

Crunch&Sip[®] Policy Evaluation

Results of the Audit Survey and Tally Charts

2010

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September 2010

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EXECUTIVE SUMMARY

In 2008 Cancer Council WA undertook an evaluation of the Crunch&Sip® program in Western Australian Crunch&Sip® certified schools. The evaluation involved distributing an audit survey to be completed by the person coordinating Crunch&Sip® in the school and a classroom participation tally chart to be completed by classroom teachers. 152 audits were completed and 910 tally charts were completed. Results were entered into Microsoft Excel and analysed in SPSS Version 27.

Results indicated that the majority of schools were Government primary schools (67.8%) and slightly more schools were located in the Perth Metropolitan area (53.3%) compared to country or rural areas (46.7%). Almost half of respondents reported that their school was situated in a medium socioeconomic status (SES) area (48.0%). The highest participation rates were reported among the lowest year group (Kindergarten, Pre-primary and Year 1) for fruit and vegetables (84.4%) and water (86.6%).

Fruit was the most commonly consumed food during the Crunch&Sip® break. Over half reported fresh whole fruit (53.3%) and about 40% reported fresh chopped fruit as the most common food. The least commonly consumed foods during Crunch&Sip® were canned fruit in natural juice (27.1%) and dried fruit (26.1%). Nearly 70% of respondents from high SES schools reported that more than 80% of their students regularly bring in fruit and vegetables for the break, significantly more than that reported by respondents from low SES schools (19.6%) ($p < 0.001$). Country or rural schools had a significantly higher average participation level for fruit and vegetables (82.3%) than Perth metropolitan schools (75.0%). Low SES schools had a significantly lower average participation level for fruit and vegetables (73.5%) than both medium SES schools (80.0%) and high SES schools (82.6%).

Slightly more respondents from the Perth metropolitan area than country/rural areas reported students forgetting as the most common reason for not bringing fruit and vegetables for Crunch&Sip®. Lack of parental support and financial issues were more commonly reported among respondents from low SES schools than other SES groups.

With the introduction of Crunch&Sip® most respondents reported that student intake was 'more' for fruit (92.1%), vegetables (77.6%) and water (86.2%). Over half of schools had used the Crunch&Sip® resources provided, the most commonly used resource was the water bottle (94.1%). Respondents were asked about what they like best about Crunch&Sip® and the most commonly 'liked' aspect was 'promotes health/feel satisfied by children's healthy behaviour (48.7%).

Respondents described additional steps they took to support Crunch&Sip® and two most commonly reported were holding events or activities and providing fruit for children. Respondents were also asked to describe any additional support they need to support Crunch&Sip® and respondents most commonly expressed how useful more promotional materials would be for motivating the children, as well as the need for support in coordinating Crunch&Sip® at the school (15.1%).

The classroom tally charts revealed that the mean proportion of students in each class eating fruit and vegetables during the Crunch&Sip® break was 74.4% per day (averaged across the three reported days) and the mean proportion of students in each class drinking water during the Crunch&Sip® break was 77.7% per day (averaged across the three reported days).

INTRODUCTION

This report presents the evaluation findings of the Crunch&Sip® policy implemented at primary schools in Western Australia.

METHODS

Data collection

The data presented here were obtained from the audit survey and tally charts (n=152). The coordinator of the Crunch&Sip® policy at each school was requested to complete the audit survey and distribute the tally charts to all classrooms. Evaluation commenced in 2008.

Treatment of the data

Data were entered using Microsoft Excel and analysed in SPSS version 17. Where appropriate, Chi square tests were used to compare groups defined by location of school (country/metro), socioeconomic status (SES) or years since certification. Few Statistically significant differences were identified and these are noted in table and figure footnotes.

RESULTS

Audit Survey

School characteristics

Respondents of the Crunch&Sip® Audit survey were asked to describe some of the demographic and other characteristics of the schools at which they worked (Table 1). The majority of schools evaluated were Government primary schools (67.8%). Slightly more schools were located in the Perth metropolitan area (53.3%) than in country or rural areas (46.7%). Almost half of respondents reported the demographic that best described their school was medium socioeconomic status (SES) (48.0%), 28.9% reported low SES and 15.8% reported high SES. Over half of respondents reported the number of classrooms operating at their schools from kindergarten to year 7 was 1-10, nearly 30% reported 11-21 and nearly 10% reported 21-33. Over 35% of the schools had 201 to 500 students attending and just over 30% had 50 to 200 students attending. About one quarter of schools had been certified for Crunch&Sip® for less than one year, over one third for 1-2 years and about a third for over 2 years.

Table 1: School characteristics

	n	%
School type		
Government Primary School	103	67.8
Catholic Education School	13	8.6
Independent School	10	6.6
District High School	9	5.9
Remote Community School	4	2.6
Education Support Centre	6	3.9
Other	6	3.9
School location		
Perth Metropolitan Area	81	53.3
Country/Rural	71	46.7
Socioeconomic status		
Low	51	33.6
Medium	73	48.0
High	24	15.8
Number of classrooms		
1 – 10	85	55.9
11 – 20	45	29.6
21 – 33	15	9.9
Number of students attending the school		
Under 49	28	18.4
50 – 200	47	30.9
201 – 500	54	35.5
501 – 800	20	13.2
Over 800	2	1.3
Years since the school became certified for Crunch&Sip®		
<1 year (2008)	39	25.7
1-2 years (2007)	55	36.2
2+ years (2006 or 2005)	49	32.2

Respondent characteristics

Over 40% of respondents were teachers and nearly 43% were school principals (Table 2). Almost 30% of respondents had been at their current school for one to two years, just over 30% for three to five years and nearly 40% for more than five years. The vast majority of respondents were the Crunch&Sip® coordinator at the school (87.5%).

