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Objective

To significantly increase fruit and vegetable consumption.

Introduction

In 2005, over 3,000 adolescents across the Barwon-South Western region of Victoria completed a knowledge, attitude and behavioural survey. It contained questions about nutrition, physical activity and body image. Schools also completed a School Environmental Audit that assessed indicators of curriculum, policies, canteens, indoor and outdoor facilities, and staff perceptions of healthy eating and physical activity within their school. The baseline data (2005) relating to the fruit and vegetable objective of the action plan showed:

- 93% of students had 1-2 serves of fruit everyday
- 80% of students had 1-3 serves of vegetables everyday

The purpose of this report is to provide an overview of the strategies used towards achieving the fruit and vegetable objective of the action plan within the five intervention schools. Intervention activities are outlined in the project’s action plan (see Implementation Report 2 – Action Plan) and were typically developed collaboratively between the Project Coordinator, School Project Officers, Ambassadors, staff and Principals. Baseline data helped to inform the interventions.

Summary of intervention strategies

The strategies for the Fruit and Vegetable objective involved work in two main areas, 1) the canteen and 2) the development and implementation of a number of and activities used to raise awareness of the overall project.

1. Canteen

The It’s Your Move! School Project Officers worked in collaboration with Canteen Managers to change or implement the availability, promotion and price of fruit and vegetables.

Across all five schools, the canteen provided students with seasonal fruit (e.g. watermelon pieces and fruit salads) but limited vegetable options. In the initial stages of the project these items were subsidised by the sale of unhealthier food items. In 2007, the price fruit and vegetables marginally increased with the implementation of the Victorian Government ‘Go for your life’ Healthy...
Canteen Kit requirements. Canteen Managers needed to source additional funds to support the canteen as a result of the removal of sweet drinks.

One of the simpler strategies used to promote fruit in particular, was the display of mixed fruit portions on the counter of the canteen, so that students were aware of its availability and cost.

Strategies to increase fruit and vegetables in the canteen were incorporated into the Food @ School objective (see Implementation Report 9 – Food @ School).

2. Programs and Activities

A number of awareness raising activities were conducted across the five intervention schools over the course of the project. Fruit and vegetable promotion was an easy way to raise awareness of the project and this particular objective. It was also one of the first objectives to be implemented while baseline data collection was taking place across the five schools, until all school had completed this process.

Activities included the use of apple slinky machine, the Market Fresh Program, establishing a vegetable garden, Sushi, Fresh Juice, Nude Food and Soup Days. The activities stemmed from discussions or classroom activities, but followed a similar formula in the course of implementation.

2.1 Overall program and activity establishment process

Initially, the School Project Officer, the Ambassadors and students would decide on a particular idea and a date to conduct the activity. They then developed a plan, which included a list of the tasks that needed to be covered for the activity to take place. These included:

- gaining approval from the Principal or Assistant Principal;
- checking the school calendar to see if all of the students were going to be in the school on the chosen date;
- finding a suitable venue and checking its availability;
- researching the costs associated with purchasing the foods/products;
- developing a budget;
- writing letters to parents – notifying them of the day/objectives and costs
- asking for volunteers (in some cases);
- marketing the activity or the day to staff and students through assemblies, posters and/or school newsletters;
- pre-ordering the food and determining catering requirements; and,
- taking food orders from staff and students and collecting/processing the money.
On the day of the activity, the School Project Officer relied on other staff and students (mainly the Ambassadors who were taken out of classes for the morning or the day) to effectively manage the tasks that had been assigned to them. This involved a process where ‘stations’ were often set up in the designated area and that a particular person was responsible for. At the end of the activity, cleaning up was often factored into the management, with additional rubbish bins being made available and staff and students staying behind to tidy up.

Early on in the project, this process took a couple of weeks to accomplish as not all tasks were considered. This meant that there were times when the School Project Officer or the students had to do some back tracking. By the end of the project, the process was so well run that activities and days such as these were conducted with little fuss, good support and integrated into broader events (see Implementation Report 4 - Social Marketing: Health and Wellbeing Days).

