

# 10,000 Steps Working Paper Series

## Paper 10: 10,000 Steps in Primary Schools: Survey of Primary School Providers

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### **EXECUTIVE SUMMARY**

This report details the findings of an online survey of 10,000 Steps Providers who may have implemented the 10,000 Steps program and/ or its resources into a primary school environment. This study assesses the applicability of the current 10,000 Steps program and its resources in the primary school environment. The findings of this study will guide the development of future 10,000 Steps resources for primary schools.

### 10,000 Steps primary school Providers commented on the use of 10,000 Steps program and resources:

- Approximately 43% of respondents had previously used the 10,000 Steps program or resources.
- Of those that had used the 10,000 Steps program and resources:
  - Almost 34% of the Providers implemented the program and/ or resources with the main objective to provide an opportunity for students to participate in physical activity.
  - An estimated 67% of primary school Providers targeted Year 5 students, with almost 56% and almost 44% targeting Year 7 and Year 6 students respectively.
  - More than 55% of the 10,000 Steps programs/initiatives implemented by the primary schools were conducted for five weeks or longer.
  - Over 66% of primary schools incorporated 10,000 Steps and its resources into the school curriculum and 80% believed that the primary school and students would benefit from a curriculum based 10,000 Steps program.
- o 100% of respondents used pedometers within the primary school environment.
- Of those that had not used the 10,000 Steps program and resources:
  - o 40% did not use the 10,000 Steps program and resources due to lack of time.
  - $\circ\,$  90% said they would consider using 10,000 Steps in their primary school in the future.
- 27% of the primary schools had implemented other physical activity and sun safety initiatives, with an estimated 14% also implementing nutrition initiatives and almost 11% implementing mental health initiatives.
- Almost 78% of the primary schools promote active travel, with only 6% using 10,000 Steps resources to do so.

### 10,000 Steps primary school Providers commented on the relevance and usefulness of the 10,000 Steps resources in the primary school environment:

- The most relevant and useful 10,000 Steps resources in the primary school environment were the 10,000 Steps Challenge, the ExtraStep Challenge, the A to Z on Nutrition and the A to Z on Physical Activity.
- The library loan scheme was not identified as being overly relevant, but was found to be very useful or useful by Providers.
- A large proportion of the Providers did not use the other 10,000 Steps resources in the primary school environment.

#### From the respondents it was found that:

- 60% of 10,000 Steps primary school Providers were teachers within the primary schools.
- Almost 45% of the primary schools had between 201 and 400 students currently enrolled.
- Almost 56% of the primary schools were located in the state of Queensland.

### Based on the results of the online survey, the following recommendations have been suggested:

- Customise and simplify the online Step Log for ease of use by primary-aged students.
- Develop customised posters to motivate and prompt primary students to continue measuring and increasing their physical activity level.
- Consider developing 10,000 Steps resources to promote active travel in the primary school environment.
- Further investigate the development of curriculum based 10,000 Steps resources.

### BACKGROUND

10,000 Steps Rockhampton was Australia's first 'whole of community' health promotion physical activity project. Funded by Queensland Health, the Rockhampton region was chosen for a two year trial of the project in 2001. During this period, the 10,000 Steps Rockhampton Project was an exemplary model of an effective multi-strategy, multi-sector physical activity project. The project has been successful in motivating local communities, workplaces and individuals to increase their physical activity levels. As a result of the success in Rockhampton, Queensland Health provided funding for 10,000 Steps to be developed as a sustainable state-wide and beyond initiative.

10,000 Steps is committed to ongoing research, development, distribution and support of new and existing 10,000 Steps support materials at the local, state and national level, all with web-based support. The program is disseminated at both the individual and organisation level. At the individual level, participants can visit the 10,000 Steps interactive website (www.10000steps.org.au) to access physical activity information and monitor their physical activity levels. At the organisational level, workplaces and community groups can register as a 10,000 Steps Provider, which upon approval gives them access to additional resources and information to guide the implementation of 10,000 Steps within their organisation.

The increasing abundance of overweight and obese individuals world-wide has now become obvious. [1] Consequently, a large portion of the Australian population is at increased risk of chronic illness and disease. Research supports that lack of physical activity participation is a significant contributing factor. [1, 2] This issue is not only affecting Australian adults, but also children and adolescents, with the abundance of obesity within these age groups continuing to rise. [3, 4] Research suggests that for every five children or adolescents, at least one individual is overweight or obese. [5] Promoting physical activity in these populations is one way to address the overweight and obesity trends. The importance of promoting physical activity participation in youth today is further supported when acknowledging the trend of decreasing physical activity participation with age. [6]

It has been identified that the 10,000 Steps program and its resources are being increasingly used in the primary school environment to increase physical activity awareness and participation in primary school students. As 10,000 Steps and its resources have not been developed specifically to apply to the primary school audience, it was necessary to examine whether the 10,000 Steps program and resources are relevant and useful to primary schools. Consequently, 10,000 Steps conducted an online survey with its primary school Providers to determine the applicability of its current program and resources in the primary school environment.

