Edith Cowan University
School of Education

Food Sensations®

2014 Evaluation Report
East Pilbara

Prepared for Foodbank WA by

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Executive summary

In 2014, the Food Sensations® initiative was delivered to 14 schools in the East Pilbara, including primary schools, secondary schools, and remote community schools. The initiative was delivered to 772 students in those schools. Both pre and post surveys were completed by 367 students.

The findings of this evaluation are that, in 2014 in the East Pilbara, the Food Sensations® initiative achieved its aim of improving students' knowledge, attitudes and skills related to making healthy food choices.

Knowledge and skills

- There was an increase in the proportion of students who know how long to wash hands before cooking, which was statistically significant.
- There was an increase in the proportion of students who know that takeaway foods are high in fat, salt and sugar, which was statistically significant.
- There was an increase in the proportion of students who know that cans of soft drink contain 8-10 teaspoons of sugar, which was statistically significant.
- There was an increase in the proportion of students who know what types of foods to eat 'most of', 'some of' and 'least of' each day, which was statistically significant.
- 95% of students indicated they had learned about healthy food.
- 93% of students indicated they had learned how to cook healthy food.
- 95% of students indicated they had learned how to choose which foods are healthy to eat.
- 86% of students recalled a message from the Food Sensations® classes that was related to health or healthy food. Most predominantly, students recalled the message 'eat healthy food.'

Attitudes

- There was an increase in the proportions of students who believed that healthy food tastes good and is easy to cook, and these increases were statistically significant.

Relevance of the program

- 96% of students reported enjoying participating in the Food Sensations® classes.

  Students were introduced to a variety of healthy foods, which were tasted and liked by most students. Approximately 70% of students said they would make the Food Sensations® foods at home.

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Introduction

In 2014, the Food Sensations® initiative was delivered to 772 students in 14 East Pilbara schools: Baler Primary School; Cassia Primary School; Hedland Senior High School; Jigalong Remote Community School; Marble Bar Primary School; Newman Primary School; Newman Senior High School; Nullagine Primary School; Parnngurr Community School; Port Hedland Primary School; South Hedland Primary School; South Newman Primary School; Strelley Community School and Yandeyarra Remote Community School.

As part of its commitment to providing a community focused, relevant and high quality program, Foodbank WA collected evaluation data at each Food Sensations® session conducted in schools in the East Pilbara. The aim of the evaluation was to assess the relevance and quality of the program, as well as gauge changes in the knowledge, skills and attitudes of all participants.

Participating students were required to complete a pre-program survey and a post-program survey, and the two surveys contained some common questions as a means of measuring changes to students' learning and attitudes. The post-program survey also contained questions relating to the students' knowledge and attitudes as outcomes of the cooking sessions. Both surveys were completed by 367 students, and the post-program survey only was completed by 86 students.

Methodology

The surveys used in 2014 were designed to gather information from participants about their knowledge, skills and attitudes towards healthy foods. All surveys were paper-based and adapted from previous Food Sensations® surveys.

The pre-program survey consisted of 11 multiple choice questions that required students to tick boxes to identify their chosen responses to the questions. The post-program survey included the 11 multiple choice questions from the pre-program survey, some additional multiple choice questions, and two opportunities for students to write word answers to questions. The replication of questions from the pre-program survey in the post-program survey enabled improvements in knowledge, skills and attitudes to be measured in some areas.

Analysis

Quantitative survey data were analysed using Excel and SPSS. Qualitative data were analysed by coding and categorising into themes so that conclusions could be drawn.

For the purposes of being able to measure changes in student learning and attitudes resulting from the Food Sensations® classes that covered nutrition and cooking modules, only the data from 367 students who completed both surveys were compared and analysed.

For the purposes of being able to assess student knowledge and attitudes as outcomes of the cooking modules, the data from 453 students (all students who completed the post-program survey) were analysed.

Findings

The findings will be presented in four sections: demographics; the cooking module; attitudes; knowledge and skills.

Demographics

The tables below show the proportions of male and female students that completed surveys providing data for this report, their ages, and whether they were of Aboriginal and Torres Strait Islander backgrounds.

Table 1: Proportions of students that completed surveys

	Male	**Female**	**No response**
Pre-program and post-program surveys completed (n = 367)	47%	53%	0%
Post-program survey only completed (n = 86)	49%	41%	10%

Table 2: Age distribution of students that completed surveys

Age	**Pre-program and post-program surveys completed**	**Post-program survey only completed**
7	2.1%	0%
8	25%	11.6%
9	16.8%	8.1%

10	16.8%	12.8%
11	13.2%	17.4%
12	13.2%	12.8%
13	6.8%	7.0%
14	3.2%	5.8%
15	1.8%	8.1%
Older than 15	0.7%	2.3%
No response	0.4%	14.1%

Table 3: Proportion of Aboriginal and Torres Strait Islander students that completed survey

	Aboriginal and Torres Strait Islander background	**Non-Aboriginal and Torres Strait Islander background**	**No response**
Pre-program and post-program surveys completed (n = 367)	44%	56%	0%
Post-program survey only completed (n = 86)	56%	32.5%	11.5%

It is noted that not all students completed all questions on the post-program survey.

The cooking module

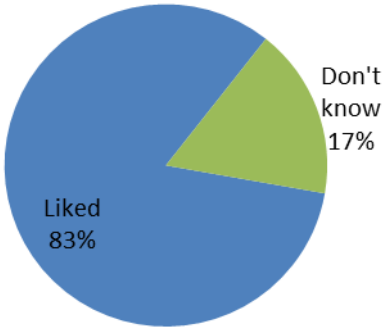
Fourteen recipes were prepared by students across participating schools, although not all recipes were prepared at every school. Some foods were prepared by small numbers of students, while some foods were prepared by larger numbers of students in various schools. The following table indicates how many students prepared each recipe.

Table 4: Numbers of students preparing Food Sensations® foods

Food	Number of students involved in preparation
Beef and vegetable rissoles	35
Toastie flat bread	101
Sweet and sour chicken	45
Lean mean chicken curry	132
Chicken noodle soup	14
Crazy corn dip	280
Bolognaise	93
Spud surprise	208
Pizza muffins	155
Vegie pikelets	78
Fruit pikelets	21
Atomic apple crumble	340
Speedy cheese fittata	334
Rainbow rice	10

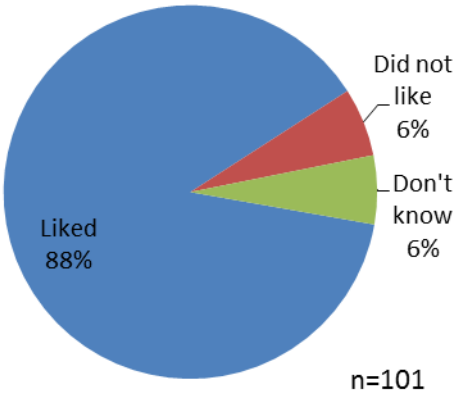
The following figure indicates the proportions of students who liked, did not like, or did not know whether they liked each food.

