

Traffic Accidents: a Problem of Corruption, Infrastructure, Road Culture and Education in Ecuador.

Richard Ivan San Lucas Tolozano and Michelle Stefanie Tolozano Lapierre

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Richard Ivan San Lucas Vanegas<sup>1[0000-0003-0271-1116]</sup> and Michelle Stefanie Tolozano Lapierre<sup>2[0000-0003-1503-074X1</sup>

<sup>1</sup>Instituto Superior tecnologico Bolivariano de Tecnologia, Guayaquil Ecuador

<sup>2</sup> Instituto Superior tecnologico Bolivariano de Tecnologia, Guayaquil Ecuador <sup>1</sup>risanlucas@bolivariano.edu.ec <sup>2</sup>mtolozano@bolivariano.edu.ec

# Traffic Accidents: A problem of Corruption, Infrastructure, Road Culture and Education in Ecuador.

Abstract. This research work was carried out using a qualitative method, a technical, chronological description of the history of the traffic control entities in the country, its infrastructure or road network, and a survey of quantitative data from official pages and experts in statistics, with techniques for observing published texts, opinion articles, reports, and graphs and tables were drawn up that will help the readers of this article have a reference of our country on specific issues that were addressed and that show the different results of various articles that It was collected from different authors, where we will realize the correlation between the subject of the article and its points exposed in the investigation. Through the results described, it is concluded that a road culture should be promoted in which those truly involved in the results of society participate.

Keywords: Accidents, road culture, corruption, education, instructors.

# 1 Introduction

Ecuador, a country that for centuries was only recognized as an agricultural territory, with little population growth, has been involved in an insertion through the political sphere that has been reflected in the social indicators in this decade, which compared to the previous decade there is a setback, where I am evidenced with the Pandemic of this year 2020.

As Eduardo Galeano tells us in his book The Open Veins of Latin America indicates...

"Underdevelopment is not a stage of development; it is its consequence. The underdevelopment of Latin America comes from the development of others and continues to feed it. Impotent due to its function of international servitude, moribund since it was born, the system has feet of clay. It postulates itself as destiny and would like to be confused with eternity". (Galeano, 2020).

This thought of Eduardo Galeano clarifies that although we have some important resources to get ahead as a country or region, it is within society, the people, or the citizenry in wanting to belong to that mediocrity, that desire to find excuses and not understand that only ourselves We can improve as individuals and as a society.

Mr. Richard Jimenez Mora in a report of the express newspaper in digital media, with the title Ecuador is perceived as a more corrupt country; indicates the following... "The International Transparency organization, together with the Citizenship and Development Foundation of Ecuador, presented the Corruption Perception Index (CPI) for 2021. According to the data presented, the country went from position 92 to 105" .... (Jimenez, 2021).

This article considers the public complaints in each country based on the prosecution of public servants, bureaucracy, among many parameters, is that Ecuador worsened compared to 2020, that is, it went from 39 to 36 points. And why it is important to emphasize how the country is as a source of the road culture article that we are presenting, since we reflect society.

The executive director of the Citizenship and Development Foundation (FCD), indicates that Ecuador's fall in the ranking... "is an opportunity to meet the objectives of climbing positions and stop normalizing corruption" (Alarcon, 2021).



# EVOLUCIÓN DE LA POSICIÓN DE ECUADOR

Figure 1.- Evolution of Ecuador's Position

### Traffic Control and Road Safety Organizations.

According to the World Bank on its official website, in a press release, in 2018 to achieve these improvements, the report lists interventions such as... "reducing and enforcing speed limits, reducing driving under the influence of alcohol, increase the use of seat belts by requiring compliance with this obligation and through public awareness campaigns, and incorporate road safety in all stages of planning, design and operation of road infrastructure" (WORLD BANK, 2018).

Many cities have given more space to cyclists and pedestrians, a measure that helps reduce traffic accidents, while generating a positive impact on air quality and leading local authorities to rethink urban spaces.

In the rates of deaths from traffic accidents, Ecuador has high indicators, for decades entities have been created at the national, provincial, or cantonal level to regulate, study and exercise or promote a road culture to lower mortality in traffic accidents. In state identities in the area of road and traffic safety, they have also been involved in user complaints, including in the media. There are numerous cases throughout history within our country, where many times there have been attempts to correct, sanction and purge organizationally speaking of bad elements or officials.