#### Purpose

The purpose of this study was to conduct an online survey of 10,000 Steps Primary School Providers to determine the applicability and usefulness of the current resources in the primary school environment. Outcomes from this study will guide the development of 10,000 Steps resources for primary schools in the future.

### METHOD

### Participants

A total of 71 current 10,000 Steps Providers associated with a primary school were selected to participate in the online survey. The list of potential participants was established by filtering the 10,000 Steps Provider database for those who listed 'school' as their core business. Additional screening was conducted by 10,000 Steps project staff to identify Providers that were linked to a primary school and not another type of educational institution. This resulted in a list of 71 potential participants.

#### Instruments

A web-based survey was utilised to determine the relevance and usefulness of the 10,000 Steps program and its resources in the primary school environment. The web-based survey was developed using SSiWeb Software (Sawtooth Software) housed within the Population Research Laboratory at CQUniversity. This type of survey was considered an appropriate method to conduct the survey as 10,000 Steps has a database of all Providers email addresses and the Providers require access to the internet to use the 10,000 Steps website. This was also found to be a quick and cost effective method to collect the required data.

The survey consisted of two components: 1) questions relating to the use of the 10,000 Steps program and its resources; and 2) demographic questions. The webbased survey consisted of 38 questions in total. The online survey received ethical approval from the Human Research Ethics Committee at CQUniversity.

#### Procedures

The survey was conducted between March 15 and April 16, 2010. All participants were emailed an introduction letter that contained a brief overview of the survey, an invitation to participate and most importantly, the unique URL address for the password protected web survey. As detailed in the information email, clicking on the survey link was considered as informed consent to participate in the survey. Participants that completed the survey prior to the closing date went into the draw to win a minor incentive (a class set of 30 x 10,000 Steps branded water bottles). Three reminder emails were sent out to all participants at five, nine and 26 days after the initial survey request. A follow up telephone call was also conducted to encourage those who had not completed the online survey after the second reminder email to do so, to confirm the email address was correct and to address any queries. Complete survey data was downloaded into SPSS Version 17.0 for data analysis.

#### **Response Rate**

Out of the 71 emails sent to potential participants, 10 were undeliverable upon sending the first survey email to potential participants. These 10 participants were deemed uncontactable and excluded from the sample. From the follow up phone calls, it was determined that a further 18 of the 10,000 Steps primary school Providers were no longer employed at their nominated primary school and could not be contacted. Therefore these Providers were also excluded from the sample of participants. Of the remaining 53 potential participants, 21 responded with complete or partial surveys that were able to be analysed.

The response rate calculation follows the recommended standard definitions of response rates based on the American Association for Public Opinion Research, Standard Definitions. [7] The response rate is a calculated percentage representing the number of people participating in the survey either with a completed or partially completed survey divided by the people selected in the sample.

RR6 is the maximum response rate. The calculations for RR6 are shown below.

RR6 =	Complete Surveys + Partial Surveys
	(Complete + Partial) + (Refusal + Non Contact + Other)
RR6 =	18 + 3
	(18+3)+(2+0+30)

The RR6 Response Rate for the online survey was 39.62%.

### RESULTS

The results of the survey are reported in relation to each question. Each question is listed and the results are displayed in the most appropriate format (table, figure or list). Further explanation of the questions and results is given where necessary.

Q1. Do you currently use or have you previously used any of the 10,000 Steps resources or programs for students in your primary school?

Response	Ν	Percent %
Yes, I have previously used the resources/ program	9	42.9
Yes, I am currently using the resources/ program	0	0
No, I have not used the resources/ program	12	57.1
Total	21	100

N.B. Question two to four in the survey were only applicable to those 10,000 Steps primary school Providers who had not utilised any of the 10,000 Steps resources in the primary school environment, and therefore were the only participants who were asked these questions.

### Q2. Why have you not used any of the 10,000 Steps resources or programs for students in your primary school?

	Resp	Percent of Providers %	
Reason	Ν	Percent %	FIOVILIEIS /6
Did not have time	4	40	40.0
Did not have resources available	0	0	0
There was no support from the school for			10.0
it	1	10	
Was not interested in that type of program	1	10	10.0
Resources were not appropriate for the			0
primary school environment	0	0	
Other	4	40	40.0
Total	10	100	100

No other responses specified.

Q3. Are there any additional 10,000 Steps resources that could potentially be developed that you feel would be effective and relevant to the primary school environment?