2.2 Apple Slinky Machine

In the first term of the project, there were a number of commitments the schools had to fulfil for evaluation purposes, so there was little time or capacity to commence coordinated approaches to the intervention objectives. As each school completed the evaluation process, the School Project Officers were looking for small scale activities that could start to inform the school community about the project and its intentions. An early activity was the purchase of an apple slinky machine for each school (figure 1). The slinky machine required spiking an apple onto the prong and turning the handle. This cores and coils the apple (figure 2). The slinky’s were used to raise awareness of the project and to encourage students to eat fruit. How they were used varied among the schools.

Figure 1: Picture of an apple slinky machine

Figure 2: A slinky apple
For the majority of the schools, the apple slinky machine was initially managed by the School Project Officer, usually in their classes or offering students the opportunity to bring their own apple and use it during recess and lunchtime. Some of the School Project Officers used their Ambassadors on a rotating roster to run the machine so that students could use it. This was problematic as the Ambassadors did not always turn up. Additionally it was usually held in a classroom in which a teacher had to supervise.

Some School Project Officers approached their canteen staff to see if it was possible for the apple slinky to be integrated into their food service. A few piloted the machine, but soon found that there the time required to slinky the apples slowed the purchasing process down. At one school, the Canteen Manager could see that students were prepared to wait, so the Ambassadors were given space specifically to slinky the apples that were brought from home. However, because the Ambassadors did not have the required food safety requirements or did not always show-up for their shift, the process was not sustainable. The apple slinky machine was returned to the School Project Officer and was made available in other activities such as at the end of the home economics classes; during Health and Wellbeing Days and at classroom celebrations (see Implementation Report 4 - Social Marketing).

A majority of the apples were brought from home or were obtained from local apple orchards or major supermarket chains. Apples that were purchased in bulk were sold at cost (50-80 cents per apple). A hard pear could also be used instead of an apple.

The apple slinky machine could be used as a fundraising activity. One school sold over 20 machines to staff in the early stage of the project because they were not commonly available in retail stores.

**Case Study Christian College**

The School Project Officer at Christian College decided the best way to get information out about the project and get student involvement was to use the apple slinky as an awareness raising activity through the home group, for Years 7-9 and the primary school students. A weekly home group roster for the apply slinky machine was developed and presented to staff who agreed to support this activity.

The process involved the home room teacher collecting stickers for students’ diaries from the school receptionists. The stickers served as a reminder to students to bring an apple to be slinkied. (The diary is an important means of communicating with parents on an ongoing basis as they did not have a school newsletter). The School Project Officer would email the teacher to remind them of their rostered week and the process involved. This occurred on a Thursday so that on Friday the teacher would collect the slinky machine and take it home at the weekend to practice if required. On Monday students could slinky their apples before recess or at lunchtime (for the primary aged
children during snack time). It was noted by some of the teachers that a few children brought two apples as the week went on.

At the end of the week, the apple slinky machine would move on to the next teacher rostered. There were times where this process did break down, particularly if a teacher was absent on the Thursday or Friday.

2.3 Market Fresh Program
The Market Fresh Program, conducted by the Melbourne Market Authority, aims to educate children about the importance of fruit and vegetables in their diet and the production of fruit and vegetables (www.marketfresh.com.au).

The program covered a range of topics including:
- Seasonality
- How fruit and vegetables are grown
- The uses of fruit and vegetables
- The importance of eating fruit and vegetables daily

The program also involved the tasting of seasonal produce. Four of the five intervention schools the Market Fresh Program come into their school. The program was quite intensive. On the scheduled day the team from Market Fresh would arrive at the school with a range of produce for the tasting session which required preparation. The School Project Officer, teachers of the classes involved and the Ambassadors prepared the fruit and vegetables which took at least 30 minutes to set up (figure 3). Classes came into the venue (usually the gym), where they watched a video and were given pamphlets about fruits and vegetables and recipe ideas. Students were then encouraged to try the fruits and vegetables available (figure 4). During the taste session the School Project Officers and Ambassadors overheard many students say that they had not tried some of the produce before.

Figure 3: Staff and Ambassadors preparing fruits and vegetables
Figure 4: Students sampling fruit and vegetables with the Market Fresh Program
The cost of this program was $150 and catered for up to 230 students (often conducted over two groups in the school). It took about an hour to complete. One of the schools shared the activity with the local primary school.