Beef and vegetable rissoles



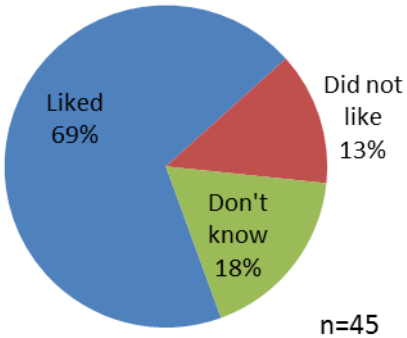
n=35

Toastie flat bread



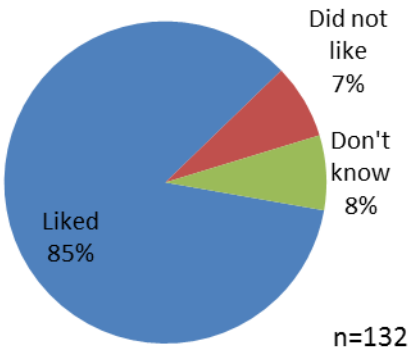
n=101

Sweet and sour chicken



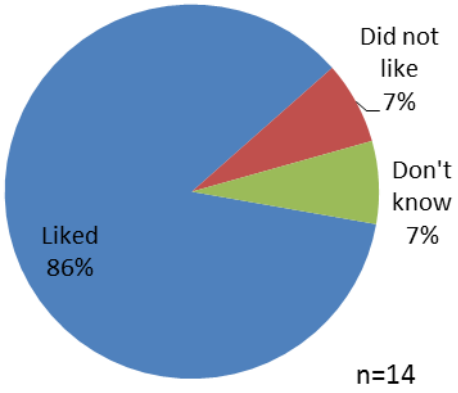
n=45

Lean mean chicken curry

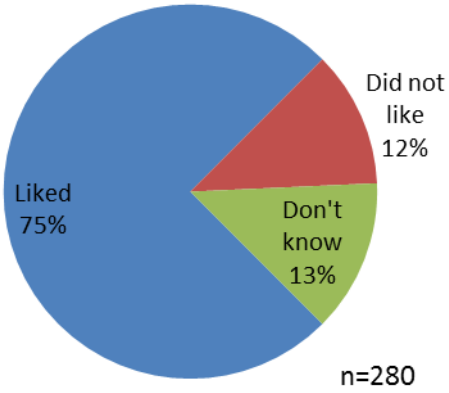


n=132

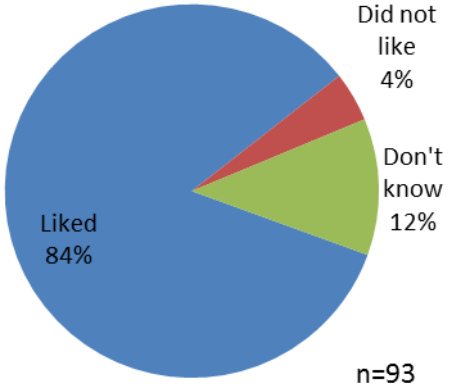
Chicken noodle soup



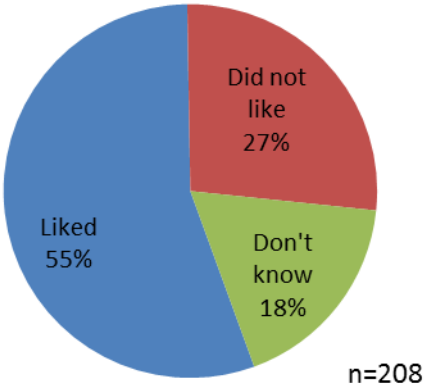
Crazy corn dip



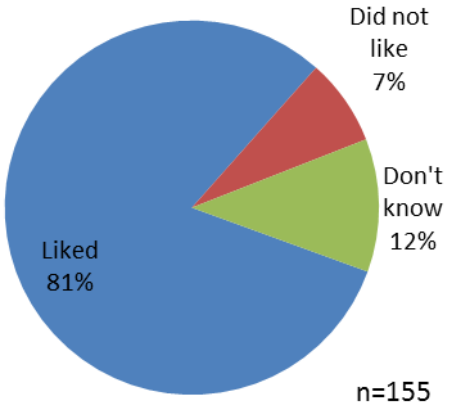
Bolognaise



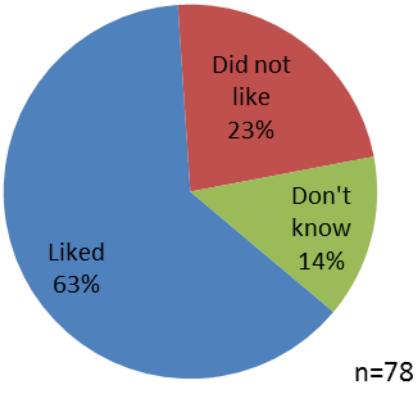
Spud surprise



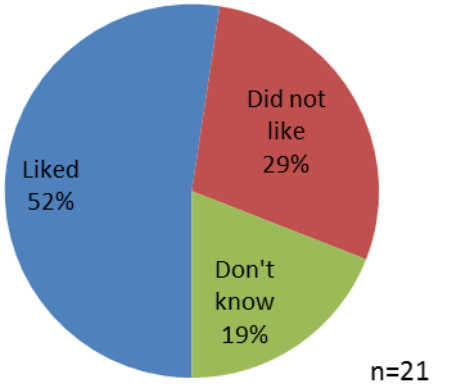
Pizza muffins



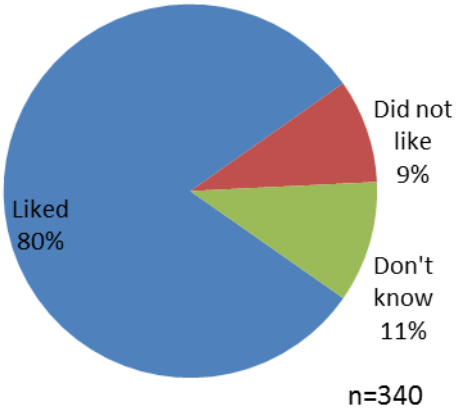
Veggie pikelets



Fruit pikelets



Atomic apple crumble



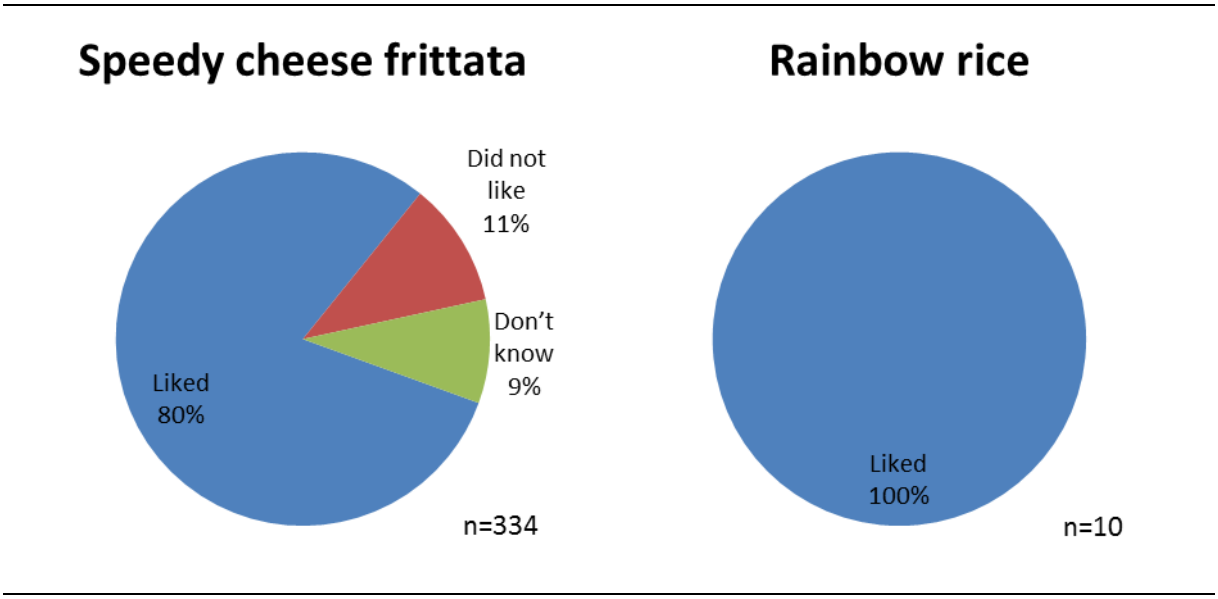


Figure 1: Proportions of students that liked, did not like, or did not know whether they liked each Food Sensations® food

As noted in the figure above, nine foods were liked by 80% or more of students that tasted them: toastie flat bread; beef and vegetable rissoles; lean mean chicken curry; chicken noodle soup; bolognaise; pizza muffins; atomic apple crumble; speedy cheese frittata; and rainbow rice.

