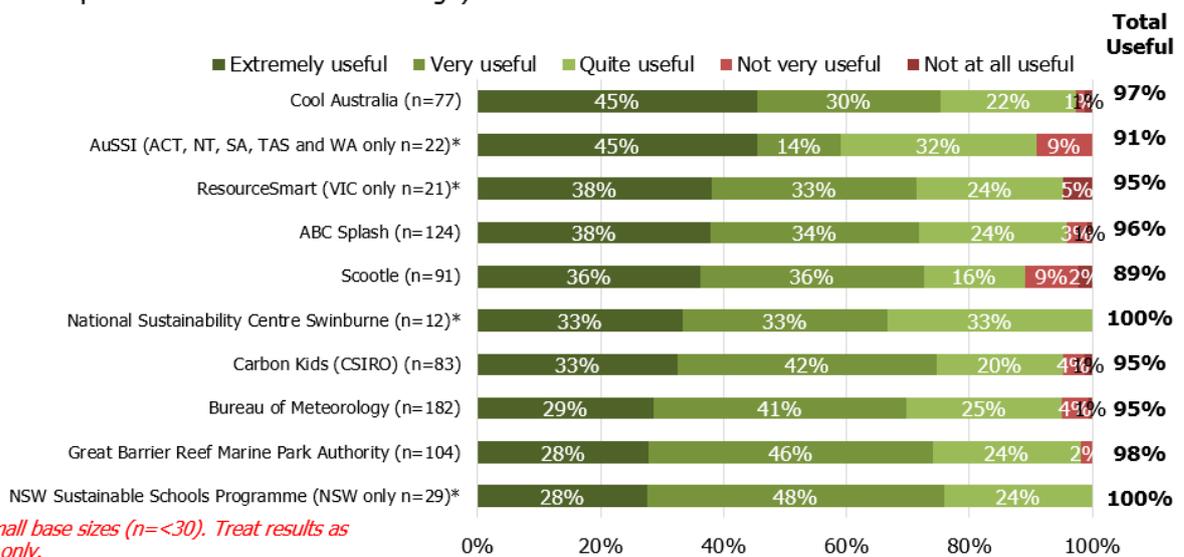
Q6. Thinking specifically about **online resources** which can be used to help teachers incorporate sustainability into their teaching practices (e.g. by providing classroom-ready resources or best practice advice and guidance), which of the following web sites, online resources and databases have **you** used to help you incorporate sustainability into your teaching practices? Base: Engaged Teachers

Usefulness of existing websites to help teachers who are getting started

Engaged teachers were asked to think about non-engaged teachers who have yet to incorporate sustainability into their teaching practices, and how useful existing website would be to them.

As Figure 4 shows, the sites most likely to be considered extremely useful were Cool Australia (45%), AuSSI (45%), ResourceSmart Vic (38%) and ABC Splash (38%).

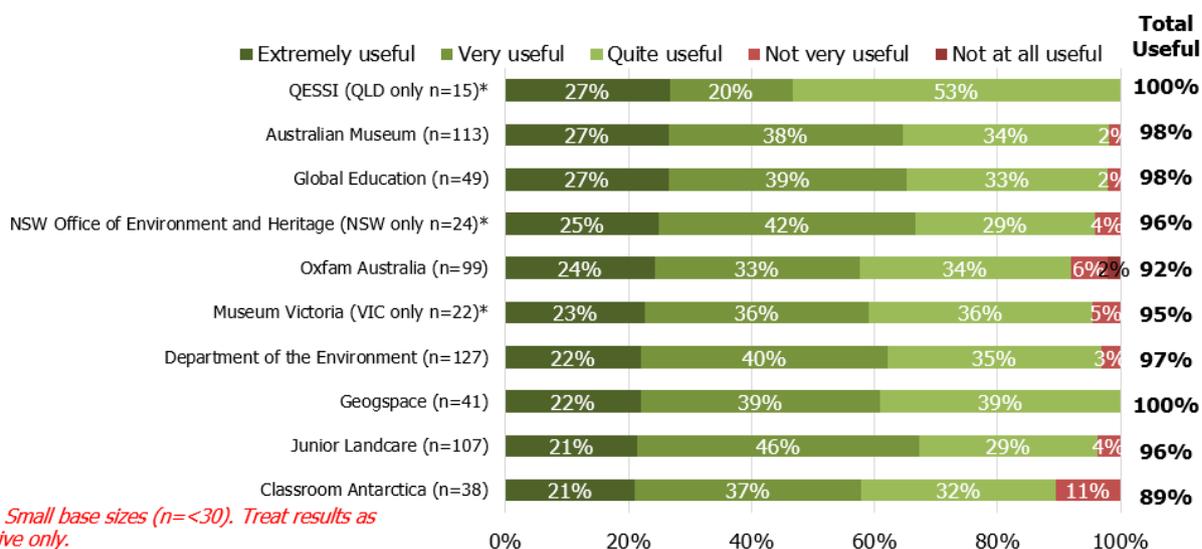
Figure 4. Assessment of usefulness of existing websites for non-engaged teachers



*Note: Small base sizes (n=<30). Treat results as indicative only.

Q7. Thinking about **non-engaged teachers** who have yet to incorporate sustainability into their teaching practices, how useful would you say each of the following web sites, online resources and databases would be to help **them** get started? Base: Have ever used the resource