The national newspaper El Universe in the Community section in 2021 reported through a photo of the reporter Carlos Barro with a description of the photo director of the Ecuadorian Transit Commission (CTE), filed a complaint with the Guayas Prosecutor's Office, in the center of the city and taking as an official source the statement on the social network Twitter the following... "No more corruption, that's why today the executive director filed a complaint against this type of dishonest act." (The Universe, 2021).

The director assured in the complaint filed in the city of Guayaquil in the Guayas Prosecutor's Office, located on the street's victor Manuel Rendon and Pedro Carbo, wing of the La Merced Church, against several vigilantes for the crimes of bribery, concussion, extortion and delinquency organized. In this complaint, the director Carlos Balarezo assures that security guards are asking for at least a few dollars so that buses leave without a circulation permit, inspection, or technical control, at the Guayaquil Terrestrial Terminal, where thousands of citizens travel daily at the provincial, cantonal level. and international.

Guayaquil is a city where daily, different cities and cantons move by means of cantonal and interactional buses, there have been numerous accidents on the roads, and that is where the Traffic Control and Road Safety agencies come in to carry out different studies and be able to reach the conclusion and avoid a growth in accidents.

In the Presidency of the Republic of the Economist Rafael Correa Delgado, the Organic Law of Land Transport, Traffic and Road Safety was created, which came into force on August 7, 2008, and due to a series of questions due to the lack of implementation of adequate mechanisms and the existence of some legal loopholes was reformed on March 29, 2011.

This modification or reform occurred because no real policies have ever been issued in the field of transportation, to guarantee citizens security in mobility since Official Registry No. 1002 of August 1996.

The institutions created by the reforms of the LOTTTSV through this law, the National Agency for the Regulation and Control of Land Transport, Traffic and Road Safety (ANRCTTTSV), and the Ecuadorian Transit Commission (CTE), subrogate the rights and obligations of those that Due to the effects of these reforms, the National Commission for Terrestrial Transportation, Traffic and Road Safety (CNTTTSV) and the Guayas Transit Commission (CTG) ceased their legal life, whose assets, goods, personnel and more will pass to the new entities.

Likewise, it is indicated in the law that the public servants who work in both institutions, when these reforms come into effect, will be evaluated and once the justification for continuing is established as a need for the new demands for human talent, as determined by the Unit in charge. Therefore, in those cases in which it is necessary to terminate the employment relationship, it will proceed as provided by the Organic Law of Public Service, for the event of suppression of positions, for which the Ministry of Finance will provide the resources. The following is going to list the most relevant articles that our constitution has regarding transport, traffic, and road safety:

### ORGANIC LAW OF LAND TRANSPORTATION, TRAFFIC AND ROAD SAFETY

Art. 1.- The purpose of this Law is the organization, planning, promotion, regulation, modernization and control of Land Transportation, Traffic and Road Safety, to protect people and goods that move from one place to another. by the road network of the Ecuadorian territory, and to the people and places exposed to the contingencies of said displacement, contributing to the socio-economic development of the country to achieve the general well-being of the citizens.

Art. 13.- (Substituted by Art. 4 of the Law s/n, R.O. 415 $\neg$ S, 29 $\neg$ III $\neg$ 2011).  $\neg$  The bodies of land transport, traffic and road safety are the following:

a) The Ministry of the Sector.

b) The National Agency for the Regulation and Control of Land Transport, Traffic and Road Safety and its decentralized bodies; and c) The Regional, Metropolitan and Municipal Decentralized Autonomous Governments and their decentralized bodies.

Art. 16.- (Substituted by Art. 7 of the Law s/n, R.O. 415¬S, 29¬III¬2011).¬ The National Agency for the Regulation and Control of Land Transport, Traffic and Road Safety, is the entity in charge of the regulation, planning and control of land transportation, traffic and road safety in the national territory, within the scope of its powers, subject to the policies issued by the Ministry of the Sector; as well as the control of traffic on the roads of the national trunk state network, in coordination with the GAD'S and will have its address in the Metropolitan District of Quito.

