

# **AWARENESS AND PREVENTION OF ROAD ACCIDENTS THROUGH ROAD SAFETY CAMPAIGNS**

A. Gutiérrez

Instituto Mexicano del Transporte, México

[agutierrez@imt.mx](mailto:agutierrez@imt.mx)

## **ABSTRACT**

As a result of traffic accidents in Mexico 20 thousand people were killed, 750 thousand were hospitalized and 40 000 were disabled in 2009. Traffic accidents are also the leading cause of death of youths between 5 and 29 years of age.

Various public and private organizations take part in the strategic planning and implementation of actions to improve road safety in the country, however, a key action to reduce this problem such as the awareness of road users, has not been carried out successfully.

Mexico has mounted both mild road safety campaigns and based on opinion leaders and famous people, but these lacked the impact to produce changes on road use behavior and throw away bad habits on road use, to be reflected on road accidents reduction.

The strategies and aims of such campaigns have to change if they are meaning to work in accidents prevention and reduction.

This article will discuss four types of road safety campaigns and will make relevant suggestions applicable to Mexico.

## **1. INTRODUCTION**

In Mexico, the leading cause of death for young people, between 5 and 29 years old, are road accidents. In 2007, the National Institute of Statistics, and Geography (INEGI) reported 6.254 deaths related to road accidents in urban and suburban areas, making this the fourth cause of mortality in the country.

In 2009, it was reported that the Federal Highway Network (FHN), over 53.000 km length, had 30.739 accidents with a balance of 32.769 injuries, 5.379 deaths and estimated damage of 137,7 million dollars. The number of injuries and deaths on the FHN represented economic losses of around 2,7 billion dollars, considering average unit costs of 400 thousand dollars per death and 12 thousand dollars per injury. It is estimated that the total cost generated by road traffic accidents in Mexico exceed 11 billion dollars annually (1.3% of GDP).

National statistics reported that 70% of the accident causes are attributable to the driver, with speeding being the most representative (51%) for any type of accident.

According to reports from the World Health Organization (WHO), road safety is considered a Public Health issue because of its importance. On this basis, WHO has insisted that countries should have an adequate methodology for preventing road accidents, specifying that:

“Road safety is not fortuitous, but it is the deliberate efforts of many individuals and many sectors of society, government and nongovernment alike” (Annan, 2007).

Several public and private organizations try to participate on the strategic planning and implementation of actions to improve road safety both on the FHN and urban roads, but an action that is key to mitigate this problem, the awareness of road users, has not been carried out successfully yet.

## **2. AWARENESS**

Awareness as a concept will take the definition of Paulo Freire which says:

“Awareness is the process by which human beings, not as recipients but as subjects of knowledge, reach a growing awareness of both the socio-cultural reality that shapes their lives, and their ability to transform that reality.” (Freire, 1970).

Brazilian Paulo Freire (1921-1997) was an influential theorist in education, who had a specific interest in education and freedom. His ideas have been extremely useful, not only in the field of education and pedagogy but also in solving various problems of social concern like the environment.