Table 2: Participant characteristics

	n	%
Position		
Teacher	62	40.8
Principal	65	42.8
Other	22	14.5
Number of years at the school		
1-2 years	43	28.3
3-5 years	47	30.9
More than 5 years	58	38.2
Coordinator of the Crunch&Sip policy at school		
Yes	133	87.5
No	15	9.9

The Crunch&Sip® policy within the school

Most respondents reported they had read the Crunch&Sip® policy (89.5%) and that the policy document had been shared with other staff and parents (86.2%) (Table 3). Nearly 30% of respondents reported that the Crunch&Sip® policy had been reviewed since certification and 10.5% reported that changes to the policy were made. The majority of respondents had seen the Crunch&Sip® fence sign at their school.

Table 3: Crunch&Sip® policy within the school

	n=152 %
Read Crunch&Sip® policy	89.5
Policy document has been 'shared' with other staff and parents	86.2
Crunch&Sip® policy has been reviewed	29.6
Changes were made to the policy since certification	10.5
Seen the Crunch&Sip® fence sign	71.1

Review and changes to the Crunch&Sip® policy within schools

The table below presents the proportion of schools that had reviewed their Crunch&Sip® policy and the proportion that made changes to the policy, by years since certification. The policy had been reviewed by over a third of schools certified in 2008 (36.8%) and in 2005 or 2006 (34.0%), but less than a quarter of those certified in 2007 (22.2%). Changes were made to the policy by 15.4% of schools certified in 2008, 17.0% of those certified in 2005 or 2006 and less than 4% of those certified in 2007. There were no statistically significant differences between groups.

Table 4: Schools who reviewed and changed their policy

Year the school became certified for Crunch&Sip®	n	Policy was reviewed	Policy was changed
		%	%
2008	38	36.8	15.4
2007	54	22.2	3.8
2006	24	25.0	16.7
2005	23	43.5	17.4

Promotion of the Crunch&Sip® policy in schools

Respondents were asked if their school used a series of methods of promoting the Crunch&Sip® policy to parents, teachers and staff of the school and the students (Table 5). The school newsletter was the most commonly reported medium for promoting the Crunch&Sip® policy to parents, with over half of respondents reporting it was used every term, and about 30% reporting it was used at least once a year. Staff meetings were the most common way of promoting the Crunch&Sip® policy to teachers with nearly 40% of respondents reporting promotion at staff meetings every term, about 25% reporting 'at least once a year' and about 30% reporting 'at the start of the year'. The Crunch&Sip® policy was mostly promoted to students by oral reminders in class, and by being linked to the curriculum during class, with almost half of respondents reporting these methods were used every term. Over 60% of respondents reported that Crunch&Sip® was promoted to students by activities during special promotional weeks such as Crunch&Sip® week and Fruit 'n' Veg week at least once a year.

Table 5: Promotion of the Crunch&Sip® Policy in schools

Promotion of the Crunch&Sip® policy to...	Every term (n=152) %	At least once a year (n=152) %	Start of the year only (n=152) %	Never (n=152) %
Parents				
School newsletter	53.3	28.3	13.8	2.0
Letter outlining Crunch&Sip policy	5.9	42.1	25.7	12.5
Note in students' diaries	17.8	13.8	5.9	31.6
Teachers and staff				
Staff meetings	39.5	25.7	30.3	2.6
Email	16.4	15.8	7.9	33.6
Notice board	21.7	33.6	13.8	13.8
Students				
Oral reminders in class	47.4	13.8	32.2	2.6
Incentives program	27.0	31.6	5.9	19.7
Linked through curriculum during class	48.7	38.8	3.3	2.6
Activities during special weeks	27.0	61.8	0.7	3.9

eg. Crunch&Sip week, Fruit 'n' Veg week				
Assembly	19.7	51.3	6.6	15.1

The three most commonly reported processes for informing new staff of the Crunch&Sip® policy at schools were brochures, newsletter or policy documents (21.1%), the induction process (20.4%) and by verbal communication (19.1%) (Table 6).

Table 6: Process for informing new staff and students about Crunch&Sip

	n=152
	%
Brochure/newsletter/policy documents	21.1
Induction process	20.4
Verbal communication	19.1
Verbal and written	10.5
Water bottles and verbal communication	3.9
Water bottle and written	2.6
Water bottles	1.3
Provide fruit and vegetables	0.7

The Crunch&Sip® break at School

The Crunch&Sip® break time varied from class to class in over 40% of schools surveyed (Table 7). The most commonly reported whole of school time for the Crunch&Sip® break was before morning recess (22.4%).

Table 7: When the Crunch&Sip® break is at school

	n=152
	%
It varies from class to class	41.4
Before morning recess	22.4
Throughout the day	14.5
Last period of the day	10.5
After morning recess	2.6
Straight after lunch	2.0
Other	5.9

The timeframe of the Crunch&Sip® break at school was also reported to have varied greatly from class to class by almost 40% of respondents (Table 8).

Table 8: Timeframe / duration of Crunch&Sip® break at school

	n=152
	%
Varies greatly from class to class	38.2

Designated 10 minute break	29.6
Break takes place throughout the whole day, students can graze of fruit and vegetables as they please	13.8
Designated five minute break	10.5
Break takes place loosely over one period	5.9
Other	0.7

The most common response for what takes place during the Crunch&Sip® break was that the class ate together at a set time (26.3%) (Table 9).