Art. 23.- (Substituted by Art. 12 of the Law s/n, R.O. 415 $\neg$ S, 29 $\neg$ III $\neg$ 2011).  $\neg$  The Consultative Council for Land Transport, Traffic and Road Safety is a body for consultation and information of the Board of Directors of the National Agency for the Regulation and Control of Land Transport, Traffic and Road Safety, whose recommendations will not be binding. It will meet regularly every two months; and, extraordinarily by summons of its President. Its operation will be defined in the regulations of this Law.

Art. 24.- (Substituted by Art. 13 of the Law s/n, R.O. 415¬S, 29¬III¬2011). ¬ The President of the Board of Directors of the National Agency for the Regulation and Control of Land Transport, Traffic and Road Safety, must convene the Consultative Council bimonthly on a mandatory basis. Art. 30.1.- The civil traffic agents will be specialized public servants to carry out traffic control at the national level, and on the roads of the national trunk state network, trained and trained by the National Agency for Transport Regulation and Control. Land, Traffic and Road Safety.

Through this article on 30.1 we are going to point out that a before and after can be seen since the GAD'S began to take the corresponding powers. with the pioneer entity in traffic control. From the country.

The Guayas Traffic Commission (CTG) was founded in the presidency of the Republic of Ecuador by Dr. Carlos Julio Arosemena Tola, on January 29, 1984, whose institution had the first training school for the first Traffic Guards, they made the first call in the newspapers of the city which was very successful, 500 applicants arrived on that day of the call.

The Institution grew year after year and over time managed to become the Transit Commission of Ecuador (CTE), Like any important institution, it created its institutional Vision of the CTE that we can see on its website, and it indicates the following:

"To be the leader of the technical operational control of traffic on the state road network, the training of agents and the effective investigation of accidents, seeking to reduce the accident rate, fluidity, and traffic safety on the roads of the state network and its national backbones, with the active participation of specialized personnel". (Transit Commission, s.f.).

Currently with more than 50 years exercising and in functions, the CTE has not been able to change the culture of a country in the field of road safety, and therefore reduce the rate of mortality and traffic accidents in the country, perhaps they did not give it the support by the governments of shifts throughout these years that regulated it, or some bad administrations that happened in everything that goes in its history. The Transit Institution with many problems due to the complaints that users made for years on open television, radio and print media, the citizenry demanded from the local authorities and the government a change or modifications in the transport law, the citizens or the Users believed that the entities that regulated traffic only cared about filling the town with traffic fines.

On August 11, 2010, approved in the National Assembly, whose president Fernando Cordero Cueva gave way to the Decentralized Autonomous Governments (GAD), which are the institutions that make up the territorial organization of the Ecuadorian State and are regulated by the Constitution of the Republic of Ecuador (Art. 238-241) and the Organic Code of Territorial Organization, Autonomies and Decentralization (COOTAD).

The GADs are decentralized institutions that enjoy political, administrative, and financial autonomy, and are governed by the principles of solidarity, subsidiarity, equity, inter-territorial integration, and citizen participation. They are organized as follows:

- Regional GADs.

- Provincial GADs.

- Cantonal GAD.

- Parish GAD.

According to Art. 30.4.- The Regional, Metropolitan and Municipal Decentralized Autonomous Governments, within the scope of their competences in matters of land transport, traffic and road safety, in their respective territorial constituencies, will have the powers in accordance with the Law and the ordinances issued to plan, regulate and control traffic and transportation, within their jurisdiction, observing the national provisions issued by the National Agency for the Regulation and Control of Land Transport, Traffic and Road Safety; and, they must report on the local regulations that will be applied in terms of traffic control and road safety.

In the Administration of Lawyer Jaime Nebot Saadi, Mayor of the city of Guayaquil at that time, he availed himself of this article 30.4, with months of preparation, planning, the Municipal Transit Authority (ATM) was created, which was created in July of 2012 by the Municipality of Guayaquil with the mission of establishing and executing policies to implement an integrated system of regulation, control, road safety and the preservation of the environment in accordance with the Constitution of the Republic and the Organic Code of Territorial Organization, Autonomy and Decentralization .

The newspaper El Universe on its digital front page in the Community section indicates the functions of the ATM that they are going to carry out in their management..." It has traffic control on the city streets, so it must plan, regulate, and control vehicular traffic and pedestrian. In addition, through SGS Revisions, it carries out the technical review of the vehicles that circulate in Guayaquil" (Universe, 2015).

