

# Inception Report

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## ROAD SAFETY EDUCATION ON POTENTIAL OF SAFE ROUTES TO SCHOOL PROGRAM IN THAILAND

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# CHAPTER 1 Introduction

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## 1.1 Introduction

Safe routes to school (SRTS) program has been interested and implemented in many developed countries, e.g. the United States, United Kingdom, and Austria. Active transport modes (such as walking and cycling) to school associate with daily physical activities for youngsters. Literature reviews have been conducted on relationships with physical activity and health outcomes [1-9].

SRTS is an approach that promotes walking and bicycling to school through engineering (infrastructure improvement), enforcement, education, and encouragement on walking and bicycling to school (U.S. Department of Transportation and <http://guide.saferoutesinfo.org>).

Developing a SRTS program involves looking at the journeys that children make to and from school and how the safety on these routes can be improved. This process involves the whole school community in assessing risks and working collaboratively to promote safe active travel (Public Health England 2016 Road injury prevention - Resources to support schools to promote safe active travel).

In the United States, McDonald et al. [10] used data collected between 2007 and 2011 at 14 schools with and without SRTS programs and found that education combined with other SRTS interventions (such as sidewalks, crosswalks, and covered bike parking) was associated with increases in walking and biking of 5–20 percentage points. Chillón [11] reviewed SRTS interventions used in the United States, Australia, and the United Kingdom, and identified 14 interventions that focused on active transportation to school for primary school children.

Moreover, it is found that active travel is also associated with environmental characteristics and suggested that school planners should consider these factors when siting schools in order to promote increased physical activity among students [12].

However, in developing countries, creating and innovating to achieve suitable adaptations of these programs with local actors and conditions should receive careful attention [13].

In Thailand, in the past, most of student went to school by themselves either walking or cycling. Nowadays, parents need to accompany their children to schools by motorcycles and private cars. For high school student, most of them ride their own motorcycles to schools. Even many

of them live not far from schools (within walking and cycling distance). This is because not only motorcycle is more convenient, but also walking and cycling is not safe (in both traffic safety and security aspects), particularly for primary school students.

Thus, the main aim of this research to design, organise, monitor and assess safe routes to school program. The output should guide and encourage schools, communities and local governments to plan for safe route to school program.

## **1.2 Objectives**

The objectives of this research are:

- to design a suitable method for assessing safety on routes to school
- to design and trial safe routes to school
- to provide guidelines for designing safe routes to school program in Thailand

## **1.3 Outputs of the projects**

Output of the projects is guidelines for designing safe routes to school program in Thailand.

## CHAPTER 2 Safe Routes to School

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Safe routes to school (SRTS) program has been interested and implemented in many developed countries. Successes of the previous programs have been reported, for example:

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- Ragland DR, Pande S, Bigham J, Cooper J. Ten years later - examining the long-term impact of the California Safe Routes to School Program. Berkeley, CA: UC Berkeley, Safe Transportation Research & Education Center; 2013.



## CHAPTER 3 Methodology and Case Study

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The project is divided two tasks: (1) designing and organising safe routes to school program, and (2) monitoring and assessment. Summary of the study methodology is presented in Figure 3.1.

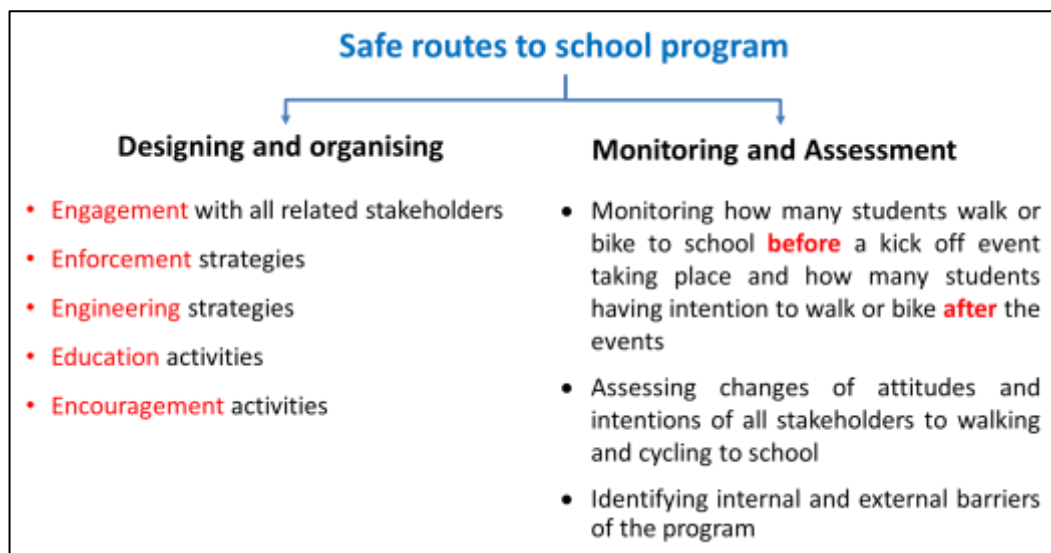


Figure 3.1 Summary of methodology

### 3.1 Designing and organising safe route to school program

The project will incorporate with all related stakeholders, e.g. schools, teachers, parents, local governments, communities around schools, and police. This is to design and organise safe route to school programs, and to monitor and evaluate the program. This will be a combination of enforcement, engineering, education, and encouragement strategies to address the specific needs of their schools.