Survey participants were given the opportunity to suggest any other resources that could be developed that they believe would be effective and useful for primary school students and the primary school environment. Below is a summary of the responses:

- Free pedometers for students to use. (1 Provider)
- I'm not sure what the resources consist of. I have only involved the teachers in the program. However anything with pedometers would be good for primary school children as they are very competitive between each other. (1 Provider)

Q4. Would you consider using 10,000 Steps in your primary school in the future?

Response	Ν	Percent %
Yes	9	90
No	1	10
Total	10	100

N.B. Question five through to 30 in the survey were only applicable to those 10,000 Steps primary school Providers who had utilised at least one of the 10,000 Steps resources in the primary school environment, and therefore were the only participants who were asked these questions.

### Q5. Who took part in the 10,000 Steps programs initiatives within your primary school?

	Res	Percent of Providers %	
Participants	Ν	Percent %	FIOVICEIS %
Principal	3	15	33.3
Teachers	5	25	55.6
Non-teaching staff	3	15	33.3
Students	8	40	88.9
Parents/ Guardians/ Families	1	5	11.1
Other	0	0	0
Total	20	100	222.2

Q6. How many 10,000 Steps programs/ initiatives have you implemented in your primary school? E.g. challenges, walkway signage, library loan scheme.

Number	N	Percent %
1	5	55.6
2-3	3	33.3
4-5	0	0
>5	1	11.1
Total	9	100

Q7. On average, how long did you implement each 10,000 Steps program/ initiative for?

Duration	N	Percent %
Less than 1 week	1	11.1
1-2 weeks	2	22.2
3-4 weeks	0	0
5-8 weeks	2	22.2
9-12 weeks	3	33.3
More than 12 weeks	1	11.1
Total	9	100

Q8. What was the total number of students who took part in the 10,000 Steps programs/ initiatives you implemented?

Number	N	Percent %
0-25	3	33.3
26-50	4	44.4
51-100	0	0
101-200	2	22.2
>200	0	0
Total	9	100

Q9. What age group/s within the primary school environment did you target?

	Res	Percent of Providers %	
Age Group	Ν	Percent %	FIOVICEIS /0
Kindergarten, Prep school, Pre			
school	2	7.1	22.2
Year 1	2	7.1	22.2
Year 2	2	7.1	22.2
Year 3	3	10.7	33.3
Year 4	3	10.7	33.3
Year 5	6	21.4	66.7
Year 6	4	14.3	44.4
Year 7	5	17.9	55.6
Year 8-12	1	3.6	11.1
Total	28	100	311.1

Q10. If you targeted more than one age group in your primary school, were there any differences in how you used the 10,000 Steps resources and/ or in how the students responded to these resources?

Response	Ν	Percent %
Yes	1	14.3
No	6	85.7
Total	7	100

Q11. Please explain the differences in how you used 10,000 Steps and how students responded to 10,000 Steps between the age groups.

Survey participants were given the opportunity to comment on how they used the 10,000 Steps program/ resources in the primary school environment for different age groups and on the differences observed between the age groups in response to 10,000 Steps. Below is a summary of the responses:

A lot of the responses varied due to the fact that there are still many homes without technology and logging in and being motivated personally was the challenge. Getting parents to purchase a pedometer was the other. Many did not do the online tracking and some were highly motivated. I still do it, for example but pedometers differ in operation and this frustrates people as well. (1 Provider)
No differences with the primary age group. (1 Provider)

### Q12. What were the main objectives of implementing the 10,000 Steps program/ resources into your primary school?

Reason	Ν	Percent %
To raise awareness of physical activity	1	11.1
To provide an opportunity for students to participate in physical activity	3	33.3
To promote the importance of supporting	-	
physical activity in the primary school	0	0
environment	0	0
To demonstrate the school's commitment to		
student well-being	1	11.1
Other	4	44.4
Total	9	100.0

### 'Other' responses:

- As part of school smart initiative (1 Provider)
- Develop classroom activities and raise awareness of activity (1 Provider)

### Additional comments:

- Believe if a whole community works on such a project (like our whole town) it would benefit the whole community to become healthier and meet different needs of all without costs. A great idea for every town and Warwick has excellent walkways (measured etc.) for the whole community to use which many do. (1 Provider)
- It was based on a unit of work that encouraged students to develop an action plan to increase the physical wellbeing of others. Students targeted staff and then monitored their progress. It was more about developing an action plan and then filtering awareness.

### Q13. Were the main objectives met?

Response	N	Percent %
Yes	8	88.9
No	1	11.1
Total	9	100

### Q14. Why do you believe your main objectives were not met?

	Responses		Responses Percent of Providers %		
Response	Ν	Percent %	Providers %		
Lack of support from other			0		
staff/ people	0	0			
Loss of interest by other staff/			0		
people involved	0	0			
Resources used did not attract			0		
student attention	0	0			
Resources used were too			0		
advanced for students to use					
and comprehend	0	0			
Other	1	100	100		
Total	1	100	100		

No other responses specified.