There were three foods that were disliked by more than 20% of students: spud surprise; fruit pikelets; and veggie pikelets.

318 students responded to a prompt about whether they would try to make the foods they cooked during the Food Sensations® classes at home. The proportions of students who would, would not, or did not know whether they would cook any of the foods at home is shown in the following figure.

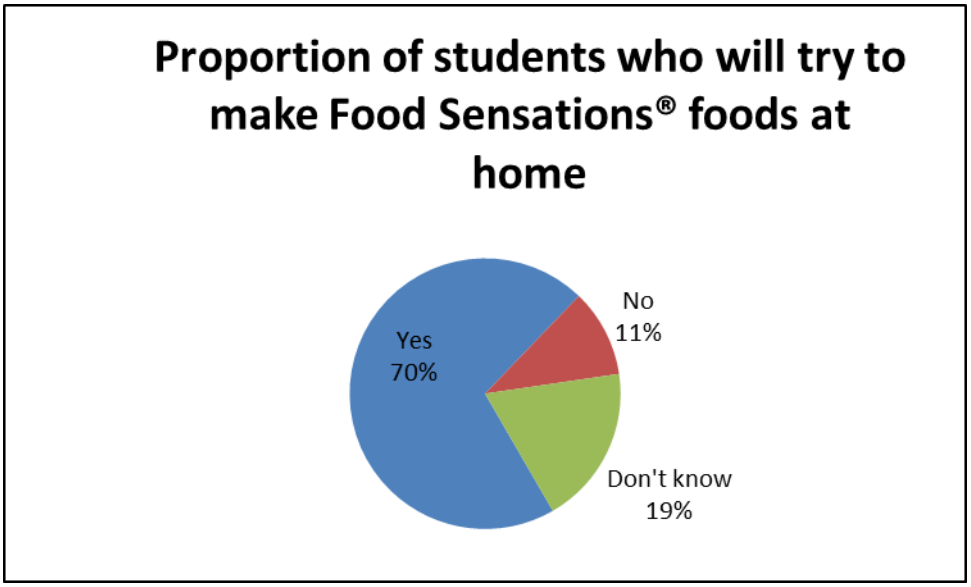


Figure 2: Proportions of students who will, will not, and who did not know whether they would make Food Sensations® foods at home (n = 318)

The following figures provide a clearer indication of which foods students are likely to try to make at home. As different numbers of students made each food during the Food Sensations® classes, proportions of students who will attempt each food are provided.

