

# PROCEEDINGS

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# ARC'S HEAVY VEHICLE DRIVERS' TRAINING AND AWARENESS PROGRAM IN BANGLADESH

**Prof. Dr. Md. Mazharul Hoque**

Director, ARC and Professor & Head  
Department of Civil Engineering, BUET

**Mr. Zobair Ibn Awal**

Jr. Research Fellow/Lecturer  
Accident Research Centre (ARC), BUET

**Dr. Md. Shamsul Hoque**

Research Specialist, ARC  
Assoc. Professor, Department  
of Civil Engineering, BUET

**Mr. Mahbub Alam Talukder**

Research Fellow/Assistant Professor  
Accident Research Centre (ARC), BUET

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## ABSTRACT

*Heavy vehicles such as trucks, buses and minibuses are the major contributors to traffic accidents and casualties in Bangladesh involving vulnerable road users, pedestrians in particular. Heavy vehicles and their drivers are fundamentally linked with conditions of road and road environment under which they operate. This paper discusses the development of heavy vehicle drivers' training and awareness program based on need assessment of the drivers. It also describes the details of the programs that are being developed and conducted by the Accident Research Centre (ARC) at Bangladesh University of Engineering & Technology (BUET).*

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## INTRODUCTION

Traffic safety priorities in most Asian countries identified trucks and busses are the major contributors to the problems of road traffic accidents and injuries. They are involved in the majority of fatal crashes. Studies on road accidents revealed that in Bangladesh also heavy vehicles such as trucks, buses and minibuses are major contributors to road accidents particularly fatalities involving vulnerable road users, pedestrians in particular.

In an endeavour to improve safety of heavy vehicles, Accident Research Centre (ARC) at the Bangladesh University of Engineering & Technology (BUET) has undertaken a research project towards understanding the situation and environment in which heavy vehicle drivers have to operate. A comprehensive questionnaire survey titled "Study on Heavy Vehicle Drivers and Their Understanding of Road Safety" has been conducted at various bus and truck terminals strategically located throughout the country to determine the level of their road safety awareness and the needs for drivers'

education to improve their performance in safe driving.

This paper however illustrates, along with the survey findings, the various elementary features of heavy vehicle drivers' training and awareness programs that are being conducted in the title of "Road Safety and Good Driving Practices" using different modules at nine strategic locations across Bangladesh.

## NEED ASSESSMENT OF DRIVER TRAINING

The questionnaire survey was carried out in the period from July 2003 to March 2004 at different Bus and Truck terminals of Bangladesh by purposive sampling for the need assessment of drivers' training. It was striking to note that nearly 60 percent of the total drivers interviewed in the survey were involved in major accidents. In an attempt to assess drivers' experience, skill and formal training in both theory and practice the following findings have been gleaned from the survey :

- In general, the majority of the drivers do not know the basic aspects of safe driving and

often they fail to recognize the meaning or implications of triangular, circular, rectangular signs and hardly recognize or understand pavement markings. The survey revealed that 69 percent of drivers failed to recognize the differences of triangular, circular, rectangular signs i.e. they do not even know that circular signs are mandatory and triangular signs are of warning type in nature.

- Also those drivers who have serious lack of knowledge of road signs, road markings etc. get involved in accidents more often than those who are fairly acquainted with them (65.5 percent vs. 34.5 percent). In general, it appears that drivers seldom feel that these control devices are very important and have definite relationship with good and safe driving.
- About 64 percent of the drivers worked as helpers, 28 percent as conductors before starting their driving profession and the rest 8 percent were used to be involved with some other businesses.
- It is interesting to note that 92 percent of the drivers responded that they got training from their so-called "ostaad" that is guru or master.
- About 79 percent of the drivers responded that they are willing to get some formal

training. In addition they were also asked about the topic or subject on which they are willing to undertake training. Drivers' responses in this regard are summarized in Table 1.

*Table1: Drivers Willingness to Undertake Basic Training.*

Subjects	No. of responses	percent of responses
Training on more skilled driving	210	42.0
Training on vehicle maintenance	155	31.0
Training on signs and signals	278	55.6
Training on laws and regulations	202	4.0
Others	9	1.8

*Note: Multiple Responses Question-Total May Exceed 100 Percent*

The need assessment study thus identified the deficiencies of heavy vehicle drivers and also their willingness to learn on various road safety aspects. The study recognises heavy vehicle drivers as a target group for delivering appropriate training. Analyses on road traffic accident data suggest that the target group are involved in most of the major fatal accidents as shown in Figure 1 (dot marks). Therefore, strategic target locations have been identified using the accidents analysis data and primary emphasis has been placed on Divisional and District Headquarters (shown in Figure 1 using star marks).