Table 9: What takes place during the Crunch&Sip® break?

	n=152
	%
Class eat together at set time	26.3
Stop class, children eat on their own	11.8
Free eating/grazing all day	11.2
Students eat during reading time or designated class time	10.5
Cut up and share fruit and vegetables at a set time	7.9
Varies – some classes have a set time, others graze	7.2
Unknown	6.6
Provide fruit and vegetable trays to class	4.6
Class grazes over set time	4.6
School eats together at set time	2.0
Students break individually	0.7

Crunch&Sip® participation rate by year group

The figure below (Figure 1) presents the average per class participation rate of consuming fruit or vegetables and water during Crunch&Sip® (for each year group). The highest participation rates were observed among the lowest year group (Kindergarten, Pre-primary and Year 1) for both fruit and vegetables (84.4%) and water (86.6%). The lowest participation rates were among the highest year group for both fruit and vegetables (66.2%) and water (70.4%).



Figure 1: Crunch&Sip® participation rate by year group

Food most commonly consumed during Crunch&Sip®

Respondents were given a range of six possible foods that children consumed for the Crunch&Sip break and asked to rank what they observed was the most common (1), to the least common (6). The proportions of what was ranked as the most common are presented in Figure 2. Fruit was the most commonly consumed food with over half of respondents reporting fresh whole fruit (53.3%) and about 40% reporting fresh chopped fruit as most common.

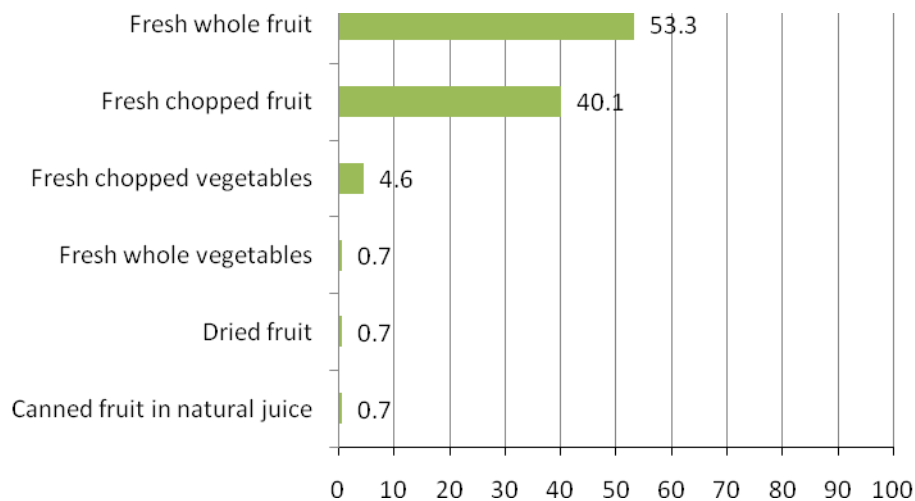


Figure 2: Most commonly consumed food during the Crunch&Sip® break

Food least commonly consumed for Crunch&Sip®

The figure below presents the proportion of respondents that rated the particular food as either '5' or '6' out of the possible six options given. Many respondents did not supply a '5' or '6' rating for this

question and so only 70.8% of schools are represented here. The least commonly consumed foods during Crunch&Sip® were canned fruit in natural juice (27.1%) and dried fruit (26.1%).

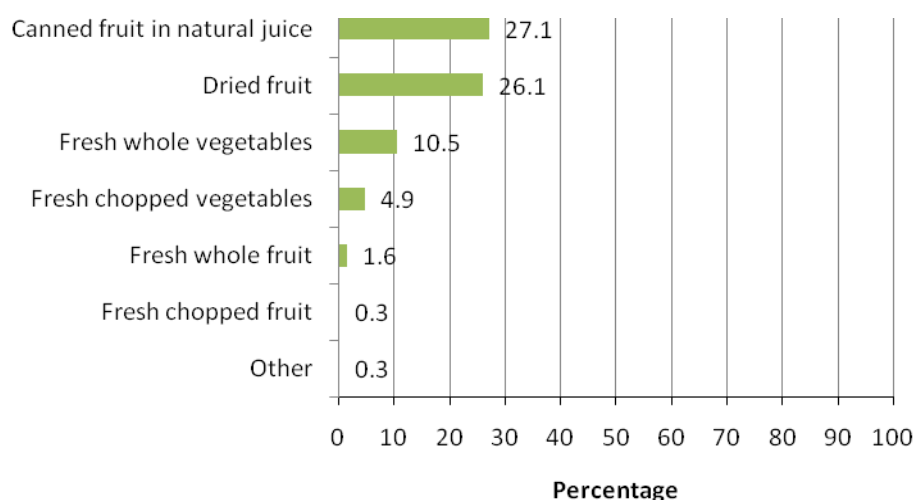


Figure 3: Least commonly consumed food during the Crunch&Sip® break

Prevalence of dried fruit for Crunch&Sip®

The table below presents the proportion of respondents, in specified subgroups, reporting that dried fruit was among the three most commonly consumed foods for Crunch&Sip®. Schools located in the Perth metropolitan area and of a high SES demographic had the highest prevalence of dried fruit for Crunch&Sip®. These differences were not statistically significant.

Table 10: How often is dried fruit among the three most commonly consumed foods for Crunch&Sip®

	n	%
Location		
Perth Metropolitan Area	11	18.3
Country/Rural	8	14.5
Socioeconomic status		
Low	6	15.8
Medium	7	12.3
High	6	35.3

Proportion of students regularly bringing fruit and vegetables for the Crunch&Sip® break

Respondents were asked on average, what proportion of students regularly brings fruit and vegetables for the Crunch&Sip® break. The results are presented as a proportion of the self-reported

SES group of the school in Figure 4. Overall, 43% of respondents reported that more than 80% of students regularly brought fruit and vegetables, about 30% reported between 60% and 80% of students and 21% reported less than 60% of students (data not shown). Nearly 70% of respondents from high SES schools reported that more than 80% of their students regularly bring in fruit and vegetables for the break, significantly more than that reported by respondents from low SES schools (19.6%) ($p < 0.001$). Over one third of respondents from low SES schools reported that less than 60% of students regularly bring in fruit and vegetables for the Crunch&Sip® break.