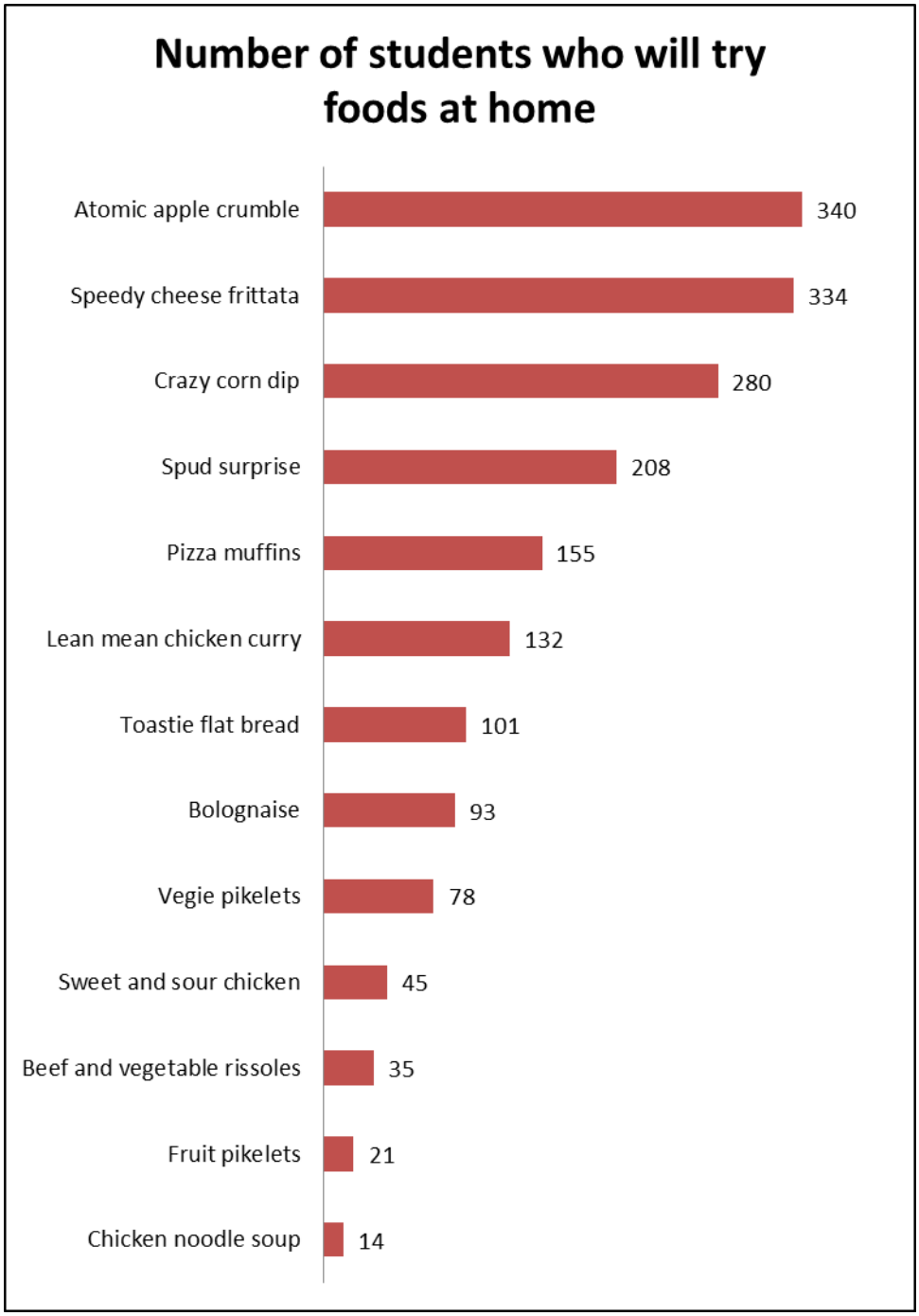


Figure 3: Number of students tasting each Food Sensations® food who will try the food at home

The three most popular foods that students indicated they would make at home were: atomic apple crumble; speedy cheese frittata; and crazy corn dip.

Attitudes

Almost all of the students who attended the Food Sensations® classes enjoyed participating. As shown in the following figure, 96% of students enjoyed taking part, 1% did not enjoy taking part, and 3% of students were unsure.

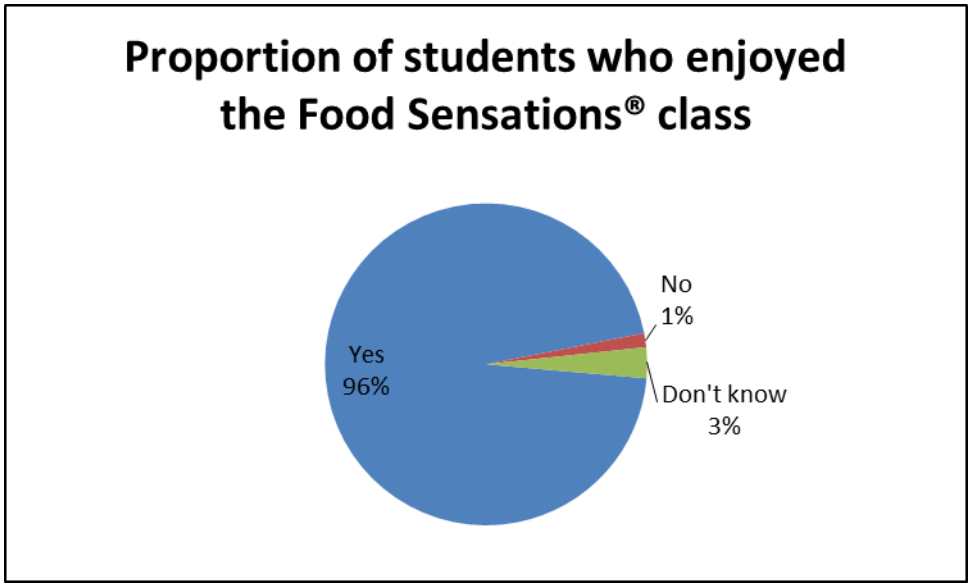


Figure 4: Proportion of students who enjoyed the Food Sensations® class (n=356)

Students were asked to indicate their attitudes about the taste of healthy food and the ease of cooking healthy food at the completion of the cooking module. The proportions of student responses are shown in the following figures.

Students' response to the question 'Do you think healthy food tastes good?'

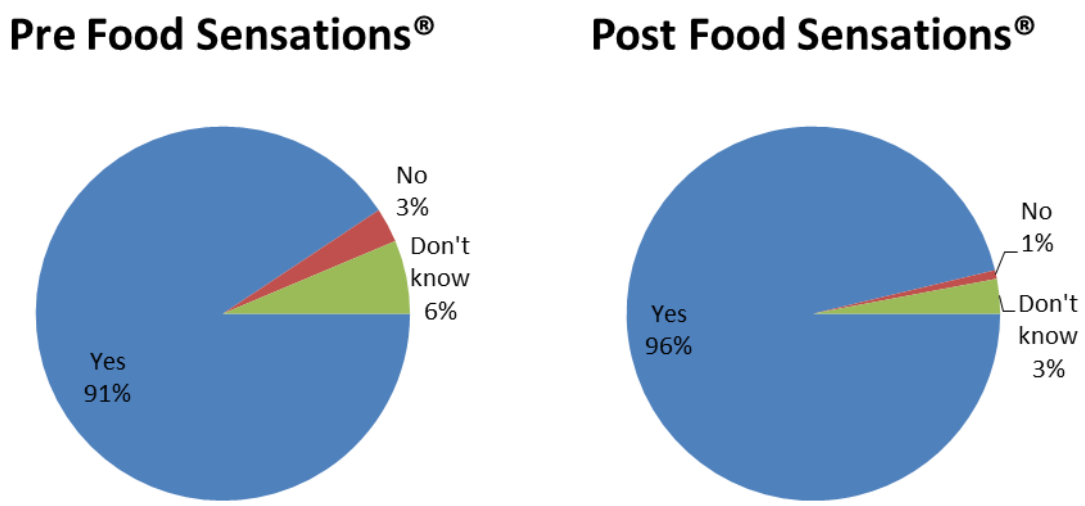


Figure 5: Students' response to the question 'do you think healthy food tastes good?' (n =268)

The result is statistically significant. ($p<0.05$)

Students' response to the question 'Do you think healthy food is easy to cook?'