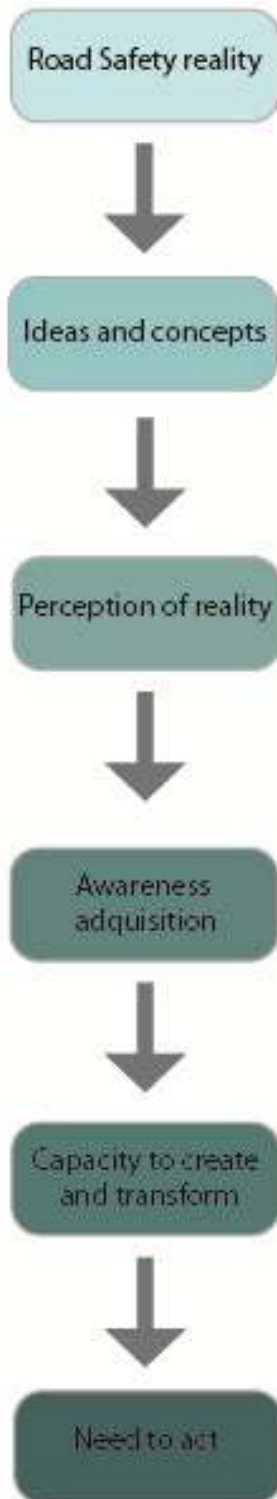
## **3. THE AWARENESS MODEL**

The formulation of the awareness model arose from the approach of the Environmental Awareness Program between 1997 and 1999 developed in Venezuela, that was applied in two pilot tests concerning environmental issues aimed to influence the modification of ideas, concepts and ways of perceiving reality by the target population, as noted by the "Model Environmental Awareness, Theoretical Basis" which is a plot derived from the decoding of the ideas of Freire. (Chesney, 2008).

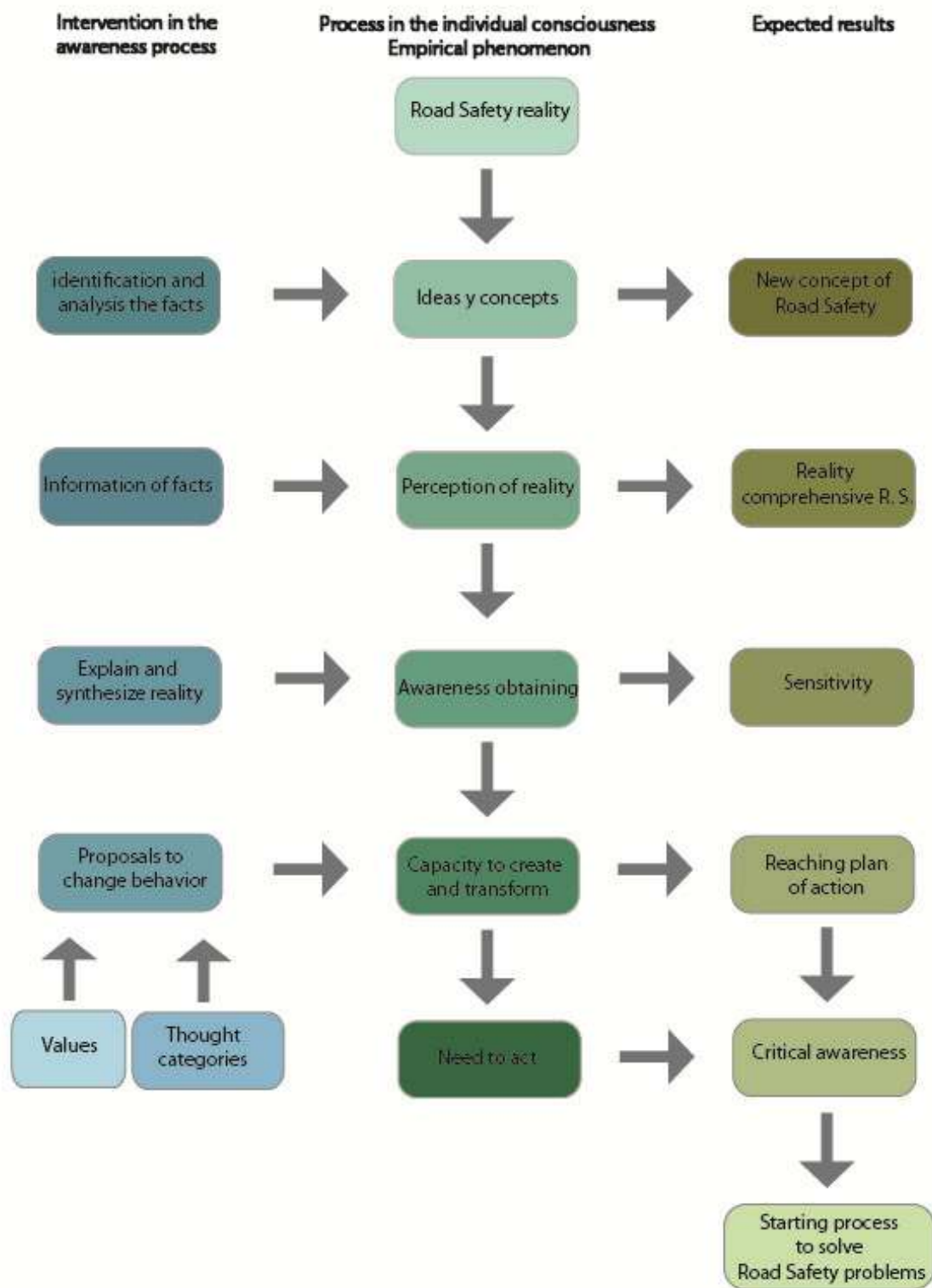
The awareness model, which follows the ideas of Freire, above exposed, is very adaptable to any social problem such as road safety. This was performed to obtain Figures 1 and 2.