In a solemn act that was set as the place of the ceremony at the Malecon 2000, located in the center of the city, at that time Archbishop Antonio Arregui blessed the 593 agents, 7 supervisors and 13 inspectors who will replace the guards of the Transit Commission of Ecuador in the city of Guayaquil.

Until 2014, few municipalities assumed responsibility for the planning, regulation and total control of traffic, land transport and road safety.

Municipalities	Civil Agents
Quito	264
Loja	157
Ibarra	58
Ambato	102
Santo Domingo	137
Guayaquil	593

#### Table 1. Training of Civil Agents

After almost a decade that the ATM began its functions, there were many changes in the city in terms of traffic, road safety and road culture, at the beginning there was annoyance in the citizenry due to the different adjustments in the roads and highways of the city. city that through studies and data surveys informed the citizenry. In the same way in the preparation of the new agents who were equipped with vehicles, motorcycles, bicycles, and scooters to move to control the traffic and avoid the generation of the different bottlenecks mainly in the center of the city.

In the technological field, investments have also been made, with the aim of saving lives and offering a safe city in road matters, the Traffic and Mobility Agency, ATM, received a donation from the International Association of Control Police (IACP), an organization allied to the international initiative Bloomberg Philanthropies, with 4 cymometers, devices that allow the speed of a vehicle to be seen in real time.

In a report by Daniel Aguirre Rios, which is reflected on the EcuadorComunica website, Omar González, Coordinator of Supervision and Control of the Bloomberg Initiative, indicated the following... "These equipment's have laser functionality that, unlike radar, allows individualizing of vehicles more efficiently, that is, the offending vehicle will be identified". (Rivers, 2021) ".

Currently the ATM not only invests in this equipment to control the mobility of vehicles, but it also works jointly with private companies, educational institutions in road campaigns, Professional Driver Schools with proper training for administrative personnel, instructors, etc.

In the report of the Periodic D`UNA, the Mayor of the Municipality of Duran, Dalton Narvaez, in the speech of the ceremony of the new traffic agents of the Duran canton, said the following... "You are a reference in traffic matters, and you must always be up to date community service. The first promotion is ready to give traffic, road safety and what falls within the scope of the laws". (Dune News, 2022).

The ceremony took place at the Max Cortez sports center, the preparation lasted 5 months. Through an institutional agreement, the proper training was carried out for the agents. The external regime was fulfilled at the Bolivarian Technological Institute (ITB) and the internal one was at the Training and Troop School (EFOT) of the Ecuadorian Transit Commission (CTE)., where they learned about traffic regulations, the Comprehensive Organic Criminal Code (COIP) and the rescue and medical emergency course. It is important that each GAD'S carry out their respective accountability to their citizens as indicated in this guide created by the Council for Citizen Participation and Social Control (CPCCS) indicates the following..." The Accountability must be executed with information that reaches the citizenship in a clear, accessible, precise, and sufficient way, because it collects results of institutional management on the formulation, execution, and evaluation of public policies". (Guide).

Year after year, the Regional, Metropolitan and Municipal Decentralized Autonomous Governments are obliged to give a report on their management to the citizenry and show important indicators as well as the rates of traffic accidents, accidents, or the contribution of the institutions in security road to citizens.

# 2. Developing.

## **2.1traffic accidents**

Today, an important indicator not only for Guayaquil, not only in Ecuador but also, worldwide, continues to grow unfavorably year after year, the percentage of deaths from traffic accidents grows globally, it should be emphasized that In December 2005, the United Nations General Assembly Resolution 60/5 on Improving Road Safety in the World called for a World Road Safety Week. World Road Safety Week is in November, and the World Health Assembly, reflecting the growing concern of governments and the international public health and development communities about the problem of road traffic injuries transit.

A global concern, that is why in September 2020, the UN General Assembly adopted resolution A / RES / 74/299 "Improving global road safety", proclaiming the Decade of Action for Road Safety 2021-2030, with the ambitious goal of preventing at least 50% of deaths and injuries from accidents by 2030. The WHO and the UN regional commissions, in cooperation with other partners, have developed a Global Plan for the Decade of Action.