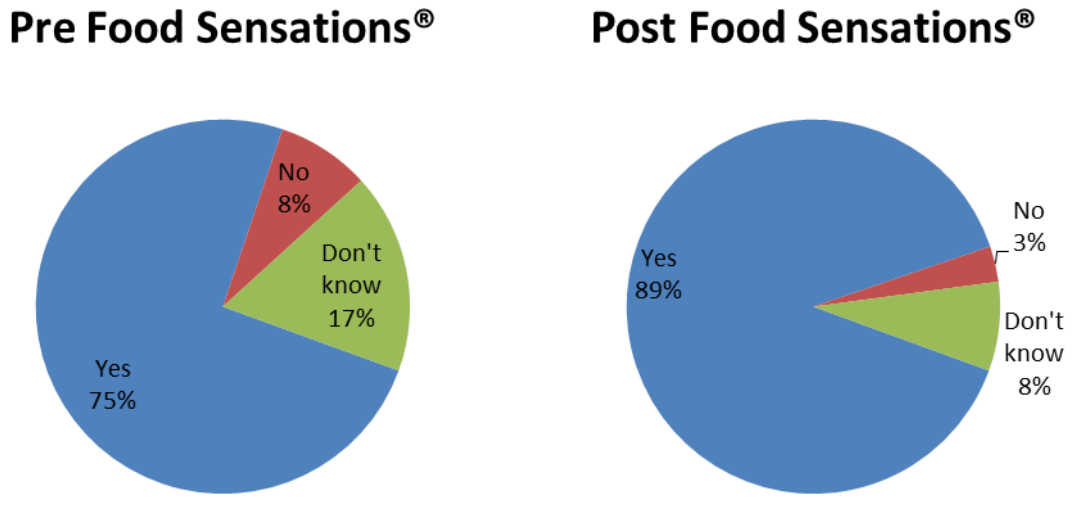


Figure 6: Students' response to the question 'do you think healthy food is easy to cook?' (n=260)

The result is statistically significant. ($p<0.05$)

Knowledge and skills

Knowledge about how long to wash hands before cooking (20 seconds)

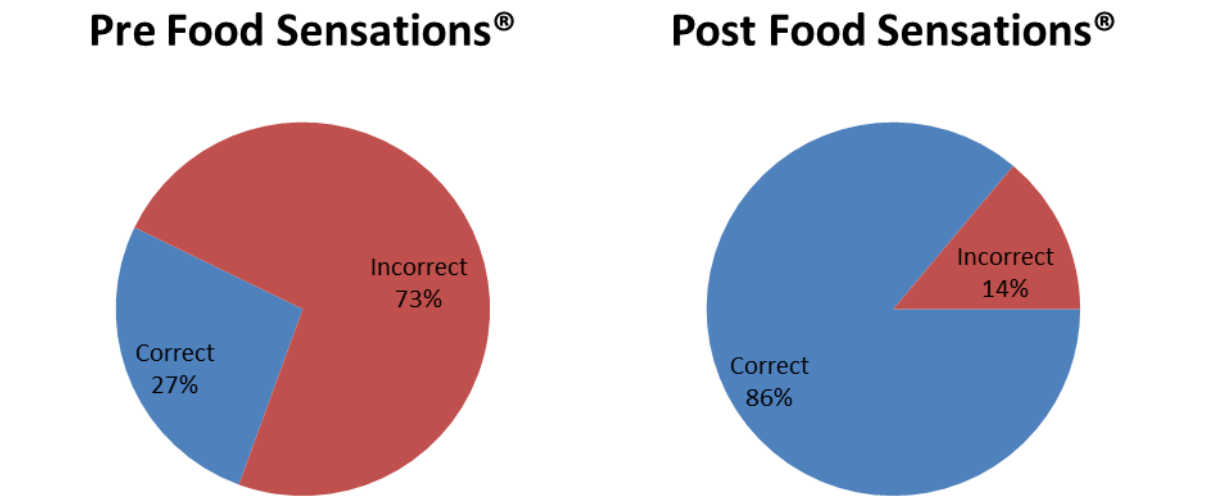


Figure 7: Students' knowledge of how long to wash hands before cooking (n=259)

The result is statistically significant. ($p<0.05$)

Knowledge that takeaway foods are high in fat, salt and sugar

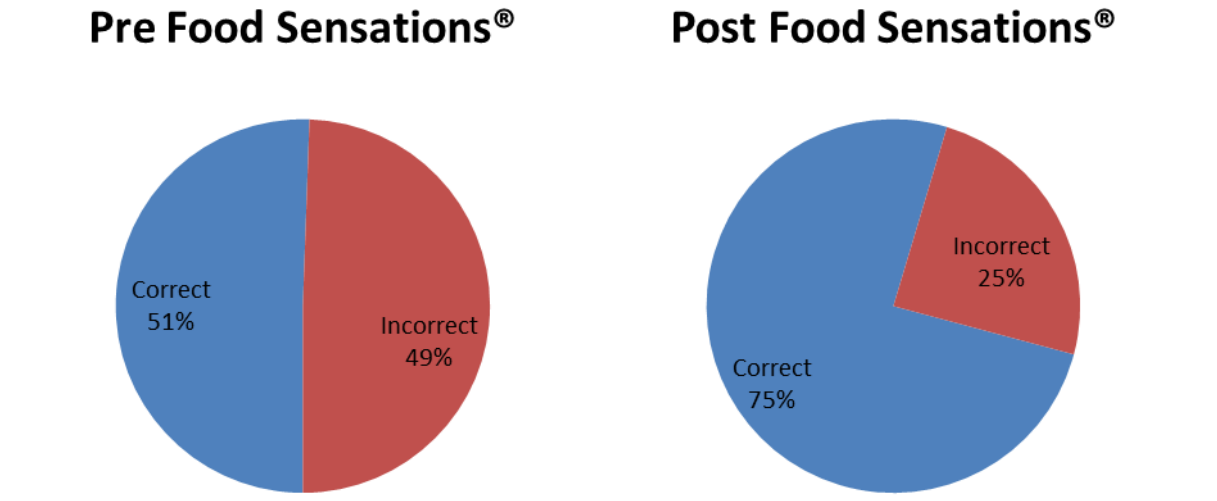


Figure 8: Students' knowledge that takeaway foods are high in fat, salt and sugar (n=265)

The result is statistically significant. ($p<0.05$)

Knowledge of the amount of sugar in a can of soft drink (8-10 teaspoons)