#### Additional comments:

We shared a couple of pedometers as it was felt I couldn't ask students to purchase their own on top of other school costs.

### Q15. Did you incorporate the 10,000 Steps resources and/ or programs into your school curriculum?

Response	N	Percent %
Yes	6	66.7
No	3	33.3
Total	9	100

### Q16. When did the students participate and/ or get involved with 10,000 Steps in your primary school?

	Responses		Percent of Providers %
Response	Ν	Percent %	i iovidei 3 70
Outside of school hours	4	22.2	44.4
During class time, in health and physical education			66.7
subject/s	6	33.3	
During class time, across			33.3
multiple subject areas	3	16.7	
During spare time/ non-study			33.3
time in class	3	16.7	
Other	2	11.1	22.2
Total	18	100	200

No other responses specified.

### Q17. Do you believe you would benefit from a curriculum based 10,000 Steps program in your school?

Response	N	Percent %
Yes	8	80
No	2	20
Total	10	100.0

#### Q18. Is the 10,000 steps goal appropriate for the children in your school?

Response	N	Percent %
Yes	8	88.9
No	1	11.1
Total	9	100.0

### **Additional Comments:**

- I believe that it sets goals and promotes working as an individual but also as a group to achieve set goals.
- It is a fun way and highly motivational but having their own pedometers would enable the program to run outside of class time as well.
- Some children were very active so the 10,000 Steps goal sometimes gave them a sense of over-achievement or inflated feeling of achievement. Many children achieved 10,000 Steps without any major extra physical activity.
- We are currently measuring areas and signposting them for the whole school to promote counting steps and targeting distances around QLD (i.e. if you walk

around the oval 10 times this week you will have walked to the turn of to Allora...) as an idea to encourage everyone to become fitter and healthier.

Q19. Rate the 10,000 Steps resources that you used in terms of their relevance to the primary school environment, i.e. were they suitable in promoting physical activity in primary schools.

10,000 Steps Primary School Providers were asked to rate the relevance of the 10,000 Steps resources they used within the primary school environment. Participants were asked to indicate the extent to which the resource/s were relevant on a 4 point likert scale ranging from very relevant to very irrelevant. The 10,000 Steps resource is written above each figure.

Figure 1: A to Z on Physical Activity

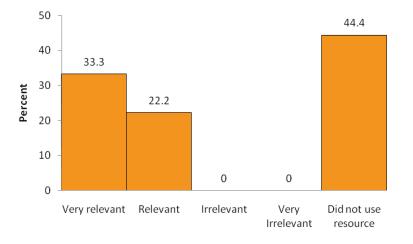
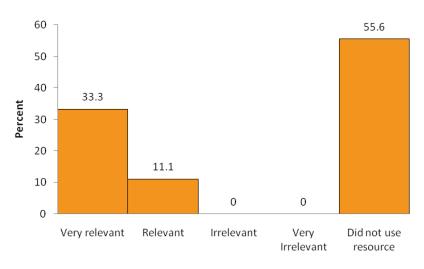


Figure 2: A to Z on Nutrition





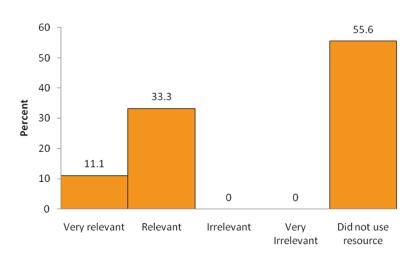
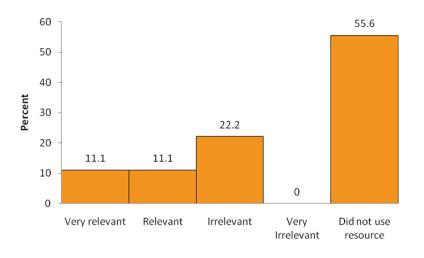
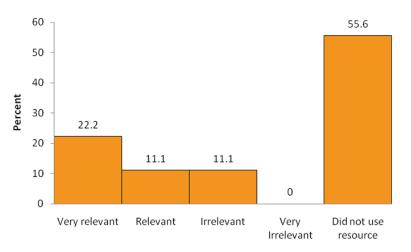