But first we must know that it is a traffic accident, because according to Vizcaino it indicates the following... "In terms of traffic, an accident is the unforeseen event produced by the participation of one or more vehicles, on the roads or highways and that causes damage material or injury to persons and even death. (Vizcaino, 2005).

And it is that most passers-by or drivers have been witnesses or know someone to see or be present in an accident. We must clarify that every traffic accident is something that as people, drivers is not something we want to happen or do, it is an unforeseen event that if we fail.

On the official page of the National Institute of Statistics and Censuses (INEC) it tells us that an accident..."It is the one that occurs on the road and occurs suddenly and unexpectedly, determined by conditions and potentially foreseeable irresponsible acts, attributed to human factors, vehicles predominantly vehicles, weather conditions, signage and roads, which cause premature loss of human lives and/or injuries, as well as physical or psychological consequences, material damage and damage to third parties." (INEC).

In this definition by an Institute of the Ecuadorian State, it gives us a broader meaning where it involves both the human and technical factor on the part of a car. It is that at the national level over many years, decades there have been many lives lost on the different highways of the country due to traffic accidents that we are going to detail those that have caused the most impact on society.

In a research article with the title Work-related traffic accidents: a priority in occupational and public health for Ecuador, the following is highlighted..." As expected, young workers (18-35 years of age) present greater risk of suffering this type of accident, this fact coincides with other studies whose main causes are inexperience in driving, distractions, and alcohol" (Cordeiro et al., 2016). (Ecuador AD, 2018).

On the Perimetral road, at kilometer 22, by block 11 of Bastión Popular, this is how the report began according to Diario Universo, detailing that ..."At 06:10 yesterday, at kilometer 11 of the Perimetral road, by the coop. Paquisha, a Chevrolet D-Max truck, license plate GQN-509, driven by a person in an intoxicated state and who apparently fell asleep at the wheel, ran over 23 people who at that time were waiting for the bus to move to different points of the city and other provinces. (The Universe, 2010).

In this accident where the residents of the perimeter sector tried to close the roads in order to make their complaint to the media and people who were traveling at that time, they were outraged not only by the accident that day, it is very It is common for there to be many deaths on that road, both due to accidents between vehicles or impacts of vehicles on people who try to cross that highdanger road on a daily basis. Jose Pizza, correspondent for the newspaper Express, made a report on how dangerous it is to cross this road in his title La Perimetral, the unbeatable queen of accidents, specifies an important point which says..." some of the accidents occur because passers-by insist on crossing the Perimetral without using the pedestrian crossings and because the drivers exceed the speed limits." (Pizza José, 2020).

Guayaquil is a city that year after year has grown both in demographic population and in settlements, and exactly on the perimeter road which was built by the government of León Febres Cordero and culminated by the government of Dr. Borja, there was a political controversy of whether it was necessary, the width that it should have, that six lanes was a waste of money; Today it is practically just another street. Likewise, the authorities such as governments in shifts, mayors began to create pedestrian crossings so that there is no risk of crossing the street and thus they continue to worsen.



Figure 2. The roads of Guayaquil with the most accidents.

Although this is from the year 2019, as of today 2022 neither the rate has lowered nor have corrections been duly made by both the authorities and the people who live around the most dangerous road, in certain sectors pedestrian crossings were installed, fenced practically the entire route with concrete walls, other sections with metal mesh, but people prefer to seek that adrenaline, avoid the fatigue of going up and down the stairs.

Diario el Comercio made a report where soccer people have lost their lives in traffic accidents, which it indicated ... "In Ecuador and throughout the world, traffic accidents have been carried out by soccer players and on a recurring basis. Some have left minor injuries, others serious injuries and, in the worst cases, have been fatal. (Diario el Comercio, 2015).

And so there is a long list of soccer players who have been the protagonists of accidents, who in specific cases died, such as the players Carlos (Frenton) Muñoz, glory of the Barcelona Sporting Club professional team, or the player identified as the blue Spiderman Otilino Tenorio both sadly died while driving on country roads.

A group of students from SEK International University. Quito, Ecuador, carried out an investigation only on the Amazon and among its conclusions indicate..." In 2016, a total of 553 traffic accidents were registered in the provinces of the Amazon Region, causing 544 victims with injuries and 131 deaths. The average of traffic accidents by province was 92.1, 90.6 injured and 21.8 deceased. (Ecuadorian, 2017).