Enforcement strategy is to deter unsafe behaviours of drivers, pedestrians, and bicyclists and to encourage all road users to obey traffic laws and share the road safely. Enforcement measures include: e.g. banning car and motorcycle parking on sidewalk, installing traffic calming devices to reduce traffic speed, and developing neighbourhood watch program. But enforcement used alone will not likely have a long-term effect. However, a combination of enforcement, engineering, education, and encouragement strategies is to address the specific needs of their schools and achieve long-term results.

Engineering strategy can improve children's safety to enable more bicycling and walking. It focuses on tools that work to create safe routes by improving paths, creating safer crossings and slowing down traffic. Engineering measures include: e.g. auditing walking and bicycling routes, identifying a safe, accessible and direct route to school (school route map for students), improving walking and bicycling paths and the environment, installing signage and devices, and constructing bicycle racks.

Education activities include teaching pedestrian, bicyclist and traffic safety and creating awareness of the benefits and goals of safe route to school program, as well as educating parents about laws requiring for pedestrians and bicyclists.

Encouragement activities also play an important role moving the overall safe route to school program forward. This is not only encouraging students' attitude and behaviour to walk and bike, but also building interest and enthusiasm of other stakeholders to support for changes.

### **3.2 Monitoring and Assessment**

Monitoring and assessment process will cover various perspectives of the program, for example:

- monitoring how many students walk or bike to school before a kick off event taking place and how many students having intention to walk or bike after the events (Pre and Post Tests)
- assessing changes of attitudes and intentions of all stakeholders to walking and cycling to school
- identifying internal and external barriers of the program

### **3.3 Case studies**

There are two case studies, including: Wat Phai Tan School in Bangkok and Thaluang Cementhaianusorn Technical College in Saraburi province. These would be representatives of schools in megacity and provincial.

According to the two tasks of this project (presented in Sections 3.1. and 3.2), there are various activities that should be done in the two case studies. Initial plan of the activities is summarised in Table 3.1.

Table 3.1 Initial plan of the activities

Tactical methods	Wat Pai-ton Primary School	Supanburi Technical College
Incorporate with all related stakeholders	Schools, teachers, parents, local governments, communities around schools, and police.	Schools, teachers, parents, local governments, communities around schools, and police.
Education activities	Teaching students as pedestrian, bicyclist, traffic safety, and creating awareness of benefits and goals of safe route to school program, as well as educating parents about laws requiring for pedestrians and bicyclists.	Creating awareness of benefits and goals of safe route to school program, as well as educating students and parents about laws requiring for pedestrians and bicyclists.
Enforcement measures	Banning car and motorcycle parking on sidewalk, installing traffic calming devices to reduce traffic speed, and developing neighbourhood watch program.	Banning car and motorcycle parking on sidewalk, installing traffic calming devices to reduce traffic speed, and developing neighbourhood watch program.
Engineering measures	Using ATRANS Safety Map App to identify hiyari and black spots for auditing walking and bicycling routes, identifying a safe, accessible and direct route to school (school route map for students), improving walking and bicycling paths and the environment, installing signage and devices, and constructing bicycle racks in cooperation with local authority and community.	Using ATRANS Safety Map App to identify hiyari and black spots for auditing walking, bicycling, and riding routes, identifying a safe, accessible and direct route to school (school route map for students), improving walking and bicycling, riding paths and the environment, installing signage and devices, and constructing bicycle racks, motorcycle lane in cooperation with local authority and community. Smart helmets will also apply to ensure safe riding of youngsters.
Encouragement activities	Workshop, training, campaign and contests to raise awareness and participation on road safety to walk/bike/ride the route to school will be carried out encouraging students' attitude, behaviour, and value to walk and bike, but also building interest and enthusiasm of other stakeholders to support for changes.	Workshop, training, campaign and contests to raise awareness and participation of youngsters and parents on road safety to walk/bike/ride the route to school will be carried out encouraging students' attitude, behaviour, and value to walk and bike, but also building interest and enthusiasm of other stakeholders to support for changes.

## CHAPTER 4 Works Planned

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The activities are planned and presented in Table 4.1.

Table 4.1 Timeframe of the project

Task	2020									2021		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1. Designing safe route to school program												
2. Organising the program												
3. Collecting data												
4. Data analysis												
5. Presentation												
Interim						✓						
Final									✓			
8. Report												
Inception		✓										
Interim						✓						
Final												✓

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