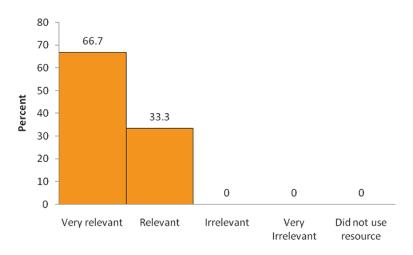
Figure 4: Workplace Presentation



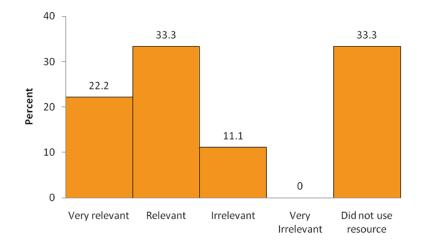




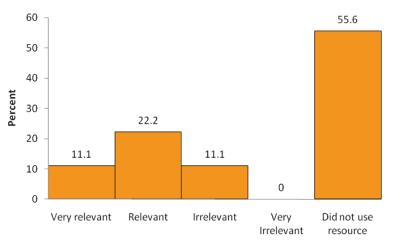
### Figure 6: 10,000 Steps Challenge

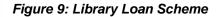


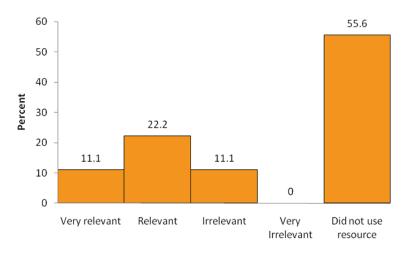




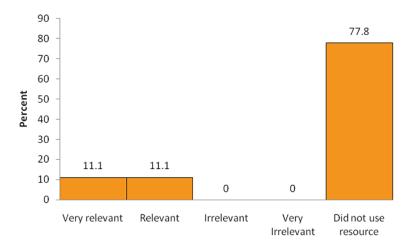




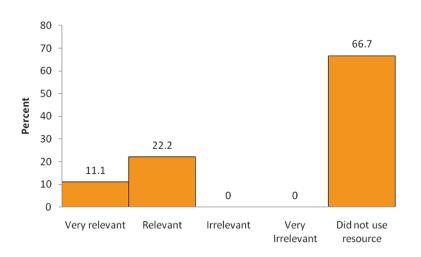






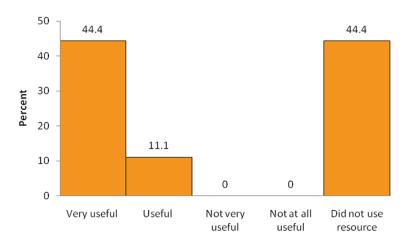






# Q20a. Rate the 10,000 Steps resources that you used in terms of their usefulness to the primary school environment, i.e. were they useful in promoting physical activity in primary schools.

10,000 Steps Primary School Providers were asked to rate the usefulness of the 10,000 Steps resources they used within the primary school environment. Participants were asked to indicate the extent to which the resource/s were useful on a 4 point likert scale ranging from very useful to not at all useful. The 10,000 Steps resource is written above each figure.



### Figure 12: A to Z on Physical Activity



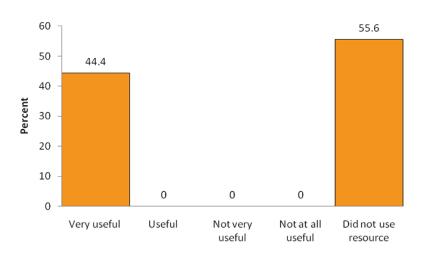
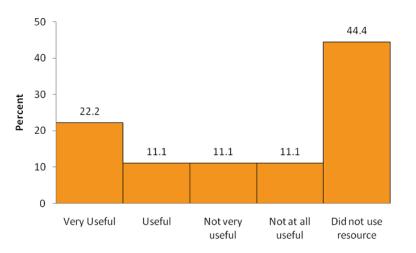


Figure 14: Media Articles





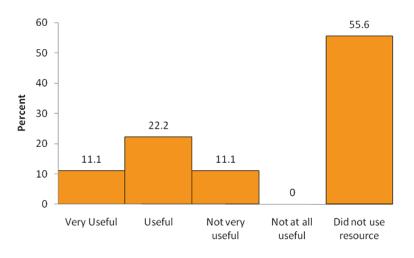
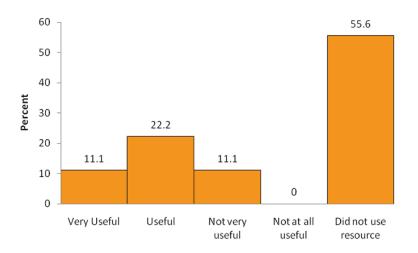
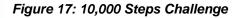
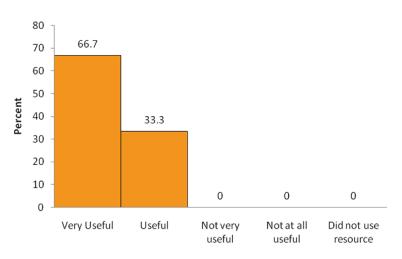