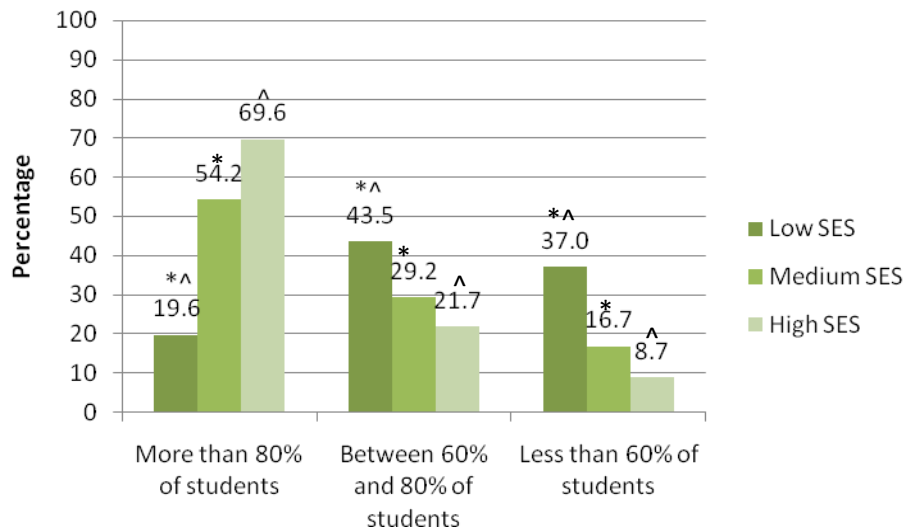


Figure 4: Proportion of students from low, medium and high SES schools regularly bringing fruit and vegetables for the Crunch&Sip® break

* Denotes a statistically significant difference between Low SES and Medium SES

^ Denotes a statistically significant difference between Low SES and High SES

Participation rates for Crunch&Sip® by location and socio-economic status of the school

The table below presents the average class participation rates for consuming fruit and vegetables and water during Crunch&Sip®, by location and socio-economic status of the school. Country or rural schools had a significantly higher average participation level for fruit and vegetables (82.3%) than Perth metropolitan schools (75.0%). Low SES schools had a significantly lower average participation level for fruit and vegetables (73.5%) than both medium SES schools (80.0%) and high SES schools (82.6%). There were no statistically significant differences between groups for the average participation level for water.

Table 11: Participation rates for Crunch&Sip® by location and socio-economic status of the school

	n	Participation rate	
		Fruit and vegetables %	Water %
Location			
Perth Metropolitan Area	70	75.0*	78.2
Country/Rural	58	82.3*	83.1
Socioeconomic status			
Low	42	73.5*^	77.5
Medium	62	80.0*	81.7
High	20	82.6^	81.6

* and ^ denote a statistically significant difference between groups ($p < 0.05$)

Most common reason for students not bringing fruit or vegetables to school for the Crunch&Sip® break

Respondents ranked a series of suggested reasons for students not bringing in fruit and vegetables for the Crunch&Sip® break from most (1) to least (7) common. These results are reported as a proportion of subgroup categories (Table 12). Slightly more respondents from the Perth metropolitan area than country/rural areas reported students forgetting as the most common reason for not bringing fruit and vegetables for Crunch&Sip®. Lack of parental support and financial issues were more commonly reported among respondents from low SES schools than other SES groups.

Table 12: Most common reasons for students not bring fruit and vegetables for Crunch&Sip®

	n	%
Students forget		
Location		
Perth Metropolitan Area	41	61.2
Country/Rural	31	56.4
Socioeconomic status		
Low	17	40.5
Medium	42	67.7
High	12	80.0
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	21	65.6
1-2 years (2007)	25	58.1
2+ years (2006 or 2005)	20	52.6
Lack of parental support		

Location		
Perth Metropolitan Area	20	31.3
Country/Rural	13	26.0
Socioeconomic status		
Low	16	39.0
Medium	10	17.5
High	6	46.2
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	7	22.6
1-2 years (2007)	11	29.7
2+ years (2006 or 2005)	12	31.6
Financial issues		
Location		
Perth Metropolitan Area	11	19.6
Country/Rural	9	20.0
Socioeconomic status		
Low	14	31.1
Medium	3	6.3
High	2	28.6
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	7	25.0
1-2 years (2007)	9	25.0
2+ years (2006 or 2005)	3	9.7
Lack of reminding by teachers		
Location		
Perth Metropolitan Area	5	10.0
Country/Rural	4	10.0
Socioeconomic status		
Low	4	11.4
Medium	4	8.7
High	1	16.7
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	2	8.0
1-2 years (2007)	4	13.8
2+ years (2006 or 2005)	3	9.7
Students don't like fruit or vegetables		
Location		
Perth Metropolitan Area	4	7.5
Country/Rural	5	11.6
Socioeconomic status		

Low	2	5.7
Medium	7	14.0
High	0	0.0
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	1	3.7
1-2 years (2007)	3	9.4
2+ years (2006 or 2005)	4	12.9
Poor availability of fruit and vegetables in the area		
Location		
Perth Metropolitan Area	0	0.0
Country/Rural	7	16.3
Socioeconomic status		
Low	1	2.9
Medium	6	14.6
High	0	0.0
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	2	8.7
1-2 years (2007)	2	7.7
2+ years (2006 or 2005)	3	9.7
Poor quality of fruit and vegetables in the area		
Location		
Perth Metropolitan Area	0	0.0
Country/Rural	2	5.9
Socioeconomic status		
Low	1	3.4
Medium	1	2.9
High	0	0.0
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	2	10.0
1-2 years (2007)	0	0.0
2+ years (2006 or 2005)	0	0.0

How schools address the issue of access to fruit and vegetables

Respondents were asked an open-ended question on what is done at their school to address the issue of 'access' (i.e. students regularly not bringing fruit or vegetables for the Crunch&Sip® break). Donations or consideration in the school budget and reminders were the most common methods (17.8%) and also cutting up the fruit and vegetables so that others can share (15.8%).