2.4 Establishment of a vegetable garden
In 2006, the School Project Officer at Saint Ignatius College applied for and received funds of $1500 from the Commonwealth Government’s Healthy Eating and Physical Activity Grant to construct a vegetable garden. The garden was located outside the home economics classroom making it easily accessed for use in this class. A budget and an expected timeline were provided to the Principal as approval was needed prior to any building taking place. The School Project Officer approached the VET (Vocational Education and Training) and VCAL (Victorian Certificate of Applied Learning) teachers to see if they could assist in the building and maintenance of the vegetable garden. They indicated that they could support the building of the planter box, (which would wrap around two sides of the building) and the initial planting of herbs and vegetables. From there it would be a shared responsibility between the three groups to maintain the garden.

The vegetable garden was completed during the year and the plants were soon established for cooking purposes.

Figure 5: Photos of the vegetable garden

Over time, the garden continued to produce herbs, but the vegetables have struggled due to the lack of water provided to the garden from drought conditions or from council enforced water conditions. The School Project Officer continued to look for ways to provide regular water to the vegetable garden.

2.5 Sushi Days
In 2006 and 2007 Sushi Days were conducted twice per year across the five intervention schools. These days relied on a pre-ordering system and distribution which were conducted by teachers and the Ambassadors. Once all orders were paid for, collated and recorded, the sushi was ordered at least a couple of days in advance. On the day, the School Project Officer went and
picked up the sushi from a local Asian restaurant close to the school. The Ambassadors and teachers distributed the sushi from a designated classroom. On average, about 60 rolls of sushi were consumed by students and teachers. Since these days, the canteens at the schools have started to stock small amounts of sushi for students and staff.

2.6 Nude Food Days
Nude Food Days were conducted at Christian College as a result of the Science teachers becoming disgruntled with the packaging and other rubbish accumulating in the school from foods and drinks brought from home. In 2007, a Science teacher approached the School Project Officer to work collaboratively to solve the rubbish problem. They came up with the idea of Nude Food Days, where students would have to bring their food to school without the packaging. It was turned into a competition so that the home group with the least amount of rubbish would receive a trophy and a prize. Letters were sent home to the parents about the Nude Food Days. The Ambassadors were involved and assessed the amount (by weight) of rubbish generated by each class (or lack of it) to declare the winner.

Since its initial inception, a Nude Food Day has been conducted once a term, with eight being conducted over the course of the project. The School Project Officer commented that a number of parents and students are now aware of better ways of packaging food and providing healthier contents in lunchboxes. Students are also more aware that healthier options tend to have less packaging.

2.7 Juice Days
At Christian College, the School Project Officer used their class to conduct a Juice Day as part of their program to raise money for one of the school’s charities. The School Project Officer approached one of the local grocers, who donated oranges. The cups were donated by the school’s science laboratory, two juicers were used from the home economics classrooms and three juicers were loaned from other staff. In class, students were placed in groups and prepared various juices for staff and teachers. Juice was sold for $1 per cup, with 135 sold over the course of lunchtime. Overall, staff and students enjoyed the availability of the juice and to support a good cause.

2.8 Soup Days
Soup Days conducted were conducted across two schools, each adopting a similar process. Christian College had 4 Soup Days and so did Newcomb Secondary College. At one of these schools the School Project Officer prepared large pots of soup in the time allocated for It’s Your Move! before lunchtime and the Ambassadors distributed the soup to the staff and students. They sold approximately 40 cups of soup for $1 each. The work required to conduct Soup Days was not sustainable.
Table 1: Summary of ‘Food Days’ conducted for ‘It’s Your Move!’ promoting fruit and vegetables

<table>
<thead>
<tr>
<th>Activity</th>
<th>Conducted in intervention schools</th>
<th>Number of students organising</th>
<th>Number of foods or drinks sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soup Day</td>
<td>2 schools x 4 times</td>
<td>6 – 8</td>
<td>~ 40</td>
</tr>
<tr>
<td>Juice Day</td>
<td>1 school x 2 times</td>
<td>6 – 8</td>
<td>~ 135</td>
</tr>
<tr>
<td>Nude Food Day</td>
<td>1 school x 8 times</td>
<td>6 – 8</td>
<td>N/A</td>
</tr>
<tr>
<td>Sushi Day</td>
<td>5 schools x 2 times</td>
<td>6 – 8</td>
<td>~ 60</td>
</tr>
</tbody>
</table>

Additionally, there were a number of smaller activities conducted within each of the intervention schools e.g. Smoothie and Icy Pole Days.