Figure 16: Professional Guide to Physical Activity







### Figure 18: ExtraStep Challenge

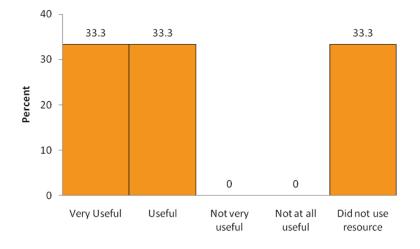


Figure 19: Dog Walking Strategy

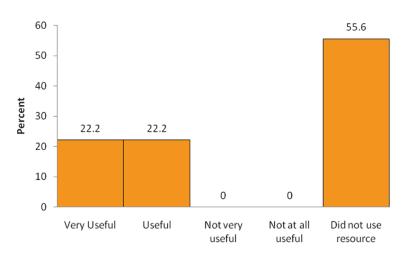
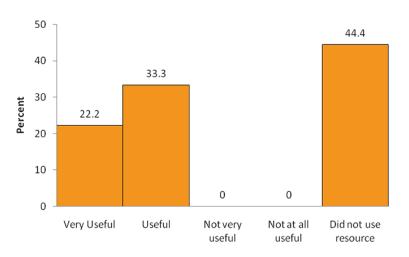
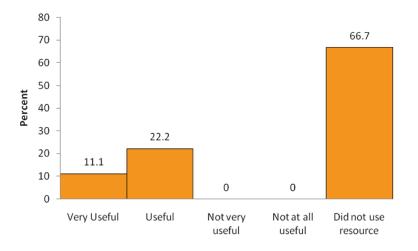


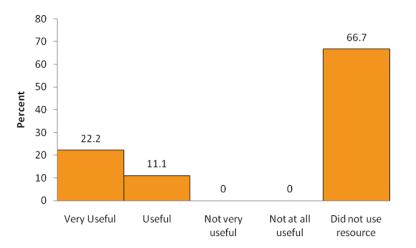
Figure 20: Library Loan Scheme



#### Figure 21: Walkway Signage







### Q20b. Please describe any additional resources that you think 10,000 Steps could develop that would be relevant and useful for primary school students.

Survey participants were given the opportunity to suggest any other resources that could be developed that they believe would be relevant and useful for primary school students and the primary school environment, having used at least one 10,000 Steps resource. Below is a summary of the responses:

- Encouragement posters without negative messages. Media hype is the biggest deterrent. (1 Provider)
- I plan to improve on what I did last year in Terms 2 and 3 and work out a way to get each student a pedometer to use 24/7 as I feel that is what makes the program a life long practise. (1 Provider)
- Very simple; Easy to use step logs, there was a lot of teaching involved in helping children to use step logs – could be very difficult especially with younger children who are not familiar with numbers in the thousands. The challenges were appropriate for the age groups, but probably not for younger grades. (1 Provider)

Q21. Do you, or have you used pedometers with your primary school students?

Response	N	Percent %
Yes	9	100
No	0	0
Total	9	100.0

Q22. Did you use the 10,000 Steps branded pedometers?

Response	N	Percent %
Yes	6	66.7
No	3	33.3
Total	9	100.0

Q23. Was the pedometer a good tool for the primary students to use to measure their physical activity levels?

Response	Ν	Percent %
Yes	8	88.9
No	1	11.1
Total	9	100.0

Q24. Did you promote the use of the 10,000 Steps website (www.10000steps.org.au) in your primary school?

Response	Ν	Percent %
Yes	7	77.8
No	2	22.2
Total	9	100.0

Q25. How did the primary students record their steps?

Method	Responses		Percent of
	Ν	Percent %	Providers %
The Online Step Log on the			44.4
10,000 Steps website	4	33.3	
Paper-based (diary, logbook			66.7
etc.)	6	50	
Did not record steps	0	0	0
Other	2	16.7	22.2
Total	12	100.0	133.3

No other responses specified.

Q26. Are you aware of the 10,000 Steps free Promotional materials (i.e. bookmarks, posters)?

Response	Ν	Percent %
Yes	6	66.7
No	3	33.3
Total	9	100.0

Q27. Did you order any of the 10,000 Steps free Promotional materials (i.e. bookmarks, posters)?

Response	Ν	Percent %
Yes	2	33.3
No	4	66.7
Total	6	100.0

Q28. Have you been in contact with the 10,000 Steps project office?

Response	Ν	Percent %
Yes	3	33.3
No	6	66.7
Total	9	100.0

#### Q29. The support from the 10,000 Steps project staff:

Response	Ν	Percent %
Exceeded my expectations	1	33.3
Met my expectations	2	66.7
Did not meet my expectations	0	0
Total	3	100.0

N.B. All 10,000 Steps primary school Providers answered question 30 through to 38.

Q30. Have you implemented any other initiatives addressing key health issues in the school?