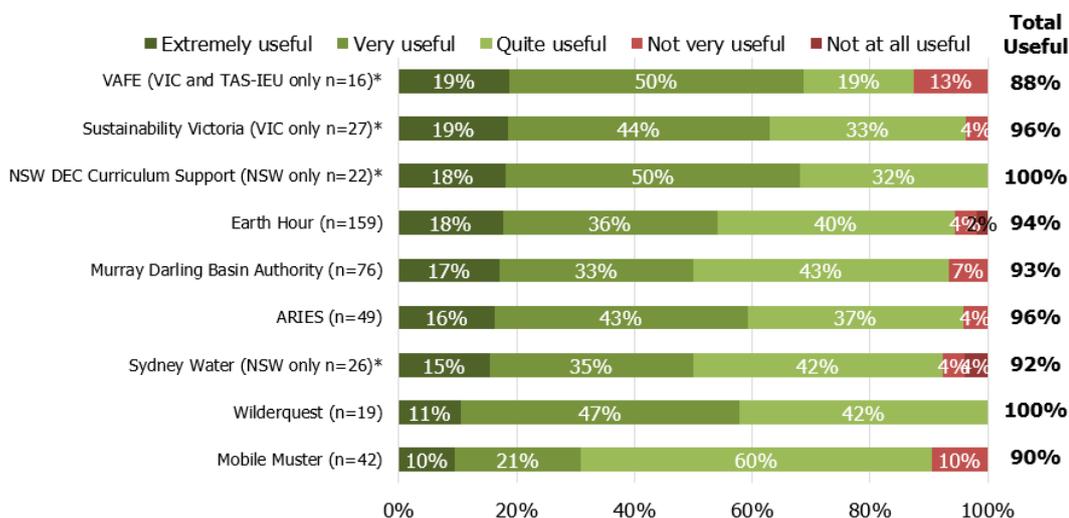
Figure 5. Assessment of usefulness of existing websites for non-engaged teachers (continued)



**Note: Small base sizes (n=<30). Treat results as indicative only.*

Q7. Thinking about **non-engaged teachers** who have yet to incorporate sustainability into their teaching practices, how useful would you say each of the following web sites, online resources and databases would be to help **them** get started? Base: Have ever used the resource

Figure 6. Assessment of usefulness of existing websites for non-engaged teachers (continued)



**Note: Small base sizes (n=<30). Treat results as indicative only.*

Q7. Thinking about **non-engaged teachers** who have yet to incorporate sustainability into their teaching practices, how useful would you say each of the following web sites, online resources and databases would be to help **them** get started? Base: Have ever used the resource

The three graphs above show that out of all 29 sites reviewed, a minimum of 88% of respondents thought that any one of the sites would be quite, very or extremely useful to a teacher who is getting started with sustainability education.

Queensland teachers were more likely to rate the Great Barrier Reef Marine Park Authority extremely useful (35% cf. NSW 10% and Vic 17%), and less likely to rate Cool Australia extremely useful (18% cf. NSW 53%, Vic 57%). Both Victorian and NSW teachers were more likely to rate Cool Australia extremely useful than other sites.

In detail: Assessing website usability for non-engaged teachers

In order to better understand which elements make websites more user-friendly, the national online survey then asked respondents to each browse five websites for several minutes to familiarise themselves with each site. They were then asked to rate each of the five sites on a number of key usability factors.

Through this process, a total of eight websites were evaluated. These websites were pre-selected to provide a combination of sites that teachers would be familiar with and others which would probably be new to them. A maximum of eight websites were evaluated to ensure significant sample sizes. *Figure 7* shows the breakdown of numbers of teachers asked to evaluate each site.

Figure 7. Usability evaluation summary – number of respondents by site

Cool Australia	ABC Splash	Great Barrier Reef Marine Park Authority	Junior Landcare	Global Education	Murray Darling Basin Authority	NSW DEC Curriculum Support	Museum Victoria
Shown to half (alternating with ABC Splash)	Shown to half (alternating with Cool Australia)	Shown to all	Shown to all	Shown to all	Shown to those outside of NSW and VIC (or not member of AEU or IEU)	Shown only to those in NSW (AEU+IEU only)	Shown only to those in VIC (AEU+IEU only)
n=128	n=127	n=255	n=255	n=255	n=179	n=38	n=38

Respondents were asked to give an overall rating of usability for each of the five sites they were allocated, and to rank the sites from 1-5 in order of usability. They then were asked to consider each of the sites against the following key usability factors:

Attributes

- Ease of navigation
- Ease of use
- Relevance of content
- Comprehensiveness of content

Usefulness

- For engaged teachers of sustainability
- As a starting point for non engaged teachers of sustainability

Attitudinal statements

- Effective tool for teachers to engage students

- Fun for students to learn about sustainability.

Figure 8 shows the results for this section of the survey. **Cool Australia and ABC Splash were rated highest** for each criteria.

Figure 8: Website rankings by key usability factors

	Cool Australia (n=128)	ABC Splash (n=127)	Junior Landcare (n=255)	Global Education (n=255)	GBR Marine Park Authority (n=255)	Museum Victoria* (n=38)	Murray Darling Basin Authority* (n=179)	NSW DEC Curriculum Support* (n=38)
Overall Rating (mean score out of 10)	8.0	7.9	7.4	7.3	7.2	7.1	6.9	6.2
Ranking (mean rank out of 5)	2.2	2.2	2.3	2.9	3.2	3.8	3.8	3.5
Attributes (mean score out of 10)								
Ease of Navigation	8.0	7.8	7.4	7.5	7.3	7.3	7.0	6.3
Ease of Use	8.0	7.9	7.3	7.4	7.2	7.7	7.3	6.4
Relevance of Content	8.1	7.9	7.4	7.2	7.0	6.3	6.7	6.2
Comprehensiveness of Content	7.9	7.7	7.4	7.4	7.6	7.2	7.0	6.3
Usefulness (% useful)								
For engaged teachers	87%	87%	73%	82%	74%	47%	70%	68%
As a starting point for non-engaged teachers	88%	86%	78%	78%	68%	37%	70%	63%
Attitudinal statements (% agree)								
Effective tool for teachers to engage students	90%	87%	85%	85%	83%	50%	80%	66%
Fun for students to learn about sustainability	89%	89%	74%	69%	66%	42%	66%	34%