Figure 1 presents the process of awareness of the individual who, by being usually in contact with the facts that surround him/her, finds out ideas and concepts, allowing him/her to realize the situation that develops those facts and then preparing the action in consequence. These actions are limited because the individual usually does neither know nor the reality and magnitude of the problem in depth nor knows what preventive measures should be taken.

Actions by individual will not have the same positive impact if they are not properly designed in the way the model of road safety awareness is proposed (see Figure 2).



**Figure 1**  
**PROCESS IN THE INDIVIDUAL AWARENESS**



**Figure 2**  
**AWARENESS IN THE INDIVIDUAL CONSCIENCE**

The objective of the model is the training of population to be aware of road safety facts; in order to carry out the proposal it is necessary to use effective tools that can meet the goal successfully.

Figure 2 presents the model of road safety awareness which contains three columns. The first one presents the proposed strategies to intervene in the process of empirical consciousness described in Figure 1. The second column is the conventional process of acquiring consciousness of a person described in Figure 1. The third column corresponds to the expected outcomes of the intervention of column one into column two.

#### **4. PROPOSALS FOR THE EXPECTED RESULTS FROM THE MODEL OF ROAD SAFETY AWARENESS**

Each of the concepts numbered 1 through 4 in the first column of Figure 2, can influence the behavior of individuals as listed below:

1. The first concept in the first column of the Model, which refers to the identification and analysis of the facts, is to investigate fully the source of the facts and to know the statistics and their analysis; this can be achieved by using reliable information sources from serious organizations dedicated to it, such as the Mexican Institute of Transport that each year publishes the Statistical Yearbook of Federal Highway Accidents. "

2. Subsequently, the second concept is to report the facts identified in the previous section which can be done through the Mass Media (MM), thereby influencing the perception of the individual's reality in order to realize the magnitude of the problem and thus achieving a comprehensive reality of Road Safety, as shown in column three of Figure 2.

The MM is a persuasive tool to manage to maintain continuous communication to the public in relation to various national and international events. They are the spokespersons and most visible transmitters for striking the public opinion; their importance is given by some of its features: the speed with which they reach the public and the vast stage they cover.

The MM is classified in print (books, magazines, newspapers, flyers, brochures, posters, etc.) and electronic media (film, radio, television and internet). It can not be said exactly which of these two types of media are more or less effective, since it depends on the type of message to be transmitted, on the audience which will be targeted, the desired impact and the invested budget in a campaign to define which media is the most suitable for the pursued purpose.

3. In explaining and synthesizing reality, it must be done as effectively and with greater impact on the population; as mentioned in the previous section the MM is a good option to achieve that given its indisputable influence on almost all social orders.

One of the alternatives to sensitize the population is through social marketing, which involves the sale of social ideas whose ultimate goal is to sell a particular

ideology or way of thinking to an auditorium. This can be achieved through social change campaigns to persuade recipients to accept, modify or abandon certain ideas, attitudes, practices and behavior.