Response	Responses		Percent of
	N	Percent %	Providers %
Physical Activity	10	27.0	58.8
Nutrition	5	13.5	29.4
Oral Health	1	2.7	5.9
Sun Safety	10	27.0	58.8
Mental Health	4	10.8	23.5
Other	2	5.4	11.8
None	5	13.5	29.4
Total	37	100.0	217.6

No other responses specified.

#### Additional comments:

- I used some of the programs materials as an example of a successful community intervention strategy to encourage people of all ages to become more active. I have found it to be an outstanding resource.
- School has a Sun safe policy

Q31. Do you promote active travel (walking or cycling to school) in the primary school environment?

Response	Ν	Percent %
Yes	14	77.8
No	4	22.2
Total	18	100.0

### Q32. Do you use the 10,000 Steps program/ resources to promote active travel in the primary school environment?

Response	N	Percent %
Yes	1	5.6
No	17	94.4
Total	18	100.0

### Q33. Gender

Response	Ν	Percent %
Male	8	44.4
Female	10	55.6
Total	18	100.0

### Q34. What is your age?

Response	N	Percent %
18-34 years	3	16.7
35-44 years	7	38.9
45-54 years	6	33.3
More than 55 years	2	11.1
Total	18	100.0

### Q35. What is your position/ relationship with the primary school?

Response	Ν	Percent %
Principal	3	15
Teacher	12	60
Teacher Aide	0	0
Non-teaching staff	1	5
Parent/ Guardian	1	5
Other	3	15
Total	18	100.0

### 'Other' responses:

- Deputy Principal & VCE PE Teacher (1 Provider)
- ESL teacher and reading recovery (1 Provider)
- HPE teacher/staff and student health and wellbeing project officer (1 Provider)

### Q36. Approximately how many students are currently enrolled at this primary school?

Response	N	Percent %
Less than 100	3	16.7
100-200	1	5.6
201-400	8	44.4
401-600	2	11.1
601-800	0	0
801-1000	3	16.7
More than 1000	1	5.6
Total	18	100.0

### Q37. In which state or territory is your school located?

Response	N	Percent %
ACT	0	0
QLD	10	55.6
NSW	4	22.2
VIC	2	11.1
SA	1	5.6
WA	1	5.6
TAS	0	0
NT	0	0
Total	18	100.0

### Q38. What is the post code of this school?

Of the 17 10,000 Steps primary school Providers who responded to this question, 17 unique post codes were reported. No further analysis of the postcode data was conducted.

### **Additional Comments:**

- I found the program very useful with students in Year 5. We were able to develop our own walking challenges based on other curriculum areas, e.g. SOSE, RE. I found the online step logs quite difficult to use with students arranged into teams, each with a separate log in, it often proved to be quite time consuming. Being able to access the step logs as a teacher and then have students access within this login would be useful. It has been several years however, since I used the resources and online step logs. I also think this is the sort of program which would have a greater success with teachers who are healthy and motivated themselves to lead children to participate. Programs/ resources for schools to use need to be easy to use and easily accessible if teachers are to use them to their fullest. Overall, a very worthwhile program.(1 Provider)
- I would love to be involved in anything you guys want to trial in the Primary school setting that makes the program better. I would love to see class sets being issued to schools without cost so all children have access to such a simple and effective program. An idea for a challenge for us in QLD in Year 7 is a challenge to walk to Canberra and back as we visit it for a camp as do many schools. Perhaps the politicians can fund resources! (1 Provider)
- The 10,000 Steps program is a great resource to implement into the school culture and we would like to continue our involvement. (1 Provider)
- The kids loved doing the program, but the cost of reliable pedometers is an issue that we faced. Although the students have been annoying me to do the challenge again, I cannot afford to purchase them all pedometers. (1 Provider)

#### **DISCUSSION AND CONCLUSIONS**

The online survey was valuable in providing us not only with information regarding the use of 10,000 Steps in primary schools, but also information on why the program was not used in some schools. The 10,000 Steps program and its resources were not used by approximately half of the survey respondents, this mostly being attributed to a lack of time. Almost all of these Providers said that they would consider using 10,000 Steps in the primary school environment in the future.

Of the survey respondents who did utilise the 10,000 Steps program in the primary school environment, the primary objective of doing so was to provide an opportunity for students to participate in physical activity. More than 50% implemented their 10,000 Steps programs/ initiatives for five to 12 weeks duration. The 10,000 Steps program and its resources were predominantly used to target primary-aged students in Years five, six and seven. This finding supports Lapere et

al. [8] hypothesis' that Year five students may have the cognitive maturity to use the pedometers correctly and remain engaged for longer periods of time. Interestingly, it was found that a large proportion of the Providers said there was no difference in how they used the 10,000 Steps program and resources across different year levels, or in how students across the different year levels responded to the resources.