3. **Parent information**

Information pertaining to fruit and vegetables was often included in school newsletters written by the School Project Officers (see Implementation Report 4 – Social Marketing).

Additionally, the topic was covered in the event with Rosemary Stanton which has been reported on in Implementation Report 9 – Food @ School.

4. **Curriculum**

A number of curriculum activities were conducted over the duration of the project. One in particular that related to the fruit and vegetable objective was a set of lessons developed by the School Project Officer at Christian College. Students were required to design a *Freaky Fruit / Fitness Person*. Students were given a design brief to create a three dimensional figure (exercising, fitness freak) using 2 fruits and 5 vegetables. They had two weeks to complete the task. At the end of the unit, students were asked to present their figure, which was assessed by teacher and other students.

**Key Learnings and Recommendations**

The canteens were influenced by a number of forces within the schools. These forces included the pressures of running a business; implementation of the ‘Go for your life’ Healthy Canteen Kit; the Food @ School Guidelines (see Implementation Report 9 - Food @ School); and, ultimately what the students and staff were willing to purchase. Other factors also affected what the canteen was prepared to sell such as pricing (determined by inflating the cost of unhealthy food); seasonality of fruits and vegetables; short shelf life of fresh produce; and, that fruits and vegetables are rarely purchased if they are not cut up (e.g. increasing time spent in food preparation by canteen staff).
At the beginning of the project, conducting awareness raising activities were an important part of engaging with the students and staff. Initially they were time consuming and relied on a process that was refined over the duration of the project. Towards the end, students were able to plan, budget, organise activities, and learn other skills such as Occupational Health and Safety/Food Safety requirements (www.education.vic.gov.au). However, having Ambassadors involved usually meant taking them out of classes to organise the activity. They also had to sacrifice a number of hours during their lunch to complete assigned tasks.

There was a process to organising activities and the Food Days. This process needed to be followed to ensure that people were aware of tasks. The process normally took a couple of weeks. Venues needed to be food friendly, with good options for spills and rubbish disposal so the gym was not always an appropriate venue.

Activities like these can raise the awareness and engage people but can burn up a lot of time and often receive little recognition from others (including staff). Some of the School Project Officers noted that not many staff would acknowledge the time and effort required to put on healthy activities/lunches.

Curriculum programs needed to be integrated into the semester and compliant with the required progression points/assessment of the Victorian Essential Learning Standards (www.vcaa.vic.gov.au). There were a number of occasions when programs would complement the intended units of work, which made it easier for the School Project Officer. An example of this was the vegetable garden, where the home economics teacher (who was the School Project Officer) was able to utilise the skills and financial resources to build a garden to support the teachings of the classroom. This garden has now become a part of the curriculum program with all year levels learning to use and maintain the herbs and vegetables.

Parent information, needed to be placed in the school newsletter regularly; including information on: promoting the 2 fruit & 5 vegetables message; simple recipes; and pamphlets and handouts available from programs such as Market Fresh. If the school did not have a regular newsletter, information was distributed via email, through a school email list.
Conclusion

Overall, this objective was eventually subsumed into the bigger Food @ School objective due to the development of the Food @ School Guidelines and the need to integrate all of the activities into the existing support and structures within the project timeframe. This meant that the School Project Officers needed to focus on the development of a Food @ School Policy which included awareness raising activities to promote larger scale changes. The fruit and vegetable objective was therefore used mainly for awareness raising and promoting the project.

Organising these activities required a lot of time, effort and energy from the staff and students. This effort was usually well received and supported on the day by other staff and students, and this was essential to the overall success. The School Project Officers acknowledged that these days were integral to the delivery of healthy eating programs, but at a school level, they were hard to implement.

Furthermore, there were a number of changes that were being implemented within the project and as part of the Victorian Governments, ‘Go for your life’ Health Canteen Kit. One of the requirements of the kit was to restrict the sales of ‘Occasional’ (red foods). One of the challenges with this requirement was that a majority of the canteens were inflating the ‘occasional’ foods to ensure that the healthier options were sold at cost. When the canteens implemented the changes, the schools experienced a ‘dip’ in the revenue and had to identify alternative sources of funds – which was difficult. At the end of the intervention period, there was no clear solution to this issue and further research would be required to find a way forward.