In this research carried out quantitatively, it details that there is a high mortality in cases of accidents when going and returning to work registered with the Occupational Risk Insurance of the Ecuadorian Institute of Social Security has increased.

Accidents, traffic accidents do not have preferences based on race, job position, whether you are high or low income, as shown by the data from the National Traffic Agency, which indicates that the most frequent causes of an accidents on the road are inattentive driving (24%), not respecting traffic signals (18.5%), speeding (15.9%). Among these others are drinking alcohol while driving, there are also distractors which are cell phones, BTL campaigns, Kinetographs among others.

In a newspaper report on a fatal accident in the canton of Naranjal, one of the most common causes is rectified "The Police, for their part, are still investigating the causes of the accident. The first data indicates that the driver lost track in a curve and could not control the vehicle. (THE TRADE, 2018).

There are drivers who simply get into a vehicle and do not drive responsibly, when someone is in a car they must understand that they have weight on their shoulders, you must put all your senses alert, do not neglect yourself because in a second lives are lost, that's why many companies, especially those dedicated to the sale, production of alcoholic beverages in their bottles, spots, or advertisements indicate that you do not drive if you drive.

Juan Carlos Amancha Moyolema, in his graduation thesis highlights the following... "Drivers and traffic agents do know the negative effects that alcohol produces, but the biggest problem is the addiction that people have when ingesting this product" (AMBATO, 2015).

Clearly today in a digital world and Social Networks force us to see news now such as accidents, concerts, advertising campaigns, new product launches, etc. It is impossible not to read, listen or watch this information that we see everywhere. And who does not know the effects of alcohol, but here comes the specific topic of the beginning of this corruption investigation, is that there are still bad elements where they apply the sanctions halfway, specifically when they find an intoxicated driver driving and both take advantage On the one hand, the driver offers money for not going to jail, and on the other hand, the agent or the transit authority begins to say a phrase that is known in Guayaquil or Ecuador, the phrase "how can I help you."

For Paúl Granda, president of the Board of Directors of the Ecuadorian Social Security Institute, it is essential.... "To promote as a State Policy the generation of a Road Safety culture that involves all public and private actors in the search and application of the measures prevention of traffic accidents" (Ecuador e.t., 2018).

However, this is not visible in the country. Ecuador ranks third on the list of countries in South America with the highest number of deaths caused by traffic accidents, according to the Global Situation Report on Road Safety 2018.

The digital newspaper Primicias, wrote a national news story that impacted the entire Ecuador and described how the fatal accident arose... "The interprovincial bus of the Divine Niño company left the road on a curve on a steep slope in the district of Los Órganos and rolled about 15 meters down in a desert area, according to local media reports" (Primicias, 2020).

Some people who survived that accident indicated that there were many irregularities throughout the trip, such as the drivers taking turns driving, that the tires were worn and several points that could have been avoided at the time, if that corruption did not exist involved in all the areas that surround a society.

We must remember that last year the CTE director himself denounced officials for turning a blind eye to bus reviews that did not include the permits or adjustments that allow a provincial or interprovincial bus to leave the bus terminal. The road infrastructure system also has a great influence, the state must guarantee road routes in perfect condition, both for national and foreign tourists.

Sofia Ramirez tells us in her report on the effects of the telluric movement that... "The earthquake of last April 16 left damage to 83.4 kilometers of the state road network. The affectation was registered in 10 provinces of the country, according to the Ministry of Transport and Public Works (MTOP). That length is equivalent to almost the distance between Quito and Latacunga" (Ramírez, 2016).

In 2016 Ecuador suffered a shock with an epicenter of 7.2 and devastated many houses in different cities of the country and many highways in the country, even connecting bridges between provinces were lost, leaving millions in losses for the state.

The blog movilblog indicates... "The National Road Network of Ecuador is conceived as a set of roads that integrate the country connecting the most important population centers and facilitating the movement of strategic goods and services that contribute to the economic prosperity of the country" (Leray, 2019).

The geographical location of Ecuador and its peculiar geomorphology make the roads of the national network prone to threats of earthquakes, landslides, floods and volcanic activity, conditions that generate interruptions in activities and services that depend on the national road network, and they aggravate the situation of other sectors; as well as increase the vulnerability of communities.