A large portion of the primary school Providers incorporated the 10,000 Steps program and/ or resources into the school curriculum, and 80% of survey respondents believed that a curriculum based 10,000 Steps program would be beneficial in primary schools. A study by Lapere et al. [8] aimed to identify the cross curricular links which may have existed in a class-based walking challenge. It was found that in conjunction with the recording and monitoring of step counts by the students, the curricular activities formulated by the teacher/s was what upheld sustained motivation and interest by primary aged students. Furthermore, the development of a curriculum based 10,000 Steps challenge may not only increase physical activity participation in current primary school environment for the future.

The online survey highlighted the relevance and usefulness of the current 10,000 Steps resources in the primary school environment. Of the resources, the 10,000 Steps Challenge appeared to be the most applicable to the primary school environment with all primary school Providers using it and 100% rating it either very relevant or relevant and very useful or useful. In addition, the ExtraStep Challenge, A to Z on Physical Activity and A to Z on Nutrition were rated as highly relevant by those 10,000 Steps primary school Providers who utilised the resources. These three resources as well as the Library Loan Scheme were identified as being highly useful in the primary school environment. The Workplace Guide was only used by a minority of primary school Providers, however those that did found the resource highly relevant and useful. The lack of use of the Workplace Guide can be justified by the fact that it was only recently developed and made available to Providers, and as the survey respondents may have become Providers as far back as 2004, this resource may not have been accessible to most.

All of the Providers in the survey used pedometers in the primary school environment, and majority felt that the pedometer was a good tool for the primary students to use to measure their physical activity levels. However, a common barrier for primary schools was the expense associated with purchasing pedometers for the students, or in prompting parents and/ or guardians to invest in a pedometer for their child/ren.

It was found that most of the Providers did promote the use of the 10,000 Steps website although a majority of the Providers had their students' record their step counts in a paper-based manner. It was proposed that this was perhaps the best method of recording as many students did not have the technology or the supporting knowledge in the home environment to log their steps on the website. Providers working with students often found that utilising the 10,000 Steps website with students was time consuming and difficult.

The online survey reflected that the schools involved have implemented various health initiatives in the primary school environment, especially those related to physical activity, sun safety, nutrition and mental health. Most of the schools also promote active travel in the primary school environment, however only a very small portion of survey respondents said they used the 10,000 Steps program and/ or resources to do so. This highlights an area in which 10,000 Steps may focus on in the future when developing resources for the primary school environment.

The survey allowed participants to make suggestions for additional resources that could be developed and that would be applicable and valuable to the primary

school environment. The feedback acquired from Providers emphasised the difficulty in purchasing or arranging the purchase of pedometers for students, and recommended the supplying of free pedometers for primary schools. In addition, the development of encouragement posters customised for primary schools was noted, and was believed to be beneficial for stimulating motivation in students. A study by Lapere et al. [8] found that Year five students became bored and unenthused when simply recording and monitoring their step counts, suggesting that encouragement cues may be necessary for sustainable pedometer use by primary students. Providers also recommended simplifying the online Step Log for easier use by primary aged students. These suggestions have given 10,000 Steps direction, to guide the future development of 10,000 Steps resources for the primary school environment.

There were several limitations identified whilst conducting the online survey with 10,000 Steps primary school Providers. At the time that the survey was conducted, many Providers were uncontactable due to no longer being employed by the primary schools. This may be expected as Providers could have registered with 10,000 Steps at any time since 2004 and may not remain at the same school over such a period of time. Being on leave and school holidays (as was the case in some states of Australia at the time of the survey) also limited the number of responses received. Therefore it may be that 10,000 Steps has been utilised in more primary schools across Australia but that information was unable to be determined through this survey.

For those that had used the 10,000 Steps resources in the primary school environment, it was found that most of resources were relevant and useful. Overall, it appears that 10,000 Steps is an appropriate program to implement in the primary school environment. However, recommendations have been suggested and should be taken into consideration to guide the development of 10,000 Steps' resources dedicated to primary schools.

#### RECOMMENDATIONS

While many of the 10,000 Steps Providers that completed the online survey were happy with the current program and resources available to them, there were some suggestions made to improve on the current 10,000 Steps program to increase its relevancy and usefulness for implementation in primary schools. In particular, it was highlighted that there was some training involved before students could participate and use the online Step Log on the web site, therefore it has been suggested that the online Step Log be simplified so it is easier for students to comprehend and use. In addition, posters customised to suit the primary school environment may be a valuable resource to assist in prompting and motivating students to continue increasing their physical activity levels. The limited use of 10,000 Steps resources to promote active travel could be viewed as an opportunity to develop resources promoting active travel in primary schools. Finally, as many of the primary schools did incorporate the 10,000 Steps program into their school curriculum, and research does suggest improved sustainability from additional curricular activities, the development of curriculum based 10,000 Steps resources could be further investigated to improve the applicability of 10,000 Steps in the primary school environment.

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