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ENHANCING ROAD SAFETY: RECOMMENDATIONS FOR DEVELOPMENT AND IMPLEMENTATION

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Abstract
This article invsetigates a scheme for studying pedestrian traffic has been developed to develop recommendations for the rational placement of pedestrian crossings, the order of movement of cars on city streets, the improvement of road infrastructure, the legal culture of traffic participants, and traffic safety. 'provision studied. At the same time, to avoid various road traffic accidents, the issues of increasing the efficiency of the car drivers in the process of transporting passengers and the behavior of pedestrians were analyzed. In addition, it was recommended to improve the legal criteria for bringing pedestrians to administrative responsibility for violating traffic rules and to create an electronic system for the immediate formalization and review of materials on administrative violations in the field of traffic.

Keywords: Infrastructure, car traffic, pedestrian traffic, electronic system, traffic participants, violations, traffic lights, highway, traffic flow.

Introduction

Road safety is a critical issue that affects the well-being and economic stability of societies worldwide [1-3]. Despite advancements in transportation technology and infrastructure, the increasing number of vehicles on the roads and the growing complexity of urban traffic systems pose significant challenges to maintaining safety. Road accidents continue to result in severe injuries, loss of lives, and substantial economic costs [4-7].

Improving road safety requires a multifaceted approach that encompasses better infrastructure, stricter regulations, advanced technology, and heightened public awareness. By addressing the root causes of traffic accidents—such as human error, inadequate road design, and vehicle malfunctions—governments and organizations can work towards creating safer road environments [8-11].

This study focuses on developing recommendations to enhance road safety through a combination of innovative strategies and practical measures. The primary objective is to identify the key factors contributing to road accidents and propose effective solutions to mitigate risks. By leveraging modern technologies and data-driven approaches, this research aims to provide actionable insights for policymakers, urban planners, and transportation authorities [12-19].

The main part

According to the "Traffic Rules" of the Republic of Uzbekistan, pedestrians are required to perform the following tasks while moving on highways and city streets:

1. Pedestrians should walk on the sidewalk or sidewalk, and in their absence, on the side of the road.

2. Pedestrians are allowed to walk in a column with no more than four people in each row, on the traffic section of the road, only along the direction of movement of vehicles, on the right side.
3. Pedestrians should cross the road through pedestrian crossings, as well as underground and overpasses, and in the absence of them, along sidewalk lines or the edge of the road at intersections.
4. Pedestrians must follow the signals of the regulator or traffic lights in places where traffic is regulated, and in their absence, traffic lights.
5. Pedestrians entering the carriageway should not be caught and stopped if it is not related to ensuring road safety. Pedestrians who have not had time to cross should stop on the line dividing traffic flows in the opposite direction.
6. If vehicles with flashing blue or blue and red lights and (or) special-sounding vehicles are approaching, pedestrians should not cross the carriageway, and those driving on it should give way to these vehicles. should give and immediately vacate the carriageway [20-24].
7. You should wait for vehicles and taxis in the specified direction only at stops, and if they are not available, wait on the sidewalk or the side of the road.

Research of the pedestrian crossing

1. Determination of pedestrian flow characteristics
2. Determine the characteristics of the transport flow

Making a diagram of the earth:

- geometry
- intensity

Arrangement of regulatory instruments:

- speed
- delay

Analysis of preliminary data

Development of recommendations for optimization of pedestrian crossings

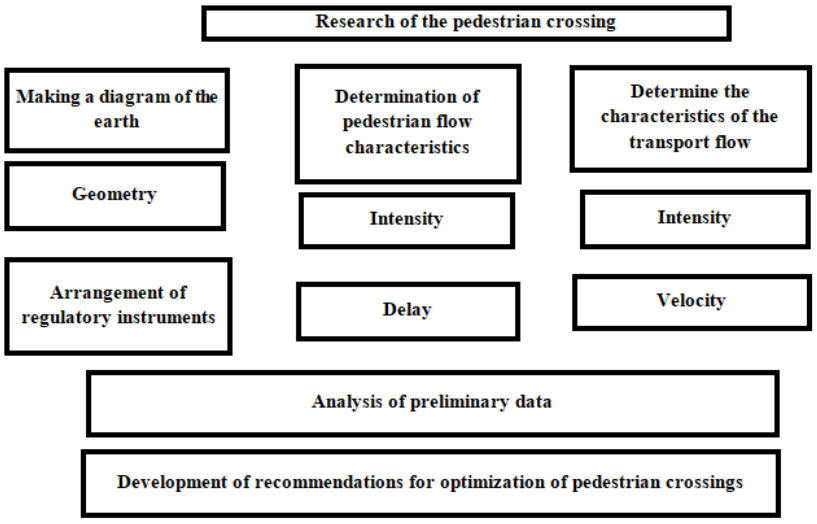

Figure 1. Pedestrian traffic study sequence on an urban road

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Recommendations for the placement of pedestrian crossings are based on the application of two goals:

- the number of "vehicle-pedestrian" collisions;
- speed of vehicles on highways.

The first indicator is to reduce such collisions, and the second is to increase the speed of vehicles on highways. Taking into account the set goals and the results of experimental studies, recommendations can be formulated as follows:

- the distance between consecutive regulated pedestrian crossings should be set from 600 to 900 m - for controlled traffic and highways of regional traffic and pedestrian importance;
- the distance between the surface pedestrian crossing and the underground crossings adjacent to it should be set in the range of 1000 - 1500 m - highways of regulated traffic and regional importance for traffic and pedestrian traffic (pedestrian flow intensity 600 - 800 people/hour, distance to the stop of passenger transport) up to 130 m;

It is noted that in 2018-2022, by implementing the concept of ensuring road safety in the Republic of Uzbekistan, it is of particular importance to form completely new approaches to the task of increasing the efficiency of state management in the field of traffic organization and provision. This Concept includes the following main areas:

- further improvement of the regulatory legal framework in the field of ensuring road traffic safety, including further strengthening of measures of responsibility for violations of traffic rules;
- comprehensive improvement of road infrastructure, improvement of road quality, and creation of reliable conditions for the safe movement of vehicles;
- improving the legal culture, essential knowledge, and skills of road users, strengthening their discipline.

Strengthening the legal framework in the field of road safety

Equipping motor vehicles of individuals and legal entities with video recorders, and organizing measures to determine the regulatory procedure for their use to prevent violations in the field of road safety [24-26].

Development and implementation of criteria for evaluating the results of service activities of road safety state service employees.

Strengthening liability for intentional violation of traffic rules.

Increasing the specified speed of movement, as well as improving measures to prevent traffic accidents caused by the use of defective vehicles.

Improvement of legal mechanisms for prosecuting pedestrians for traffic violations.

Improving the procedure for stopping vehicles on highways and conducting special events, as well as determining the list of grounds for this.

Creation of an electronic system for immediate formalization and review of materials on administrative violations in the field of traffic.

Implementation of a practical mechanism that ensures the rapid organization of the electronic system of identification of wanted persons and vehicles and its subsequent effective use.

Amendments and additions to traffic rules aimed at increasing the quality and reliability of traffic safety.

Taking into account the effectiveness of the work of the state traffic safety service organization, including the principles of dividing the Republic of Karakalpakstan and regions into sectors for socio-economic development, the rational distribution of the forces and means of the road patrol service to take practical measures to increase with li.

Improving the procedure for mandatory technical inspection of vehicles.

Development and establishment of regulations for penalty areas, and improvement of their operation taking into account the introduction of public-private partnership mechanisms.

Introduction of public-private partnership mechanisms into the road safety system.

Implementation of comprehensive measures to strengthen the scientific, personnel and material, and technical potential of the State Road Traffic Service, the introduction of criteria for evaluating the results of the service activities of its employees.

In 2018-2019, the following key indicators will be taken into account and analyzed to assess the effectiveness of activities in ensuring road safety:

- the number of traffic accidents and administrative offenses in the field of traffic;
- the number of traffic accidents and administrative offenses involving pedestrians;
- the number of traffic accidents and administrative offenses involving children;
- the number of traffic accidents that resulted in the death or injury of people;
- the number of traffic accidents caused by the unsatisfactory condition of the road surface, as well as the lack of road markings and lines;
- the number of traffic accidents committed by motor carriers in the field of passenger and cargo transportation;
- the amount of damage caused to road infrastructure objects;
- the number of security systems and tools used in transport and road infrastructure facilities;
- the total number of specialists of state bodies responsible for ensuring road safety.

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