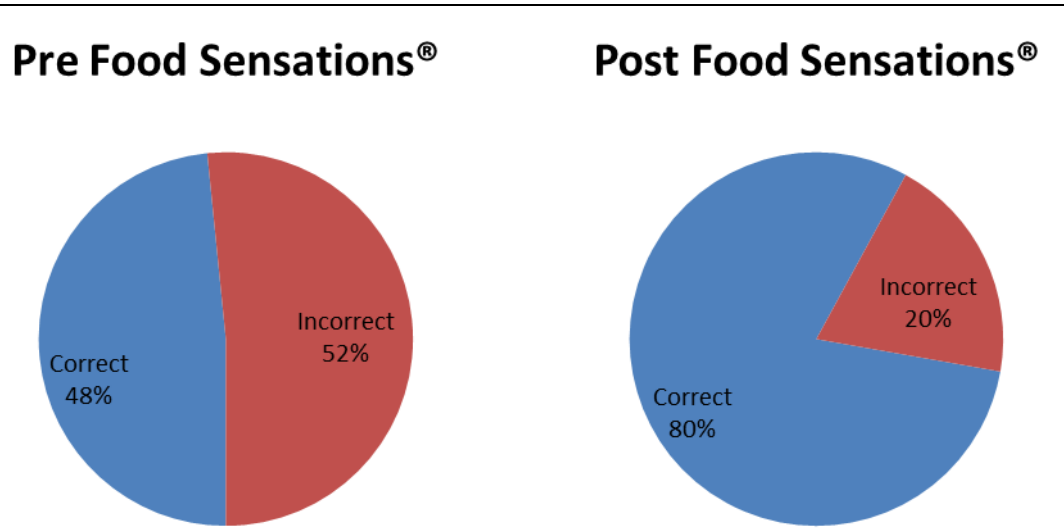


Figure 9: Students' knowledge of the amount of sugar in a can of soft drink (n=252)

The result is statistically significant. ($p<0.05$)

The following figure shows the students' knowledge about whether to each most, some, or least of various foods each day.

Knowledge that you should eat vegetables 'most of' each day

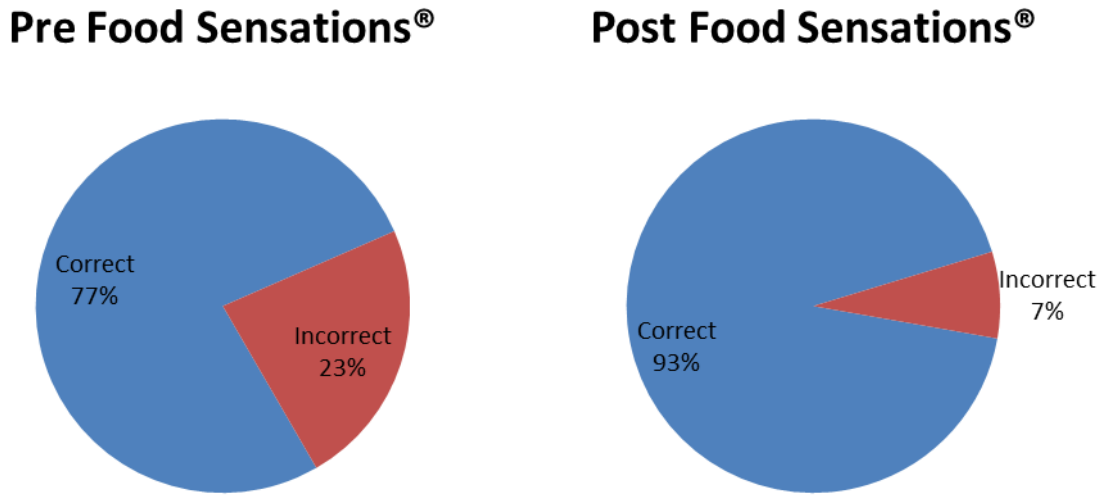


Figure 10: Students' knowledge that you should eat vegetables 'most of' each day (n=254)

The result is statistically significant. ($p<0.05$)

Knowledge that you should eat fruit 'most of' each day

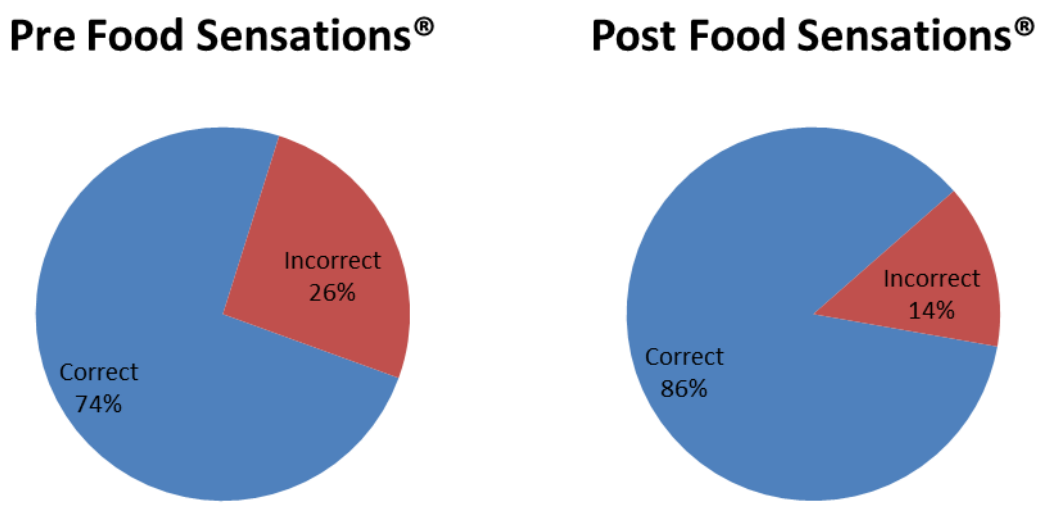


Figure 11: Students' knowledge that you should eat fruit 'most of' each day (n=253)

The result is statistically significant. ($p<0.05$)

Knowledge that you should drink milk 'some of' each day

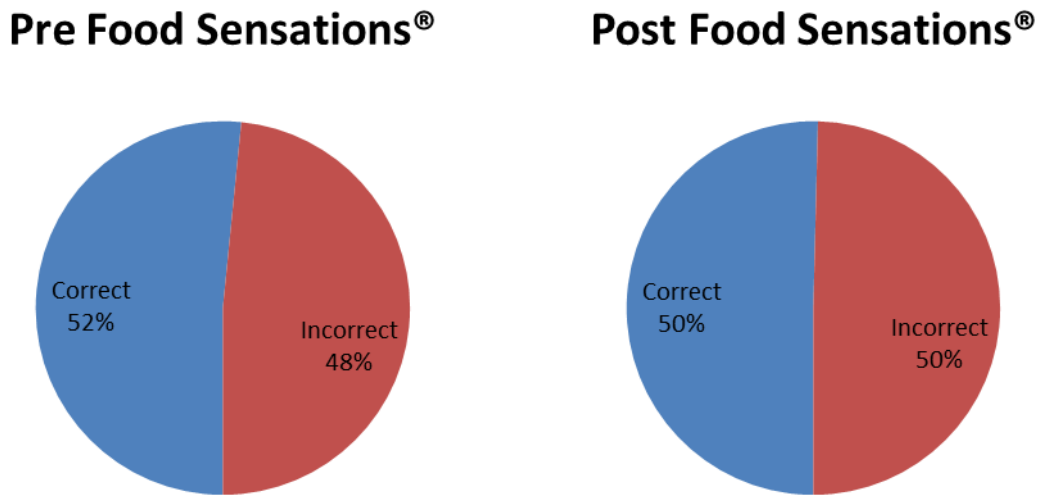


Figure 12: Students' knowledge that you should drink milk 'some of' each day (n=254)

The result is not statistically significant.