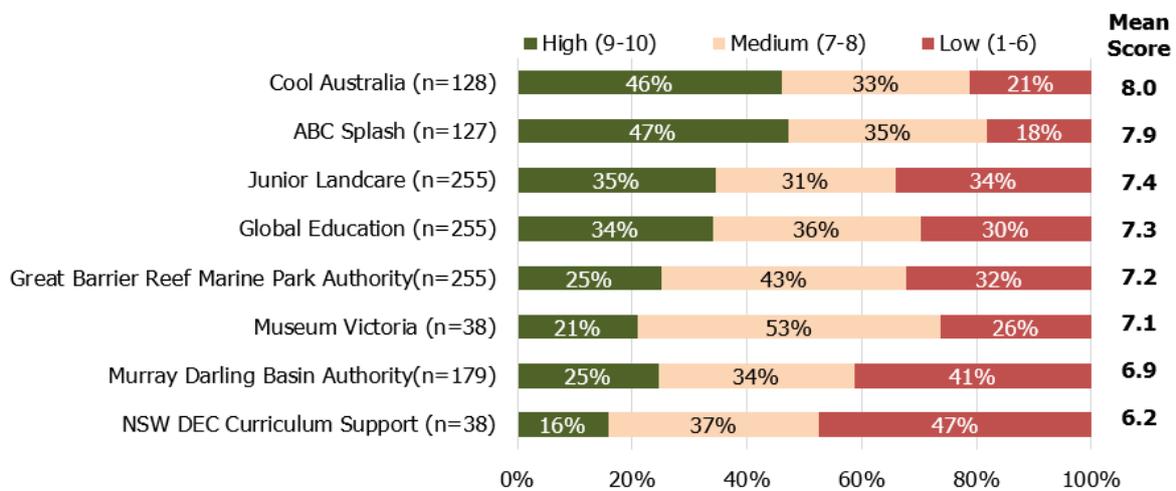
The results in Figure 8 are broken down further in the following tables.

Overall rating

Teachers were asked to give an 'overall' rating of each website's usability, with the key usability factors in mind, as seen in Figure 9. **Cool Australia (8.0)** and **ABC Splash (7.9)** were **given the highest overall ratings of those evaluated.**

Teachers teaching sustainability for 5 years or more rated the Cool Australia more highly than those with less experience (9-10 51% cf. <5 years 41%).

Figure 9. Overall rating of website usability



Q8. On a scale of 1 to 10, where 1 is extremely poor and 10 is extremely good; please rate **this** website for each of the following usability criteria - **Overall**
Base: Engaged Teachers

Ranking

Next, respondents were asked to rank the five sites they were reviewing, in terms of the most useful sites to help non-engaged teachers who are looking to integrate sustainability into their teaching practices. The results are shown in Figure 10.

- Consistent with the overall ratings, Cool Australia (mean rank 2.2, 47% ranked 1st) and ABC Splash (mean rank 2.2, 48% ranked 1st) were the highest ranked sites.
- Although Junior Landcare had a similar mean rank (2.3), it was less likely to be ranked 1st (30%).

State differences

- Victorian teachers ranked Cool Australia more highly (mean rank 1.6: cf. NSW 2.2, Qld 2.6).
- Queensland teachers rated the Great Barrier Reef Marine Park Authority higher (mean rank 2.9: cf. NSW 3.5, Vic 3.5).

Figure 10. Most useful sites to help non engaged teachers suggested by engaged teachers of sustainability.

Rank	Website	Mean Rank
1	Cool Australia (n=128)	2.2
2	ABC Splash (n=127)	2.2
3	Junior Landcare (n=214)	2.3
3	Global Education (n=255)	2.9
4	Great Barrier Reef Marine Park Authority (n=255)	3.2
5	NSW DEC Curriculum Support (NSW only n=38)	3.5
6	Museum Victoria (VIC and IEU TAS only n=38)	3.8
7	Murray Darling Basin Authority (n=179)	3.8

Q11. Thinking about the 4-5 websites you've just looked at, which do you consider would be the **most** useful to non-engaged teachers who are looking to integrate sustainability into their teaching practices? Base: Engaged Teachers

Key website usability criteria

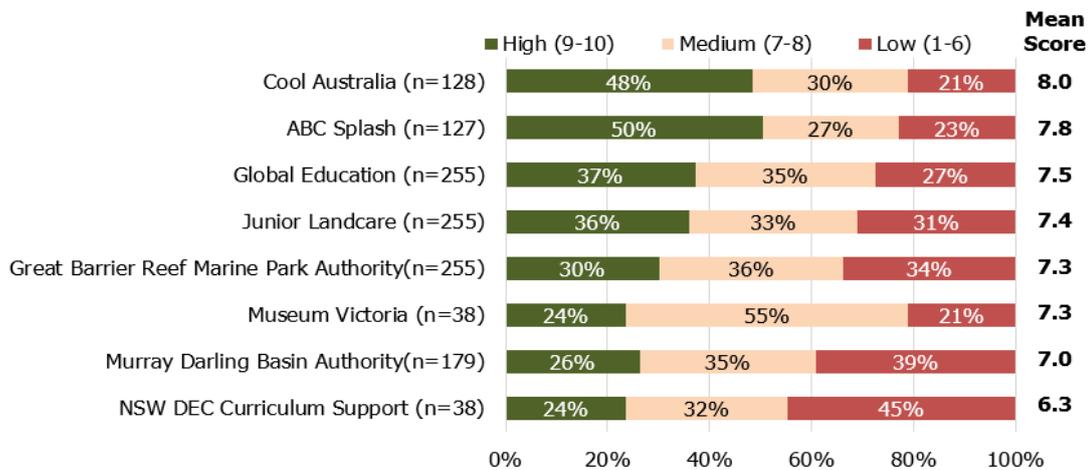
For a detailed analysis, respondents then assessed each of their sites according to the key usability criteria, as follows.

A. Ease of navigation

Cool Australia was considered the easiest website to navigate (8.0), followed by ABC Splash (7.8) and Global Education (7.5). Results are shown in *Figure 11*.