Figure 1: Locations of Major Fatal Accidents (Dot Marks) and Targeted Training Program Locations (Star Marks).

Thus the need assessment study revealed the following objectives that to be fulfilled :

1. To fill up deficiencies of the target group in the road safety aspects.
2. To involve policy makers, stake holders and administrative officials in the campaign and promote road safety awareness.
3. To generate mass awareness not only the among the target group but also among all types of road users.
4. To further develop, modify and refine future programs for the target groups.

## DESIGN OF TRAINING MODULES

### Training Booklet

Based upon the survey findings the Accident Research Centre (ARC) developed a training module/Booklet and initiated the training program on heavy vehicles' drivers at different locations. ARC published the booklet titled "Understanding Road Safety" with a particular aim to improve the understanding about good

driving practices and raise road safety awareness of the heavy vehicle drivers. The booklet highlights some basic understanding of the magnitude of road traffic accident problems, factors and causes of road traffic accidents, useful information regarding what drivers could do to prevent and reduce road accidents and some guidance on good driving practices. It is expected that the booklet will contribute significantly to smooth and safe driving in Bangladesh. Figure 2 shows the cover page of the driver training booklet.

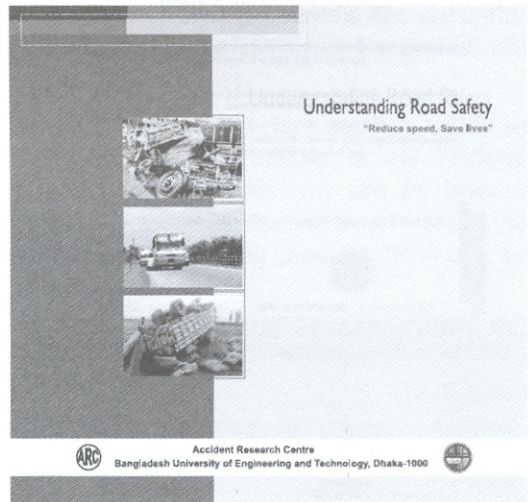


Figure 2: Cover Page of the Driver Training Booklet.

### Contents of Driver Training Booklet

The contents of the driver training booklet are as follows :

1. Road accidents problem and it's factors
2. Reasons of road accidents
3. How to reduce road accidents
4. What drivers should do to prevent road accidents
5. Important works while driving
6. Traffic signs
7. Traffic light signals
8. Important road marking
9. Road marking: a general picture-1
10. Road marking: a general picture-2
11. Correct ways to turn left and turn right

12. While driving you must do
13. Responsibilities of drivers when involved in an accident
14. Some points to be considered for safe driving

Figure 3 depicts some inside pages of the driver training booklet describing different types of traffic signals and some important road markings.

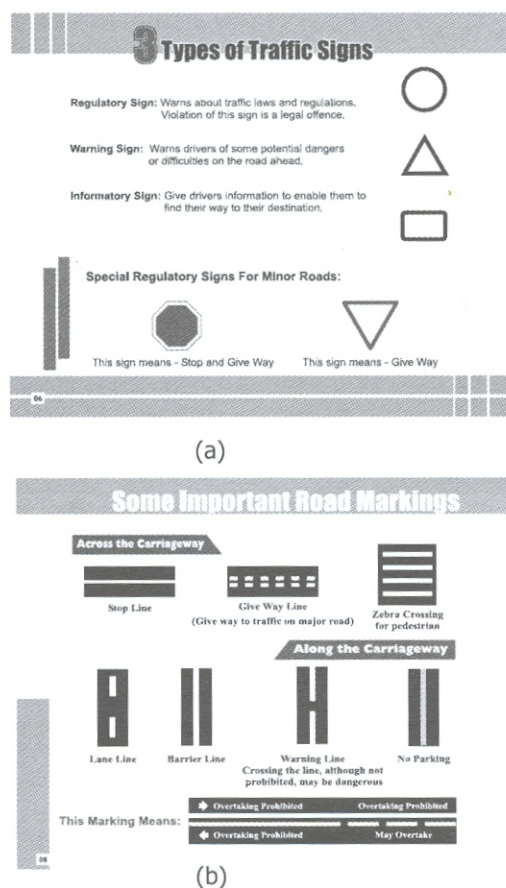


Figure 3: Some the Pages of the Training Booklet.