In the article by Mariana Baranova for the NEO MOTOR page, she indicates that the classification of the countries with the best roads in the world is as follows: "Singapore occupies the first position with 6.5 points, with 7 being the highest score. This country has the best roads in the world, so driving along its roads is quite a driving experience. In second place is the Netherlands with 6.4 points, followed by Switzerland (6.3 points) and Hong Kong (6.1 points). The top 5 is closed by Japan with 6.1 points, the same as Hong Kong" (Baranova, 2019).

This article was a summary of the World Economic Forum that carried out during that year 2019 an in-depth analysis of the state of the roads of 141 countries to classify them according to the quality of their road network in which Ecuador was ranked 34.

On the official page of the Presence of the Republic, an analysis by Mr. Walter Vásquez was found, where he highlights the following... "We have a constitution that strengthens rights but also requires the necessary guarantees for them. And having roads is a way of vindicating those who have been historically excluded, marginalized." (Vasquez, s.f.).

If you want to lower this mortality rate at the national level, you must have a modern road system is to get ready to concentrate efforts to get out of underdevelopment. These are the minimum conditions required to sustain State policies in the medium and long term.

This was revealed by a World Economic Forum survey of 14,000 leaders in the region. On a scale of 1 to 7 on the quality of the country's road infrastructure, where 1 is extremely poor and 7 is extremely good, Chile obtained a score of 5.2; Ecuador of 5.1 and Panama of 4.4. Meanwhile, Haiti obtained a score of 2.1; Paraguay 2.4; and Costa Rica 2.6. (EKOS, 2019).

Although this classification shows the nation as one of the best road networks, this was 5 years ago and the solution to lower the number of traffic accidents is not to keep streets in perfect condition.

PAÍSES CON MEJOR CALIDAD DE VÍAS DE AMÉRICA LATINA		
En una escala de 1 a 7, donde 1 es extremadamente pobre, y 7 extremadamente bien, la escala de la calidad de carreteras es:		
Posición	País	Puntuación
1	Chile	5,2
2	Ecuador	5,1
З	Panamá	4,4
4	México	4,4
5	Nicaragua	4,3
6	República Dominicana	4,3
7	El Salvador	4,0
8	Honduras	3,8
9	Argentina	3,3
10	Uruguay	3,3

Figure 3. Countries with the best road quality in Latin America.

According to Alvaro Merino, it indicates..." Despite advances in important areas such as legislation, vehicle standards and access to medical care, population growth and the rapid motorization of transport that are taking place in many parts of the world continue to increase the number of deaths in traffic accidents" (Merino, 2020).

For Álvaro Merino, not only in underdeveloped countries are there a higher number of deaths from traffic accidents, but a country with greater economic security also has a lower mortality rate from these causes. This problem does not look at race, economy, religion, this is a dilemma with many questionable issues and few people in charge who want to make an improvement without something changing.



# La inseguridad de las carreteras

Muertos en accidentes de tráfico por cada 100.000 habitantes (2017)

Figure 4. Road insecurity

Every year, 1,350,000 people lose their lives on the road around the world. That means 3,700 deaths a day in car, bus, motorcycle, bicycle, and truck accidents. More than half of the victims are pedestrians, motorcyclists, and bicyclists. It is not a minor problem: it is estimated that injuries caused by traffic accidents are the eighth leading cause of death globally and the first for people between 5 and 29 years old. According to sources on the website: "elordenmundial.com".

According to Elena Sanz Bartolomé in her article the 10 countries in the world with the most dangerous roads to drive, she tells us that... "Globally, it is estimated that, every thirty seconds, someone loses their life on the road and, in addition, twenty people they get injured from an accident" (Bartolomé, 2021).

Zutobi, a driver education platform and app, has considered where an incident is most likely to occur. It's not just drivers who are potentially at risk: some 750 pedestrians are also killed every day.

Road traffic deaths mostly affect low- and middle-income countries, which is where 90% of road traffic deaths occur globally. Rising incomes in many developing countries have led to accelerated motorization, but road safety regulations and management have not kept pace.