Teachers teaching sustainability for longer (5 years or more) were more likely to believe Cool Australia is easy to navigate (9-10 55%; cf. <5 years 41%)

Figure 11. Key usability criteria: Ease of Navigation

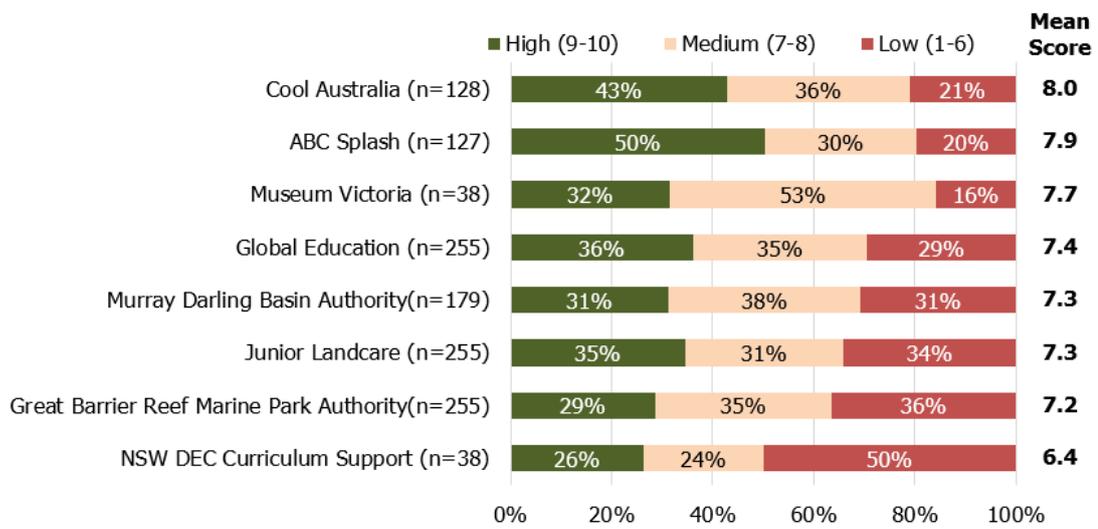


Q8. On a scale of 1 to 10, where 1 is extremely poor and 10 is extremely good; please rate **this** website for each of the following usability criteria – **Ease of Navigation** Base: Engaged Teachers

B. Ease of use

Cool Australia was believed to be the easiest site to use, with a mean score of 8 (see *Table 12*), however ABC Splash was the most likely to be rated “high” for ease of use (50%; cf. Cool Australia 43%), as seen in *Figure 12*.

Figure 12. Key usability criteria: Ease of use

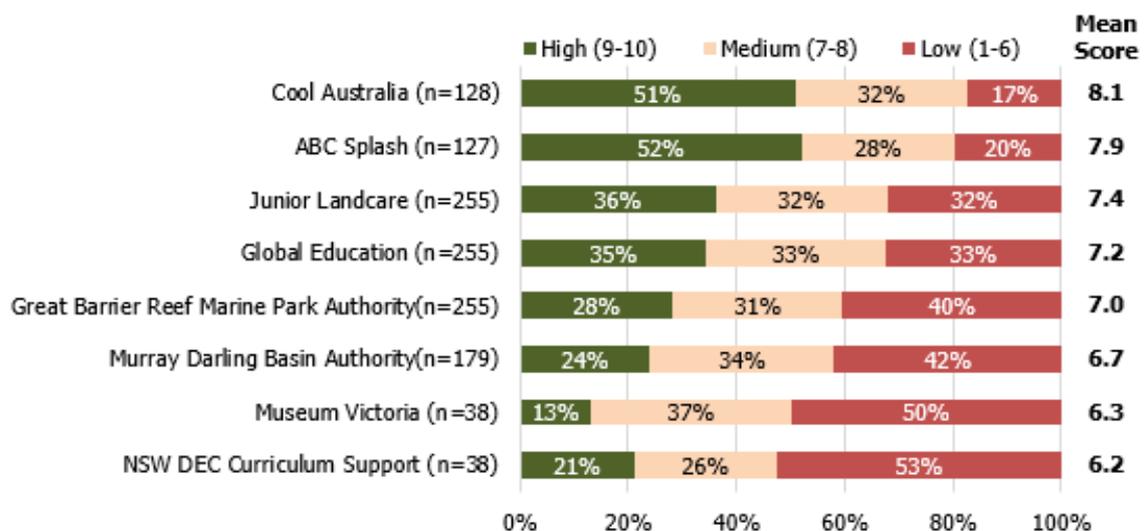


Q8. On a scale of 1 to 10, where 1 is extremely poor and 10 is extremely good; please rate *this* website for each of the following usability criteria – *Ease of Use* Base: Engaged Teachers

C. Relevance of content

When engaged teachers were asked to rank the relevance of the content on the selected website, again Cool Australia (8.1) and ABC Splash (7.9) were seen as having information that was most relevant to sustainability, as shown in Figure 13.

Figure 13. Key usability criteria: Relevance of content

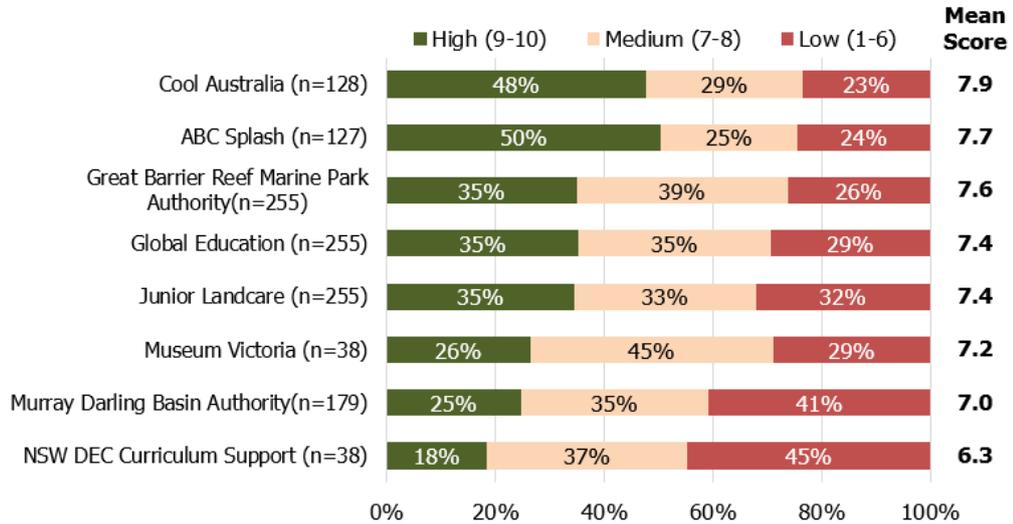


Q8. On a scale of 1 to 10, where 1 is extremely poor and 10 is extremely good; please rate *this* website for each of the following usability criteria – *Relevance of content* Base: Engaged Teachers

D. Comprehensiveness of content

Cool Australia (7.9), ABC Splash (7.7) and the Great Barrier Reef Marine Park Authority (7.6) sites were considered the most comprehensive in terms of content, as shown in Figure 14.