## STRUCTURE OF THE TRAINING PROGRAMS

The training programs are aimed to deliver lectures to approximately 100 heavy vehicles (buses and trucks) drivers of the targeted

divisional head quarters/districts. Participants are being invited through local Drivers' Association and a suitable date is being fixed by discussing with the relevant officials. Usually the sessions are being conducted at the places where all the participants and distinguished invited guests feel as appropriate and effective for the program. Table 2 describes a typical day-long driver training and awareness program.

Table 2: A Typical Driver Training and Awareness Program in Brief.

Session	Tentative Time	Short description
Inauguration Ceremony	9.30 am to 11.30 am	The session contains Welcome Address, Keynote Speech, Speech from Special Guests, Chief Guest and Chairman
Tea Break	11.30 am to 12.00 am	Light refreshment
Driver Registration	12:00 am to 12.30 pm	The participating drivers get themselves registered and necessary training materials (bag, booklet, paper, pen etc) are being provided during registration.
Training Session I	12.30 pm to 1.30 pm	1. Road Safety Problems & Driver's Involvement 2. Good Driving Practices
Break	1.30 pm to 2.15 pm	Break for lunch and prayer
Training Session II	2.15 pm to 3.30 pm	Good Driving Practices
Tea Break	3.30 pm to 4.00 pm	Light refreshment
Open Discussion	4.00 pm to 5.00 pm	Drivers get themselves involved in an open discussion where various aspects of driving problems & their remedies are conferred.
Closing Ceremony	5:00 pm to 5:30 pm	Certificate Awarding
Road Safety Rally	5:30 pm to 6:00 pm	A foot rally is being organised which covers the major areas of the city



The drivers' training and awareness program as shown in Table 2 can, however, be divided into four major sessions viz:

1. Inaugural Session
2. Training Session
3. Open Discussion Session
4. Foot Rally

### Inaugural Session

The purpose of the "Inaugural Session" is to introduce the necessity of the training program to the administrative units of the district and divisional head quarters, policy makers and stake holders so that the program may become more effective and necessary follow up can be accomplished later. The session typically contains a Welcome address, a Key Note Speech and Speeches from Special Guests, Chief Guests and Chairman. Overall safety scenario and the needs for improving road safety are generally discussed in the session with particular emphasis being given on heavy vehicles and their drivers. Figure 4 shows the inaugural session of the Driver Training and Awareness Program (Module-7) at Rongpur which are being chaired by different high ranking officials and policy makers of the district.



Figure 4: Inaugural Session.

### Training Session

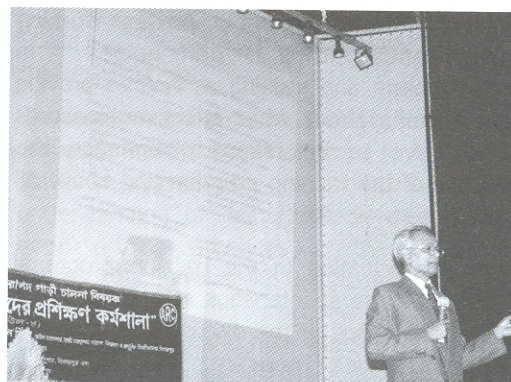
The "Training Session" is further divided into three subsequent sections with three lectures namely:

- Road Safety Problems & Drivers'

Involvement, where the road safety problems are elaborately discussed both theoretically and statistically in the context of heavy vehicles and their drivers.

- Good Driving Practices, the fundamental requirements of driving such as sound health condition, awareness of basic traffic rules and regulations, mechanical knowledge on heavy vehicles, and other issues relating to good driving practices are discussed.
- Driving Problems & Remedies, different aspects of driving problems are elaborately discussed in the context of Bangladesh with possible remedies.

Figure 5 shows the lecture sessions which are being conducted by Professor Dr. Md. Mazharul Hoque, Director of ARC (a) and Dr. Shamsul Hoque, Research Specialist of ARC (b). Participants in training program (Modul-7) are shown in (c).