"Social Marketing is a process that applies marketing principles and techniques for creating, communicating and delivering value to influence the behavior of the target market that benefits both society and the same market" (Kotler, Lee2006).

To achieve the desired objective it is necessary to conduct a marketing plan and then choose a strategy to influence the target market, which in this case is the general population and authorities.

4. Since we know the awareness tool to use is the proposal for the modification of behavior, which is recommended by social change campaigns to persuade recipients to accept, modify, or abandon certain ideas, attitudes, practices and behaviors.

The elements of a social change campaign are:

a) Cause: A social objective which the change agents believe will provide a successful response to a social problem. In this case the cause is the prevention and reduction of road accidents.

b) Change Agent: An individual or organization trying to bring about social change and the implications of a social change campaign. It may be the Federal Government or any institution of humanitarian aid to recognize the severity and impact of the situation in our country.

c) Target audience: Individuals, groups or populations that are the target of the calls for change. In this case, it involves the Mexican population in general, since the problem occurs in all ages and socioeconomic strata.

d) Channels: communication and distribution routes along which the influence and response relationship between change agents and recipients are exchanged and transmitted back and forth.

e) Change Strategy: The address and the program adopted by an agent of change. It refers to the type and tone of campaign to use that is most convenient for the magnitude and importance of the topic.

## **5. CAMPAIGNS FOR ROAD SAFETY AWARENESS**

In 1970 there was a significant event because the Organization of Economic Cooperation and Development (OECD), decided to form an international group of experts called S4, during discussions in the "International Conference on Design Campaigns Road Safety ", of which the explicit consideration of key factors (including the human factor) that should be treated in the campaigns, including studies on the most appropriate strategies for proper evaluation, was highlighted (OECD, 1994).

According to Montoro, et al. (1994), efforts aimed at preventing the accident from the standpoint of human factors such as safety campaigns aimed at informing and produce changes in attitudes of drivers, have always had a strong weight.

Over time, road safety campaigns and strategies have evolved (by country), taking as reference the commercials, campaigns, health education, and social marketing, based on the principles of social psychology (Toledo, et al. 2007: 319). This author identifies four different types of campaigns, same as described below.

## 5.1. General Types of Safety Campaigns

There are a variety of general strategies used to raise road safety campaigns, which are being grouped into the following types: a) soft campaigns, b) environmental impact; c) educational and training content, and d) social prescribers.

### 5.1.1 Soft Campaigns

The reasons for its use are basically three: a clear identification and understanding of what should be a road safety campaign, not taking risks with newer approaches and the fear of a possible social non acceptance that could be shocking to the recipient. This approach has been developed based on some campaigns in many countries until the late eighties, where a significant change in the communication strategy of road safety started to occur. An example of this is the road safety television campaign by the Ministry of Communications and Transport (SCT), which had the motto "Do not play with your life," which in its five different versions referred to the most frequent driving violations (speeding, drunk driving, etc.).

This campaign was targeted to group drivers traveling on federal roads and prevention rhetorical argument was based on valuing life as much as the family.

### 5.1.2 Social campaigns through opinion leaders

These campaigns are based on the use of some opinion leaders (highly relevant person) that are responsible for delivering the message. In Mexico since the early 90's, the government toll road agency "Caminos y Puentes Federales de Ingresos y Servicios Conexos (CAPUFE)", in conjunction with the Preventive Federal Police (PFP), launched a campaign during the course of the "Easter" holiday aimed at drivers of private vehicles, reinforcing the caution that they should have about the vulnerability of accidents at this time. Variables in this campaign are the elements which transmit the message. Sometimes staff appeared looking safeguarded PFP (individuals tall, muscular, helicopters, patrol large and modernized), or a comic character on television known as Brozo "scary clown" was used to convince the driver to drive with caution.

In general, this strategy has not yielded good results (neither in Mexico nor elsewhere) because their effectiveness is perceived as "artificial" and

sometimes the "strength of character" often mask or leave in the background the message that is desired to be transmitted (Toledo, et al. 2007:320).