Figure 14. Key usability criteria: Comprehensiveness of content

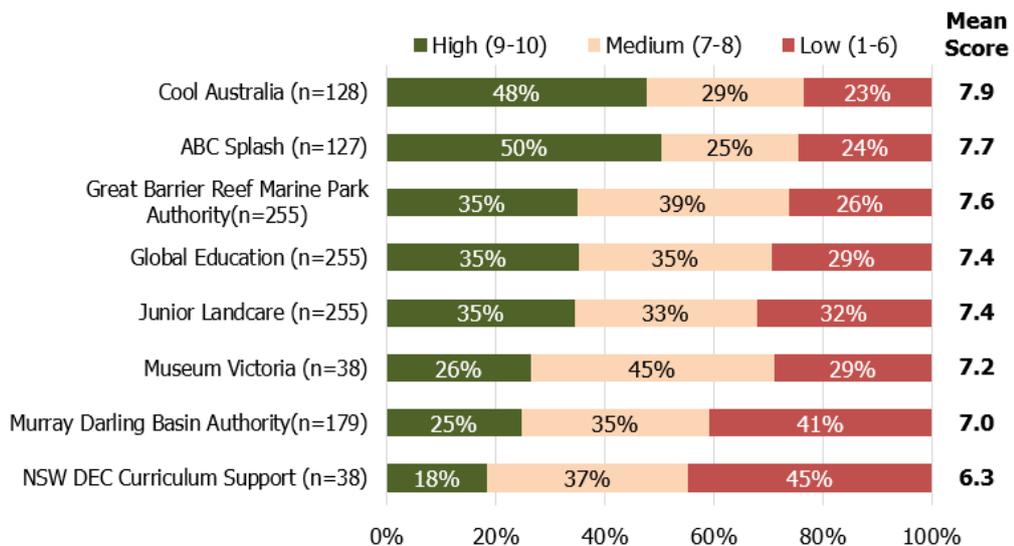


Q8. On a scale of 1 to 10, where 1 is extremely poor and 10 is extremely good; please rate **this** website for each of the following usability criteria – **Comprehensiveness of content** Base: Engaged Teachers

E. Effectiveness as a tool for teachers to engage students.

Cool Australia (90%) and ABC Splash (87%) were most likely to be considered effective tools for teachers to engage with students about sustainability, as shown in Figure 15.

Figure 15. Key usability criteria: Effectiveness as a tool for teachers to engage students.

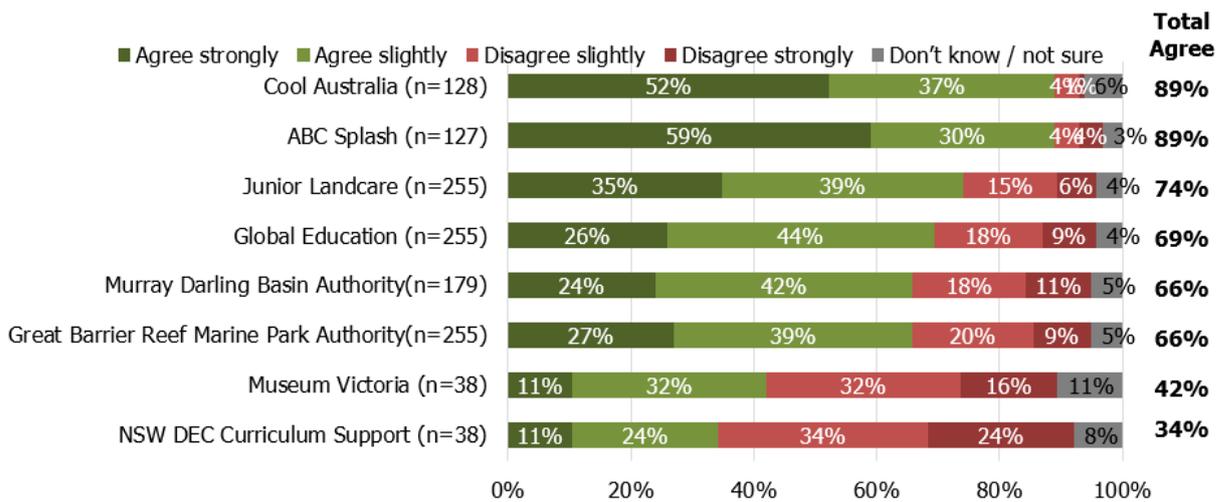


Q8. On a scale of 1 to 10, where 1 is extremely poor and 10 is extremely good; please rate **this** website for each of the following usability criteria – **Comprehensiveness of content** Base: Engaged Teachers

F. Fun for students to learn about sustainability.

The final usability criteria was whether the site would be fun for students to learn more about sustainability. For this question, ABC Splash and Cool Australia came equal first, with 89% of engaged teachers responding in the affirmative. See Figure 16.