Table 13: How schools address the issue of access to fruit and vegetables

	n=152 %
Donations or school budget for fruit and vegetables	17.8
Reminders	17.8
Cut up and <i>share</i> fruit and vegetables	15.8
Not an issue	9.9
Provide fruit and vegetables for certain students	6.6
Fruit from Foodbank, Breakfast Club, Red Cross	5.3
Provided for students that forget and reminder is sent home	3.9
Incentives to bring fruit and vegetables	3.9
School garden provides	2.0
Unknown	2.0
Access to fruit and vegetables at school canteen	1.3

Respondents were asked specifically if their school had a budget for Crunch&Sip® and if their school participated in the Food Bank School Breakfast Program. Responses to these have been presented as a proportion of subgroups in Table 14. A larger proportion of Perth Metropolitan schools (29.6%) were reported to have a budget than Country/Rural schools (20.6%). Over half of the schools from low SES demographic were reported to participate in the Food Bank's School Breakfast Program (56.9%)

Table 14: Schools with a budget for Crunch&Sip® and participation in the Food Bank's School Breakfast Program

	School has a budget for Crunch&Sip®		School participates in Food Bank's School Breakfast Program	
	n	%	n	%
Location				
Perth Metropolitan Area	24	29.6	19	23.5
Country/Rural	14	20.6	14	19.7
Socioeconomic status				
Low	15	30.0	29	56.9
Medium	17	23.6	4	5.5
High	5	20.8	0	0.0
Years since the school became certified for Crunch&Sip®				
< 1 year (2008)	9	23.1	10	25.6
1-2 years (2007)	14	26.4	10	18.2
2+ years (2006 or 2005)	13	26.5	13	26.5

Water drinking in the classroom at school

Most students drink water from a water bottle in the classroom (90.8%).

Table 15: Where students drink water from in class

Generally at your school students drink water from...	n=152 %
A water bottle	90.8
A water fountain in the classroom	0.7
It varies from class to class	3.9
Other	4.0

The majority of students keep their water on their desk (65.1%).

Table 16: Where students keep their water bottles or cups

On average students at your school keep their water bottles / cups...	n=152 %
On their desks	65.1
On a bench at the side of the classroom	13.2
On the floor next to their desk	7.2
In their bags outside the classroom	2.0
Other	11.3

Respondents were asked what best describes the way in which water bottles / cups are cleaned at their school. Almost 60% reported that the students' water bottles were taken home each night for washing.

Table 17: Cleaning of water bottles or cups at the school

	n=152 %
Taken home each night for washing	59.9
Taken home periodically for washing	14.5
Washed daily at school	9.2
Washed periodically at school	7.2
Other	6.6
Never washed	0.7

Respondents were asked on average, what proportion of students regularly brings a water bottle to drink in class. About half of respondents reported that more than 80% of students regularly bring a water bottle to drink in class.

Table 18: Proportion of students that regularly bring a water bottle to drink in class

	n=152 %
More than 80%	48.0
Between 60% and 80%	31.6
Less than 60%	16.5

Fruit, vegetable and water intake

Respondents were asked if, since introducing Crunch&Sip®, the students' intake of fruit, vegetables and water had changed (Table 19). The vast majority of respondents reported that student intake was 'more' for fruit (92.1%), vegetables (77.6%) and water (86.2%).

Table 19: Change in Fruit, vegetable and water intake since introducing Crunch&Sip®

	n=152 %
Fruit intake	
More	92.1
Less	0.7
About the same	2.6
Unsure	3.9
Vegetable intake	
More	77.6
Less	0.0
About the same	11.2
Unsure	9.2
Water intake	
More	86.2
Less	0.0
About the same	10.5
Unsure	2.0

Beliefs on the impact of Crunch&Sip®

Respondents were given a series of belief statements on the impact of the Crunch&Sip® policy. The results of those who 'strongly agreed' are presented as a proportion of subgroups in Table 20. Larger proportions of respondents from schools in the Perth metropolitan area (than from Country/rural schools) strongly agreed with all six statements, however the difference only reached statistical significance for "Crunch&Sip® provides health benefits to students". Similarly, more respondents from Schools with a high SES demographic strongly agreed with all six statements than respondents in other SES categories, though none of these differences were statistically significant.