(a)



(b)





(c)

Figure 5: Ongoing Training Sessions

### Open Discussion Session

The "Open Discussion" session attempts to generate an interactive assembly where the drivers can deliver their own opinions and ideas on various issues. Such sessions provide a rich source of information about drivers' working environment, their deficiencies in professionalism and training as well as provide their opinions about what effective measures should have to be taken to enhance the credibility of the training program and above all to make roadway safer.

Drivers' participation in the training programs was found to be spontaneous and wilful. Many points were raised in the discussion session by the drivers. Some of these are:

- o Longer duration and wider coverage of the training programs are considered necessary.
- o The training sessions may cover some additional topics on advanced traffic control devices viz. recently used traffic signs, signals, markings rather than only the traditional ones.
- o Collaboration from the employer and owner

of the drivers' vehicle is considered necessary which will reap mutual benefit by making the owners feel free to let the drivers take part in the training program.

- o Friendly highway petrol police is vital for ensuring safe driving. Undue harassment by law enforcing personnel and absence of police patrolling at night time, particularly on the 'dacoit' prone sections of highways, compel drivers to travel at high speed which often causes tragic incidences.
- o Other road users like pedestrian and non-motorised vehicle drivers should be given similar training so that the most vulnerable users know how to use high-speed road properly and safely.

### Organizing Rally

The training program was followed by a rally after completion of the three sessions having all the drivers as participants. The rally usually covered a few kilometres of roads displaying road safety messages in banners, posters, festoons etc. The aim of the rally was to create public awareness on road safety throughout the country and also to create publicity among the road users. Figure 6 shows a glimpse of the foot rally.



(a)





(b)

Figure 6: Foot Rally after Training Sessions.

Some road safety messages are also being broadcast in audio format (as shown in Figure 7) during the foot rally. The audio tapes prepared by the Accident Research Centre works as an effective medium for transferring the messages to the mass population and particularly to those who cannot read.

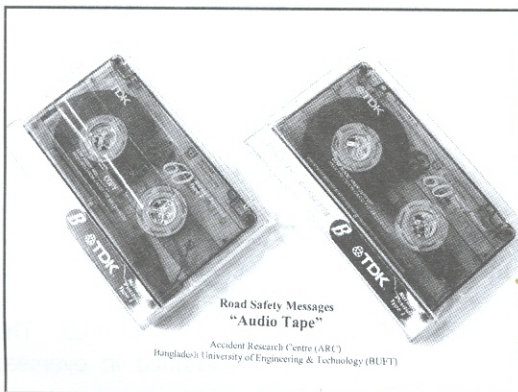


Figure 7: Audio Tapes Containing Road Safety Messages

### COVERAGE OF THE PROGRAM

The training programs are organised at strategic locations where the demand for such training and awareness building up appears absolutely necessary. Analysis on major fatal accident locations using Geographical Information System (GIS) helped to determine the target locations. As mentioned earlier, the emphasis is given more on divisional headquarters at the initial

stage. So far six divisional head quarters and three districts (in nine modules) have been covered in a series of programs. Table 3 shows brief details of the training programmes along with the number of participants in each programme.

Table 3: Location, Time and Number of Participants in the Training Programs.

Module No.	Location	Date	No. of participant
1	Dhaka	September 2004	104
2	Rajshahi	December 2004	98
3	Chittagong	January 2005	117
4	Sylhet	March 2005	102
5	Khulna	April 2005	87
6	Barishal	June 2005	85
7	Rongpur	August 2005	90
8	Dinajpur	December 2005	107
9	Cox Bazar	April 2006	108

### CONCLUSIONS

The heavy vehicle drivers training program has proved to have substantial scope in raising road safety awareness and improving the understanding of heavy vehicle drivers about good driving practices in the context of developing countries like Bangladesh. A series of such driver-training programs conducting all over the country and their wide coverage across the nation is expected to have a substantial impact on traffic safety and can also set examples for other developing nations as well.

### ACKNOWLEDGEMENT

This paper has been prepared based on the materials and experiences of the series of Training and Awareness Programs of Heavy Vehicle Drivers.

### REFERENCE

Accident Research Centre (ARC) (2003), Understanding Road Safety, ARC, BUET, Dhaka.