Figure 16. Key usability criteria: Fun for students to learn about sustainability



Q9b. To what extent do you agree or disagree with this statement- This site will be fun for **students** to use to learn more about sustainability Base: Engaged

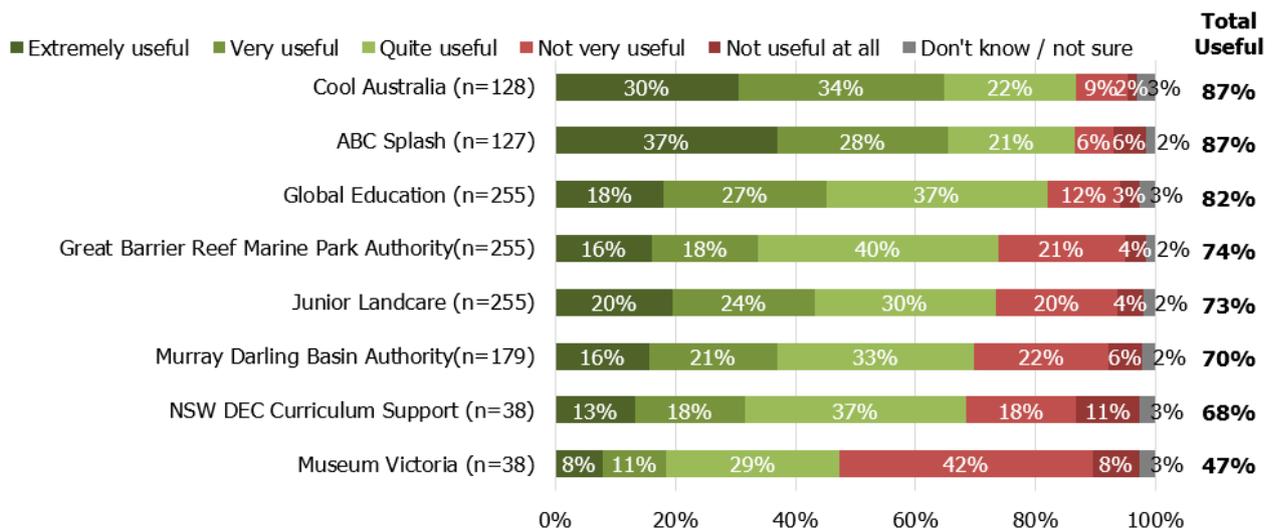
Assessing website usability for engaged teachers

National survey respondents were now asked to consider the websites again, from a personal perspective, answering the question 'how useful do you consider this site to be to help you further integrate sustainability into your teaching practices?'

Cool Australia (87%) and ABC Splash (87%) were most likely to be considered useful by engaged teachers for further integrating sustainability into their teaching practices, as seen in Figure 17.

Victorian teachers were less likely to consider Junior Landcare (62%; cf. NSW 78%, QLD 74%) and Global Education (71%; cf. NSW 87%, QLD 83%) useful.

Figure 17. Usefulness of websites for engaged teachers



Q9a. How useful do you consider this site to be to help you further integrate sustainability into your teaching practices? Base: Engaged Teachers

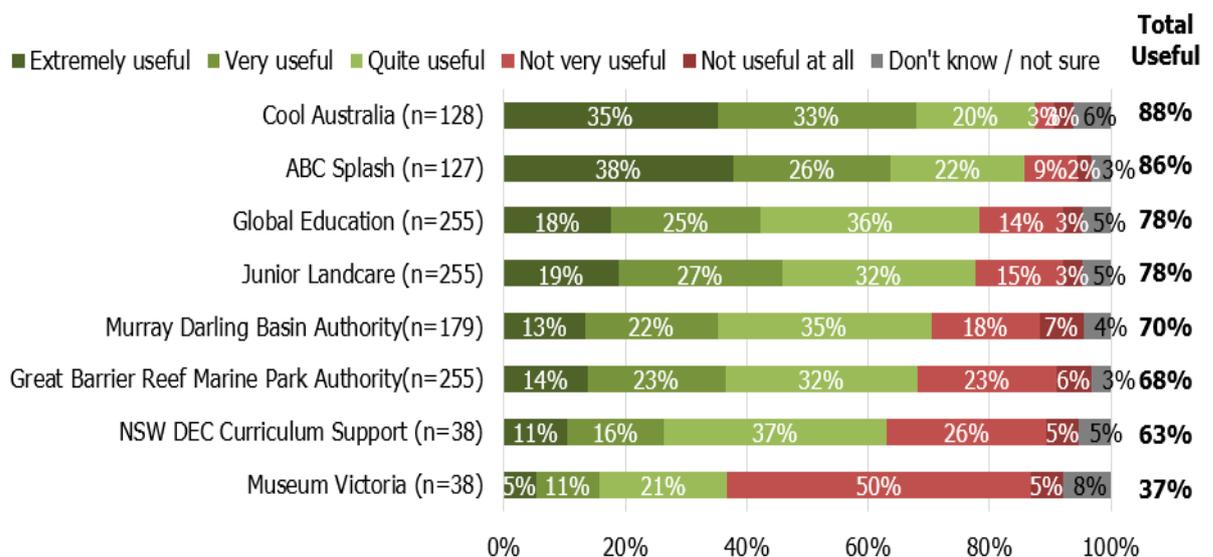
Getting Started: The most useful starting point for non-engaged teachers

Finally, engaged teachers were asked 'how useful do you consider this site to be to help non-engaged teachers to get started i.e. begin to incorporate sustainability into their teaching practices?'.

The results in Figure 18 show that the sites considered most useful as a starting point for non-engaged teachers were Cool Australia (88% useful) and ABC Splash (86%).

NSW teachers were more likely to consider ABC Splash (96%; cf. Vic 88%, Qld 81%), and Junior Landcare (87%; cf. Vic 69%, Qld 76%) useful for non-engaged teachers starting out.

Figure 18. Usefulness as a starting point for non engaged teachers.



Q10a. How useful do you consider this site to be to help non-engaged teachers to get started i.e. begin to incorporate sustainability into their teaching practices? Base: Engaged Teachers

Reasons for Rating of Usefulness for non engaged teachers – Cool Australia

Cool Australia received positive feedback from the majority of engaged teachers of sustainability in terms of usefulness.

Teachers consider links to teacher resources (49%), lots of information (45%) and being easy to navigate (25%) most useful, as shown in *Table 2*.