Knowledge that you should eat meat 'some of' each day

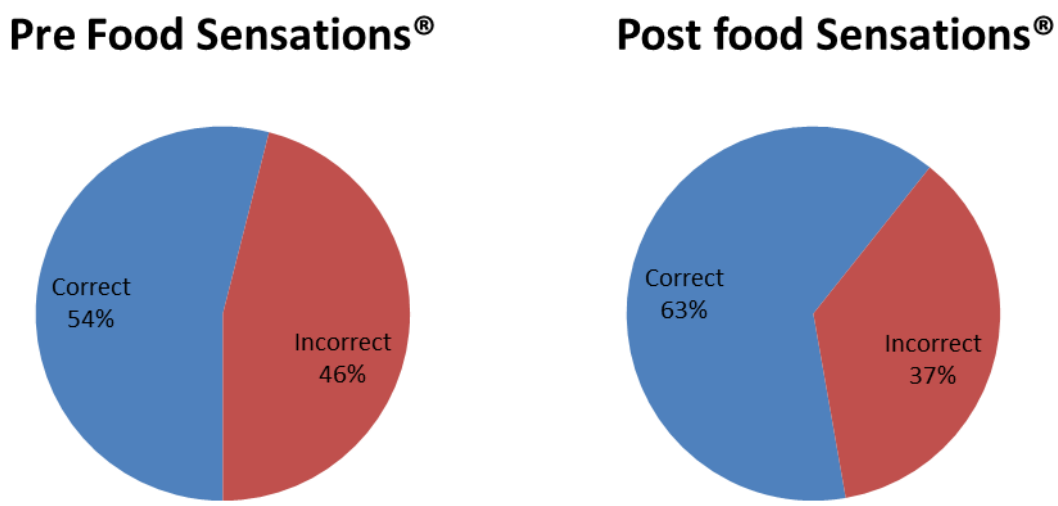


Figure 13: Students' knowledge that you should eat meat 'some of' each day (n=252)

The result is statistically significant. ($p<0.05$)

Knowledge that you should eat bread 'most of' each day

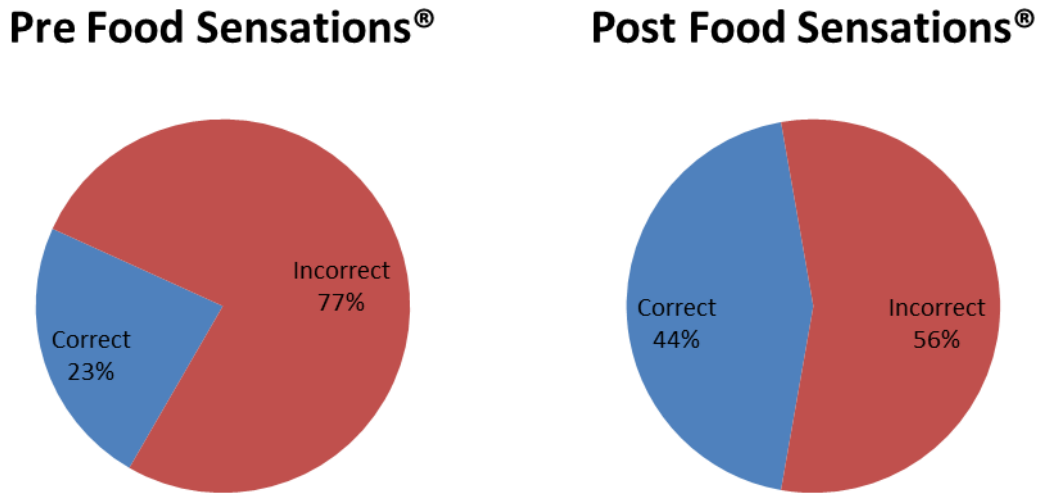


Figure 14: Students' knowledge that you should eat bread 'most of' each day (n=243)

The result is statistically significant. ($p<0.05$)

Knowledge that you should eat hot chips 'least' each day

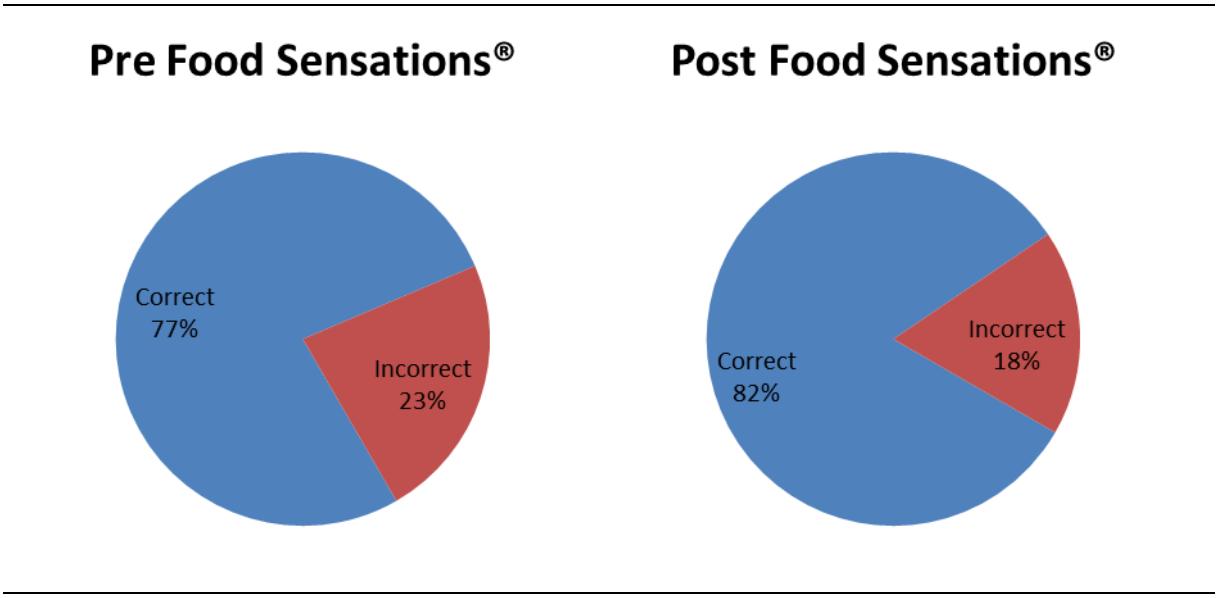


Figure 15: Students' knowledge that you should eat hot chips 'least of' each day (n=247)

The result is statistically significant. ($p<0.05$)

Student learning about nutrition through the Food Sensations® class

Of the group of 334 students who responded to questions about their learning from the Food Sensations® classes,

- 95% of students indicated they had learned about healthy food.
- 93% of students indicated they had learned how to cook healthy food.
- 95% of students indicated they had learned how to choose which foods are healthy to eat.