Table 20: Beliefs of those who 'strongly agreed' by subgroups

	n	%
Crunch&Sip® is easy to implement		
Location		
Perth Metropolitan Area	41	50.6
Country/Rural	29	42.0
Socioeconomic status		
Low	19	37.3
Medium	36	50.7
High	14	58.3
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	19	48.7
1-2 years (2007)	25	47.2
2+ years (2006 or 2005)	24	49.0
Crunch&Sip® positively influences students' behaviour		
Location		
Perth Metropolitan Area	45	55.6
Country/Rural	31	44.9
Socioeconomic status		
Low	21	41.2
Medium	38	53.5
High	15	62.5
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	23	59.0
1-2 years (2007)	23	43.4
2+ years (2006 or 2005)	27	55.1
Crunch&Sip® makes students more manageable		
Location		
Perth Metropolitan Area	19	23.5
Country/Rural	12	18.5
Socioeconomic status		
Low	8	16.3
Medium	14	20.0
High	7	29.2
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	9	24.3
1-2 years (2007)	11	21.2

2+ years (2006 or 2005)	9	18.8
Crunch&Sip® supports teachers to deliver nutrition curriculum		
Location		
Perth Metropolitan Area	39	48.1
Country/Rural	28	41.2
Socioeconomic status		
Low	19	37.3
Medium	32	45.7
High	14	58.3
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	17	44.7
1-2 years (2007)	25	47.2
2+ years (2006 or 2005)	24	49.0
Crunch&Sip® provides health benefits to students		
Location		
Perth Metropolitan Area	60	74.1*
Country/Rural	40	58.0*
Socioeconomic status		
Low	31	60.8
Medium	49	69.0
High	16	66.7
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	26	66.7
1-2 years (2007)	35	66.0
2+ years (2006 or 2005)	35	71.4
Crunch&Sip® provides education benefits to students		
Location		
Perth Metropolitan Area	44	54.3
Country/Rural	32	47.8
Socioeconomic status		
Low	23	45.1
Medium	39	55.7
High	13	54.2
Years since the school became certified for Crunch&Sip®		
< 1 year (2008)	21	55.3
1-2 years (2007)	27	50.9
2+ years (2006 or 2005)	25	52.1

* Denotes a statistically significant difference between groups ($p < 0.05$)

Crunch&Sip® resources used

Respondents were given a range of Crunch&Sip® resources that are provided and indicated whether their school had used them. Over half of schools had used each resource listed in Table 21. The most commonly used resource was the water bottle (94.1%).

Table 21: Crunch&Sip® resources used

	n=152 %
Water bottle	94.1
Brochure	84.9
Crunch&Sip website	77.0
Curriculum activities from Fruit 'n' Veg® week website	70.4
Tally charts	66.4
Bookmark	66.4
Curriculum activities from Crunch&Sip® website	64.5
Curriculum activities from Go for 2&5® website	61.8

Most liked about Crunch&Sip®

Respondents were provided an opportunity to comment on what they liked best about the Crunch&Sip® policy at their school. The grouped responses are shown in Figure 5. The most commonly 'liked' aspect was around promoting health and feeling satisfaction that the children were getting fruit and vegetables (48.7%).

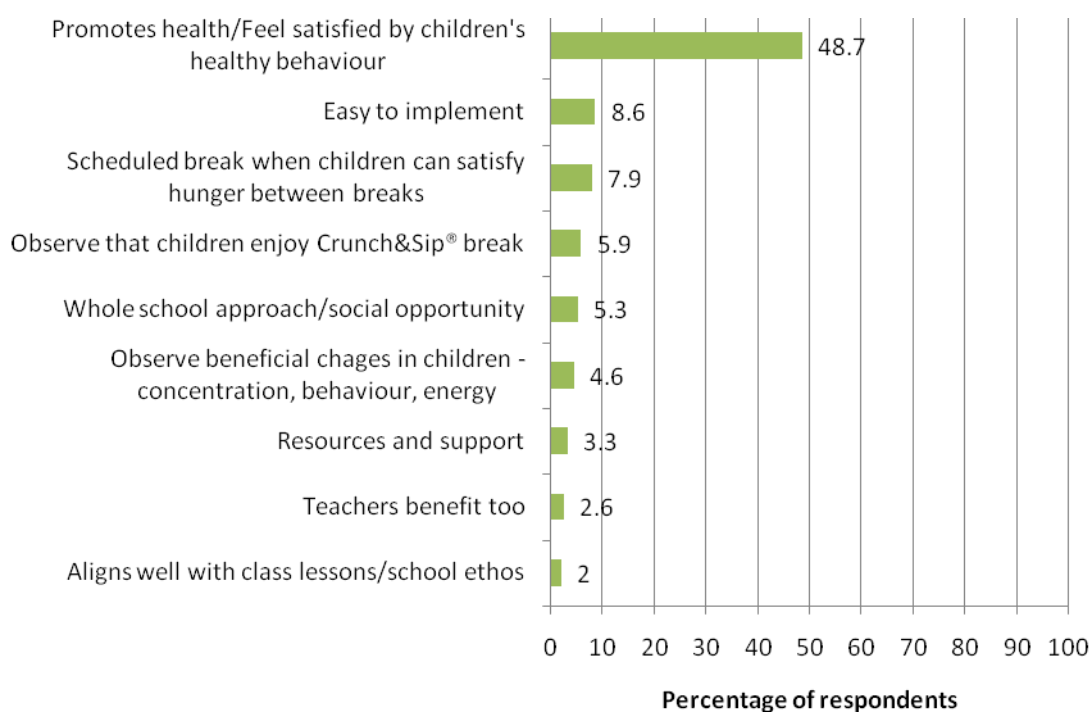


Figure 5: Most liked about Crunch&Sip®

Respondent's comments on "...what like best"

"Provides and encourages children with the opportunity to eat fruit and vegetables each day. Students incidentally learn the educational benefits of eating fruit and vegetables and realise they can taste quite nice."

"Students now eat vegetables they previously did not like"

"Water bottles, advertising, teaching support materials"

"Easy to implement – doesn't require too much teacher time"

"Students initiating the best 'time' in their class. Their excitement – they ALWAYS remember"

"Sharing time – only 19 students in total – good time for teaching social skills"

Least liked about Crunch&Sip®

The most commonly reported 'least' liked aspect was around the inconvenience in the classroom of cleaning up messy fruit and children requiring more frequent toilet trips (12.5%), followed by the difficulties of supply of fruit and vegetables for children (11.2%) (Figure 6).