Table 2. Reasons for Rating of Usefulness for non engaged teachers – Cool Australia

	%		%
TOTAL POSITIVE	93%	TOTAL NEGATIVE	16%
Teachers Resources (e.g. links to curriculum, videos, lesson plans)	49%	Site is boring / not engaging	5%
Lots of information / Great Resource (good starting point)	45%	Not suitable for all age levels	5%
Easy to navigate	25%	Having to sign up	5%
Relevant to me / my teaching	23%	Too much information	1%
Great design (e.g. graphics)	19%	Not relevant to me / my teaching	1%
Engaging (exciting and interesting for students)	17%	Not a good starting point	1%
Easy to understand (student friendly)	14%	No teachers resources (teachers plans, units)	1%
Good overall (NFI)	8%		
Covers a wide range of ages	3%		
Other positive	4%		

Q10b. Why do you think that <site name> is <Q10a response> for non-engaged teachers to help them get started? Base: Engaged Teachers (n=128)

Reason for Rating of Usefulness for non engaged teachers-ABC Splash

ABC Splash received positive feedback from 4 in 5 (80%) of engaged teachers, notably with regards information (43%), being engaging for students (29%), and easy to incorporate into a lesson (28%), as seen in Table 3.

Of the 8 sites tested the ABC Splash site received the most positive feedback for being engaging (29%).

Table 3. Reason for Rating of Usefulness for non engaged teachers - ABC Splash

	%		%
TOTAL POSITIVE	80%	TOTAL NEGATIVE	25%
Lots of information / Great Resource (good starting point)	43%	Site is boring / not engaging	12%
Engaging (exciting and interesting for students)	29%	Not student friendly	3%
Easy to incorporate into a lesson / lesson plan / links to curriculum	28%	Doesn't specifically focus on sustainability	3%
Easy to navigate	19%	Doesn't match Australian Curriculum	3%
Great design (e.g. graphics)	18%	Not suitable for all age levels	2%
Easy to understand (student friendly)	14%	Not relevant to me / my teaching	2%
Relevant to me / my teaching	10%	Not a good starting point	1%
Good overall (NFI)	7%	Other negatives	7%
Can search for year level appropriate material	2%		
Case studies (i.e. Practical examples)	1%	None / Don't know	3%

Q10b. Why do you think that <site name> is <Q10a response> for non-engaged teachers to help them get started? Base: Engaged Teachers (n=127)

Reason for Rating of Usefulness for non engaged teachers - Junior Landcare

Junior Landcare received mostly positive feedback (70%), although as shown in *Table 4*, almost 2 in 5 (37%) of engaged teachers gave some form of negative feedback.

The site was considered less than ideal for helping non engaged teachers get started because it was not suitable for all age levels (16%).

Table 4. Reason for Rating of Usefulness for non engaged teachers - Junior Landcare

	%		%
TOTAL POSITIVE	70%	TOTAL NEGATIVE	37%
Easy to incorporate into a lesson / lesson plan / links to curriculum	23%	Not suitable for all age levels	16%
Lots of information / Great Resource (good starting point)	21%	Site is boring / not engaging	7%
Easy to navigate	14%	Doesn't match Australian Curriculum / syllabus	7%
Engaging (exciting and interesting for students)	14%	Too much information	4%
Easy to understand (student friendly)	13%	Information is not relevant to me / my teaching	4%
Provides case studies	7%	Not student friendly	1%
Great design (e.g. graphics)	7%	Not for starting out	1%
Relevant to me / my teaching	5%	Hard to navigate (find resources)	<1%
Good overall (NFI)	3%	Other negatives	8%
Other positive	12%		
		None / Don't know	2%

Q10b. Why do you think that <site name> is <Q10a response> for non-engaged teachers to help them get started? Base: Engaged Teachers (n=255)

Reason for Rating of Usefulness for non engaged teachers - Global Education

The majority of engaged teachers rated Global Education positively (75%) , with the primary reasons being that it has a lot of information (34%) and is easy to incorporate into a lesson plan, as seen in *Table 5*.

Table 5. Reason for Rating of Usefulness for non engaged teachers - Global Education

	%		%
TOTAL POSITIVE	75%	TOTAL NEGATIVE	31%
Lots of information / Great Resource (good starting point)	34%	Not suitable for all age levels	6%
Easy to incorporate into a lesson / lesson plan / links to curriculum	24%	Site is boring / not engaging	5%
Relevant to me / my teaching	13%	Hard to navigate (find resource)	5%
Easy to navigate	12%	Too much information	5%
Global perspective	12%	Doesn't match Australian Curriculum / syllabus	4%
Engaging (exciting and interesting for students)	9%	Doesn't provide teacher resources (e.g. lesson plans / units of work)	4%
Great design (e.g. graphics)	7%	Local then Global (overwhelming)	3%
Easy to understand (student friendly)	5%	Not student friendly	3%
Good overall	4%	Information is not relevant (e.g. for QLD teachers, specific issue, not in my subject area)	3%
Case studies	<1%	Not for starting for non-engaged teachers	2%
Other positive	4%	Doesn't specifically focus on sustainability	1%
		Other negatives	3%
None / Don't know	2%		

Q10b. Why do you think that <site name> is <Q10a response> for non-engaged teachers to help them get started? Base: Engaged Teachers (n=255)

Recommendations

The following recommendations are for organisations developing or maintaining websites and online databases for EfS. The recommendations have an intentional skew toward the needs of the 40% of teachers who are aware of and supportive of EfS but need assistance on how to get started in integrating this into their teaching practices.

The results of the national online survey outlined above have provided some insight into what teachers already incorporating sustainability into their teaching practice see as important to assist their colleagues to get started on their sustainability journey.

These results were reinforced in the teacher focus groups held in Melbourne, Sydney and Brisbane to discuss these and other issues with teachers who had identified themselves as non-engaged in the integration of sustainability in their teaching practice.

Ease of navigation

Teachers are time poor due to the many competing demands of their profession. This in turn creates a barrier to incorporating EfS into their teaching practice as non-engaged teachers believe it is will be difficult and time consuming to incorporate sustainability into their teaching practice. Easy navigation of websites and online resources is an essential time saver.