If the character has no clear relation to road safety, the credibility of the message is not too high. Such is the case of Brozo, who is a comic character known to audiences for his irreverence and levity to serious situations, speaking regularly with inappropriate language and double meanings. Naturally when the opinion leader of a prevention campaign is Brozo, the viewer immediately ignores the importance of the message leading to a formal little flat and lacking in seriousness, where again the viewer considers the campaign as "nice", making him laugh momentarily, but he can not remember the long-term message, neither it makes him aware of the seriousness of the issue. Another case arose when the Mexican pilot Stephanie Reyes, 17 years old, the image of a marketing campaign for control of the road, had an accident in a residential area in January 2008.

### 5.1.3 Emotional Impact Campaigns

The origin of these campaigns can be found in the U.S., Britain, Canada, Japan and especially in Australia, which concluded that this strategy, despite its apparent lower brightness, achieved with its messages some goals that failed to be achieved by more conventional campaigns.

In Spain, this line of communication was introduced in 1992, showing for the first time, with shocking images, the causes and the direct consequences of accidents. Studies carried out on these campaigns showed that, unlike previous ones, the message was remembered by a very high percentage of the drivers concluding most of them that these campaigns had a positive influence in preventing accidents, and a good percentage of the drivers recognized that the campaign had influenced them with a change in behavior. By contrast, very few drivers have a direct negative elements mentioned.

For Toledo, et al. (2007:320), with this type of campaign an important objective was achieved, which at the beginning was not planned "presumably". The break with previous strategies is so great that the media have devoted great space to its analysis (which meant an interesting product placement) and originated a strong social debate on the problem of traffic accidents.

### 5.1.2 Campaigns Education / Training Content

Toledo, et al (2007:320) states that such campaigns are based primarily on three elements: a) knowledge of the causes of accidents (e.g., fatigue and level of involvement in the claims); b) description of the symptoms that exist to recognize its existence and dangers, and c) behavior that would be taken to alleviate the problem (eg, driving times and rest periods).

Mexico has carried out light road safety campaigns and of opinion leaders, but they have been lacking effectiveness so as to produce changes in behavior and abandon misconducts in the auditorium. In general, these campaigns have not been reflected in the reduction of road accidents.



Emotional impact campaigns and of educational-training content have not been carried out in Mexico. These types of campaigns are those that have had a major impact on the population in other countries, using a high MM penetration and reach, and especially focusing on three broad areas: promoting safe driving, reduce deaths and injuries, and reduce violations to traffic laws.

## **6. CAMPAIGN EVALUATION**

It is important that after launching a social campaign, long and short term assessment is carried out in order to know the impact they are having on the audience and if this is the target audience desired or not. For this reason, we suggest taking a sample of the target market (audience expectation) and run a focus group to hear public opinion regarding the campaign, the degree of impact of the message, if it succeeded or failed to sensitize. We must also assess the latest statistics and see if progress has been made and reduce accidents in the segment of the population for which the campaign is designed.

Knowledge will be gained on whether the campaign is succeeding, or if it should be strengthened or improved, if the MM being used is optimal, or if the campaign should be withdrawn and find other more effective strategies.

## **CONCLUSIONS**

The behavior of the users of the road system is essential in the current situation of the accidents experienced in the country.

To create awareness of individuals, social campaigns are a recommended tool for the acquisition of consciousness.

Proposals must focus on changing the behavior of users of the road system, attitudes and values. The MM campaigns can: a) increase the level of concern about an issue or behavior, b) increase the level of information about a specific topic, c) help build and reinforce values, and d) create in the audience need to act and raise awareness of the need to participate in solving the problem.

In general, the types of campaigns that have had greater impact in the most successful countries have been the emotional impact and those of educational and training content. This is due largely because they are the most successful in persuading users to change their attitudes and habits, especially when they do not feel the real need for it.

The use of road safety campaigns as a measure of awareness and behavior change in the population must be considered as an investment with a very high return in terms of improving road safety.

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