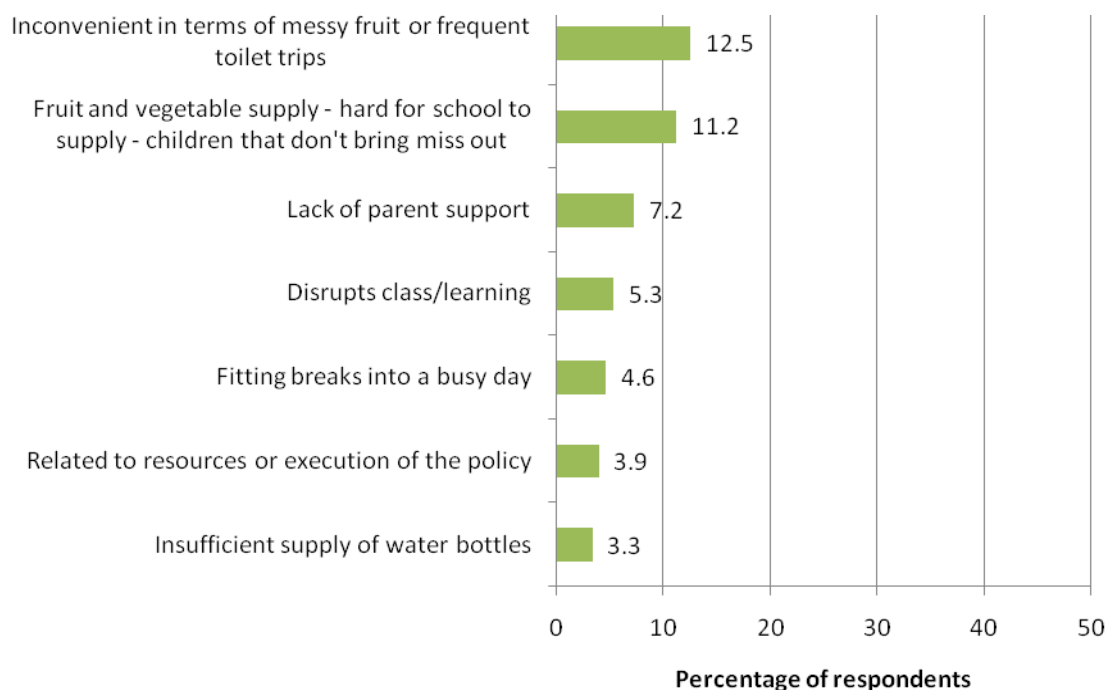


Figure 6: Least liked about Crunch&Sip®

Respondent's comments on "...what like least"

"Parents who do not support the program or encourage their children to eat fruit and vegetables"

"Prompting parents to send only appropriately healthy snacks – some hostility from parents about 'what is a healthy snack' especially if child is not willing to eat fruit or vegetables"

"Some days it is hard to fit everything in"

"Fruit is so expensive. Activities can be costly, parents are always asked for donations."

"The problem of receiving good quality fruit and vegetables in a remote area"

"Only getting to Port Hedland about once a fortnight to get fresh fruit"

"Some children never bring fruit and vegetables in"

Additional steps taken by respondents

Respondents described additional steps they took to support Crunch&Sip® and these responses were coded into nine categories shown in Figure 7. The two most commonly reported additional steps taken were holding events or activities and actually providing fruit for children.

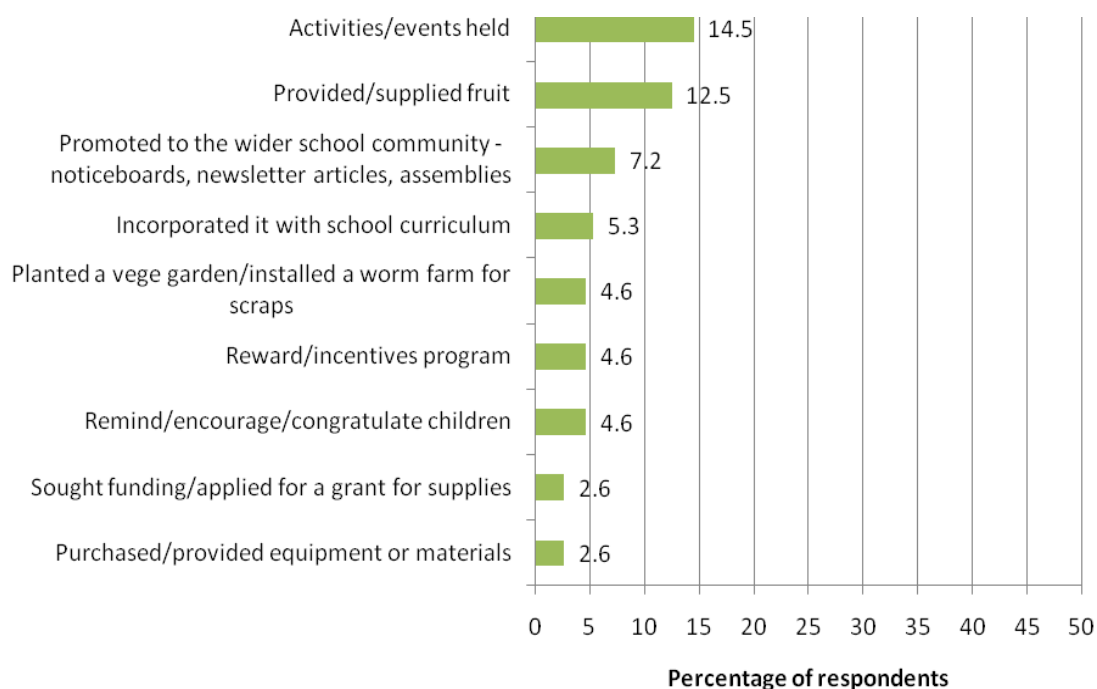


Figure 7: Additional steps taken to support Crunch&Sip®

Respondent's comments on "...any additional steps you have taken to support Crunch&Sip®"

"Purchase of resources from health budget. Children create posters for school viewing to promote Crunch&Sip regime, school plays, assembly."