In particular, of the group of Aboriginal and/or Torres Strait Islander students who responded to questions about their learning from the the Food Sensations® classes,

- 94% of students indicated they had learned about healthy food.
- 94% of students indicated they had learned how to cook healthy food.
- 92% of students indicated they had learned how to choose which foods are healthy to eat.

Student learning about Food Sensations® healthy food messages

At the completion of the Food Sensations® classes, students were asked to recall the main health message they remembered from their participation. Although not all students were able to identify a healthy food message, 89% of students surveyed were able to state a health message they had retained. The following figure indicates the range of messages that were retained by students and the proportion of students retaining each message. Some student comments were not health messages but merely words, and some comments were unrelated to the question. These comments have been coded in the 'miscellaneous' category.

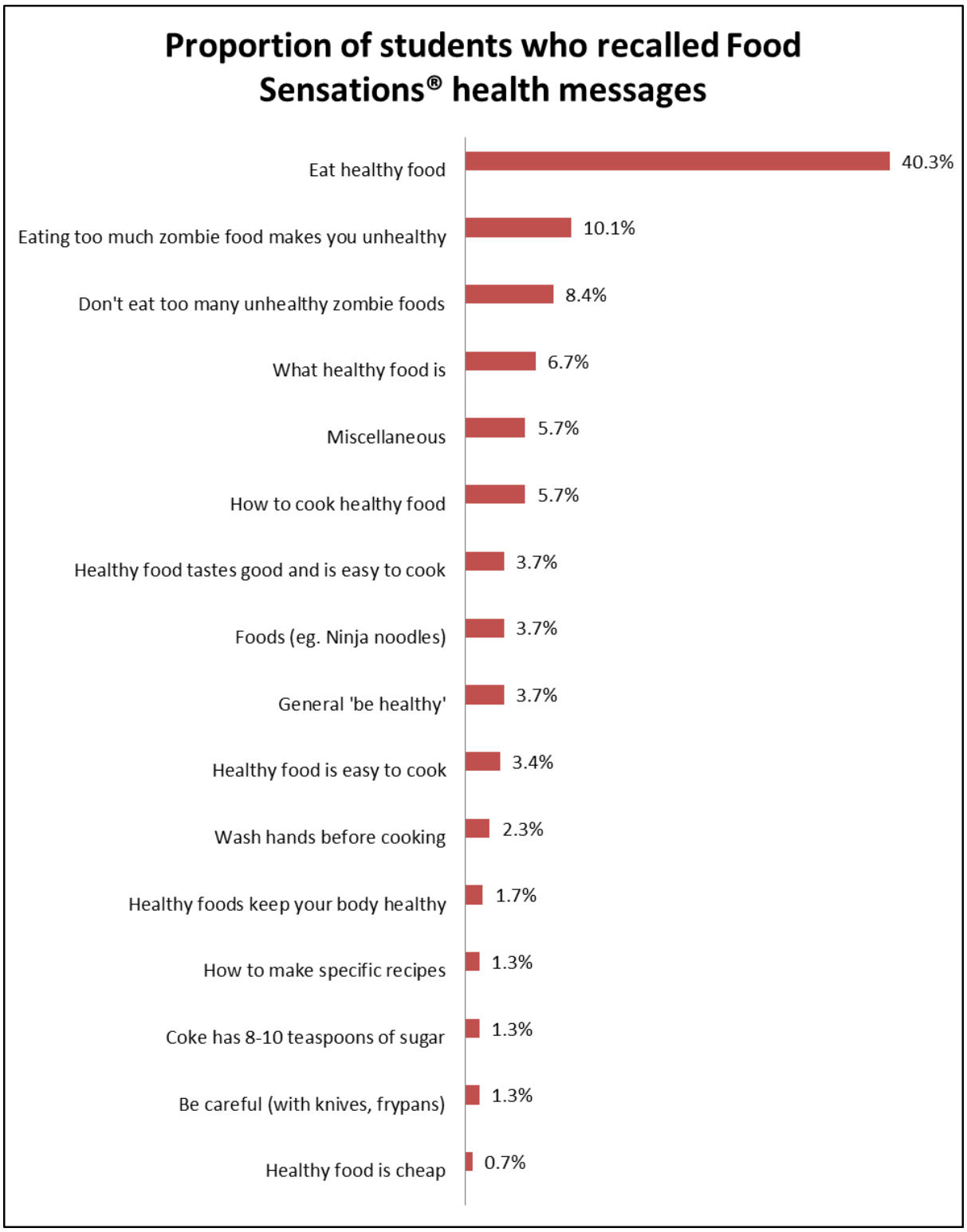


Figure 16: Proportion of students recalling various Food Sensations® health messages (n=298)

Data from the figure above indicates that 85.7% of students were able to recall a message from the Food Sensations® classes that related to health or healthy food. The most predominant message that students remembered from the classes was to 'eat healthy food'.

Conclusion and recommendations

In 2014, the Food Sensations® initiative was delivered to 14 schools in the East Pilbara, including primary schools, secondary schools, community schools, and remote community schools. The initiative was delivered to 772 students in those schools. Both pre and post surveys were completed by 367 students.

The findings of this evaluation are that, in 2014 in the East Pilbara, the Food Sensations® initiative achieved its aim of improving students' knowledge, attitudes and skills related to making healthy food choices.

Almost all students (96%) enjoyed participating in the Food Sensations® classes. The majority of students that cooked each food in the Food Sensations® classes liked them, with 70% of students indicating they would try to make the foods at home.

The classes resulted in an increase in the proportions of students who believed that healthy food tastes good and is easy to cook, and these increases were statistically significant.

There was a substantial improvement in students' knowledge about how long to wash hands before cooking, that takeaway foods are high in fat, salt and sugar, and that cans of soft drink contain 8-10 teaspoons of sugar. That improvement in knowledge was statistically significant.

The improvement in students' knowledge about the types of foods that should be eaten 'most of, 'some of' and 'least of' each day was also statistically significant (except milk).

At the conclusion of the Food Sensations® classes, 95% of students indicated they had learned about healthy food, 93% of students indicated they had learned how to cook healthy food, and 95% of students indicated they had learned how to choose which foods are healthy to eat. The statistics for Aboriginal and Torres Strait Islander students were on a par with all students. In addition, approximately 86% of students were able to recall a message from the Food Sensations® classes that was related to health or healthy food. Most predominantly, students recalled the message 'eat healthy food.'

It is recommended that the Food Sensations® initiative continue and be supported financially in the East Pilbara. Where possible, the initiative should be expanded to reach more schools and more students.