Cool Australia and ABC Splash were the standout sites teachers found easy to navigate in the national online survey conducted.

The key elements to easy navigation which were identified are -

- Being able to search by year level and subject area as filters will save teachers time.
- Teachers want to be able to quickly navigate through a site to locate resources they can use in their classrooms immediately and also to plan to include resources into future units they are teaching.
- Navigation should clearly identify if there are teacher and/or student resources.
- Generally feedback in the focus groups was that secondary teachers appear to prefer to search by their subject area whereas primary teachers prefer to search by year level. Both these search functions should be available on a site.
- Some existing sites which have some very good resources for teaching about sustainability were not rated well by teachers who had difficulty even navigating within these sites to find the educational resources. Quality resources need to be supported by easy navigation.

Ease of use.

To encourage those teachers who have not yet started to integrate sustainability into their teaching practice websites and online databases need to be easy to use to save teachers time and to change their perceptions that it will be difficult to incorporate sustainability across the curriculum.

ABC Splash and Cool Australia were identified in the national online survey as being very easy to use and other analytics showed once teachers identified a site as easy to use and navigate they would return repeatedly to use it building their confidence with teaching sustainability.

- Teachers wanted sites and online databases to be easy to use, with what they needed all in one place.

Comprehensiveness of content

Teachers don't want to spend a lot of time on multiple websites to find resources to integrate into their teaching practice. Cool Australia and ABC Splash were rated highly due to the comprehensiveness of their site.

- If they can find a comprehensive site with sustainability materials for both teacher reference and student engagement on different subject areas, levels, themes and events they are likely to use this site repeatedly.
- Teachers rated sites highly when they covered a comprehensive range of subject areas, included curriculum links and identified links to the Organising Ideas for sustainability which all made the site or database relevant to their teaching.
- Teachers rated sites highly when they provided resources to a wide range of student levels within the same site. In both the focus groups and the national online survey sites which only catered for a specific age group were rated as less use friendly and comprehensive than those sites which catered from early years through to secondary level and also included teacher resources.
- Sites should include lots of information, teaching resources including lesson plans and student activities with links to the Australian curriculum.
- Material on websites and within online databases needs to be current and maintained as teachers will quickly stop using sites where material, statistics, curriculum links or changes to versions of the curriculum are not updated. This was a criticism by teachers in the online survey of several sites which teachers had used previously but had stopped using as the content, curriculum links or both had frustrated teachers.

Links to the Australian Curriculum

- Organisations developing new resources and online databases should link to the latest version of the Australian Curriculum with teacher resources linked to the sustainability priority, with relevant content descriptions and Organising Ideas included. Some new resources which were evaluated for this report have started to do this as have some sites which are currently being redeveloped. Keep sites updated.
- Some existing sites are also starting to include links to the sustainability organizing ideas in order to encourage teachers to develop their understandings and comprehension of these organizing ideas. (Cool Australia have started to do this)

Differentiate between Education about Sustainability (EaS) and Education for Sustainability (EfS).

- Many older resources on sustainability are really education about sustainability (EaS). This means that the resources are about theoretical knowledge of sustainability not orientated to transformational change through EfS towards more sustainable patterns of living.
- Organisations developing new classroom ready teaching resources on EfS should include the use of EfS as a tool for achieving sustainability and link to the cross curriculum sustainability priority which focuses on systems thinking, worldviews and futures. This encourages the design and taking of informed actions to create sustainable patterns of living rather than teaching materials which are educating about the environment. This is why a whole school approach is critical to EfS.

Usefulness as a starting point for non-engaged teachers of EfS.

- Teachers generally have indicated that they are time poor and have been seeking assistance in the time required for them to find and then incorporate resources around education for sustainability into their teaching practice.
- Teachers who have not yet integrated sustainability into their teaching practice need support from websites and online databases in providing material that improves their ability to directly teach sustainability topics.
- Teachers are seeking teaching resources which are easily identified by their type, e.g. video, activity, lesson plan, curriculum link.
- Sites which provide a comprehensive range of resources which can be seen to assist in reducing teacher time spent preparing and developing lessons were highly rated and used more frequently.
- Include material which improves teachers' understanding and comprehension of EfS and builds teacher confidence around EfS.
- Include material which will increase teachers' levels of interest and engagement with EfS.

Effectiveness of engaging students

- Sites and online databases which included student materials and created innovative, fun and interesting materials for students were rated highly by non-engaged teachers of sustainability and engaged teachers who participated in the national online survey.
- Teachers wanted to see a range of activities and resource types. For example, teachers in the early years were looking for games and apps they could use which were linked to the curriculum and secondary teachers were looking for materials which would motivate and engage youth.
- Teachers are looking for resources with units of work, activities, videos and worksheets. They want a variety of activities linked to content descriptors and the sustainability priority Organising Ideas which will improve student awareness and comprehension of EfS and also motivate students to design and take informed action around EfS leading to more sustainable patterns of living.
- Material developed should be empowering for students so that they can be part of a solution towards more sustainable patterns of living.

Fun for students to learn about sustainability

- Sites which have made their resources engaging and fun for students have been strongly supported by teachers, are used frequently and contribute to building teacher confidence in EfS.

Inclusion of case studies/illustrations of practice

- Teachers surveyed saw the provision of a range of case studies and illustrations of practice which can be viewed by teachers yet to engage in EfS teaching practice as critical. This enables teachers to sample what EfS may 'look like' in their classrooms and builds their awareness, comprehension and engagement with EfS.

Multiple entry points

- Provide multiple entry points. As well as linking resources to the Australian curriculum through content descriptors and organising ideas for general classroom activities, teachers wanted multiple entry points to EfS for schools. This may include resources being developed by organisations for special event days in schools such as Environment Day or Environment Week, Clean up Australia Day, World Oceans' day and many more.

This enables teachers to use resources provided which create another opportunity for engagement with sustainability for both teachers and students across the school.