"Planted vege garden at school with students doing the work. Produce then distribute throughout the school"

"Parent workshop, newsletter home, mystery fruit and vegetable competition"

Additional support needed

Respondents were also asked to describe any additional support they need to support Crunch&Sip® and these responses were grouped into five categories shown in Figure 8. Respondents most commonly expressed how useful more promotional materials would be for motivating the children, as well as the need for support in coordinating Crunch&Sip® at the school (15.1%).

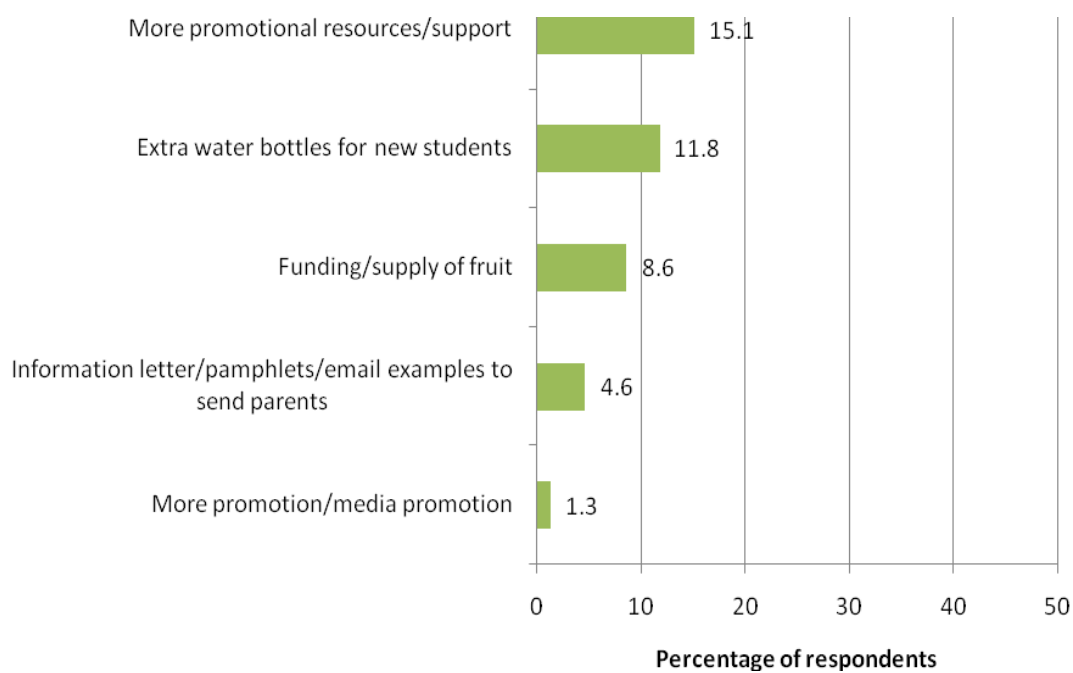


Figure 8: Additional support needed to support Crunch&Sip®

Respondent's comments on "...any additional support you need to support Crunch&Sip®"

"Would be great if brochures and additional water bottles were sent to schools early Term 1 to ensure newcomers and youngest children can be involved right from the start."

"Some different incentives or promotional items for when enthusiasm wanes – usually when our local shop only has green apples and carrots!"

"Any help to revitalise the program and to encourage all teachers to participate."

"Funding for "Kickstart" was a great bonus. Different ways to present message to those still not 'hearing' it."

Other comments

"Fantastic program. Should be in every school."

"Students enjoy Crunch&Sip and it is well supported by parents. School is keen to continue program"

"Great concept and changing student ideas of good choice and selecting healthy foods."

"It is interesting to look at the participation rates – it has identified that we need to focus on years 5-7 as the participation rates are low."

"Thanks for all your support, keep up the great work and promotion of this worthwhile initiative."

Classroom Participation Tally Charts

Respondents completed a tally chart of the number of students in their class consuming a piece of fruit or vegetable, and consuming water, during the Crunch&Sip® break. The tallies were completed on any three days of a given school week.

- The mean proportion of students in each class eating fruit and vegetables during the Crunch&Sip® break was 74.4% per day (averaged across the three reported days).
- The mean proportion of students in each class drinking water during the Crunch&Sip® break was 77.7% per day (averaged across the three reported days).

The table below presents the average class participation rates for consuming fruit and vegetables and water during Crunch&Sip, by location and socio-economic status of the school. Country or rural schools had a significantly higher average participation level for fruit and vegetables (82.3%) than Perth metropolitan schools (75.0%). Low SES schools had a significantly lower average participation level for fruit and vegetables (73.5%) than both medium SES schools (80.0%) and high SES schools (82.6%). There were no statistically significant differences between groups for the average participation level for water.

	Participation rate		
	n	Fruit and vegetables %	Water %
Location			
Perth Metropolitan Area	70	75.0*	78.2
Country/Rural	58	82.3*	83.1
Socioeconomic status			
Low	42	73.5*^	77.5
Medium	62	80.0*	81.7
High	20	82.6^	81.6

* and ^ denote a statistically significant difference between groups ($p < 0.05$)