#### **3.Results.**

This research article began with a descriptive analysis and collection of information on how the country is seen internationally in the field of corruption, a historical description was made of the regulatory entities in transit, the cultural problems that exist in society, but we have not indicated or exposed the possible solutions at the national or global level to try to lower this high rate of deaths from traffic accidents.

On the subject that Ecuador is among the countries with the most corruption, not only at the political level, but also in society in general, it is an opportunity that we do not see this issue as normal in the country or, worse, see it as necessary. We must show that the citizens of each province of this country do not allow these types of corruption daily, and we begin to denounce these acts.

On the issue of the road network, Ecuador must continue with works where a study of the project can really be seen. Project and not only the promises of electoral campaigns are fulfilled, that there is a greater demand for professionals in the construction of highways or what is known as urbanism.

About the traffic agents who are trained day by day in different cantons, cities of the country, that is with a transforming training, with values to society, with ethics of responsibility that is to control traffic, educate society and apply the law to the one who breaks it. That educational institutions rigorously take this commitment, in the same way that they train professionals in the different branches that impart knowledge.

And about road culture, training conscientiously integrates in the field of Education and Road Safety, through many references from national authors, a series of possible ways to improve the training issues for those directly responsible and responsible are detailed chronologically. indirect.

According to Cabrera, he tells us ..."Spain is one of the best in Europe and the world, in this country technology is very busy to be able to control everything related to traffic and to be able to avoid traffic accidents" (Marco Cabrera, 2012).

In 2012, in a thesis work with the title technical proposal for the reduction of traffic accidents within the Cuenca canton from the human-vehicle-environmental equipment point of view. A change was proposed in the city of Cuenca and that gave examples such as nearby countries, as is the case of Peru with plans for regulations and fines, Argentina where alcohol and drugs in drivers are strictly controlled.

For Gonzalo Montero, the solution was that... "The population and its organizations must be part of the construction of prevention actions. Otherwise, the classic lines of intervention education, traffic engineering (vehicles-roads) and monitoring of compliance with traffic regulations will prove insufficient" (Montero, 2013).

For Montero, the solution is not a decree, a law that is more specific, it is literally up to each one of us to see the problem, raise awareness and improve as a society and around terminal problems such as deaths or injuries due to traffic accidents.

For Adriana Soberness in her research, she indicates... "However, and even though the Ministry has a delegate on the ANT board, these strategies have been designed individually and emit a diffuse message towards the target audience" (Sobenis, 2015).

The need for a society trained in Education and Road Safety is an issue that is constantly being discussed at the level of authorities in the field and local governments, both the Ministry of Education and the National Traffic Agency, which is the governing body of the sector, and The Ecuadorian Traffic Commission, an operational entity in the sector, has in its structures and plans programs designed to educate and train citizens.

For Mayra Leon it is important... "The absence of educational resources for teaching driver education is non-existent, which demonstrates the urgency of this study." (Leon Mayra, 2018).

Until the early 1990s, specifically in public schools in Ecuador, subjects corresponding to road safety, civics, etc. were taught. Nowadays they are only taught in professional and non-professional driving schools, when in the pedagogical field there is nothing better than educating the child from school.

For Sellan in 2019, in his research he tells us... "The road culture of people must be correct, for this, each inhabitant must be clear about the knowledge that encompasses road education, the regulations of traffic laws, the meaning of each signage that is in the streets and the security measures that serve as prevention on the roads and thus develop their learning skills showing appropriate behaviors towards others "(Sellan, 2019).

It is no longer just a problem of an index, a percentage, it is not just a cause of death worldwide, a public or state health problem, the individual is involved, that person who is on the flyer, they are questioned if In truth, he is trained or not on the responsibility of what driving a vehicle implies.

According to Luis Delgado... "Among the factors causing the problem of road traffic in the pedestrian in the lack of road education on the streets and avenues of the city of Guayaquil and especially the banking area, in addition to the use of cell phones as the main causing pedestrian accidents" (Delgado, 2019).

In the investigation by this group of people, it promotes training to society and its importance for the reduction of the mortality rate in traffic accidents.

For Alfonso Polanco, in his article Road culture in the educational community for attention to diversity, he proposes the following... "well-trained teachers with expertise, enhancers of road culture and training improvisation" (Polanco, 2020).

Alfonso's research highlights a subject that has not been dealt with much, or at least they have not given it due importance, is that the lack of training for teachers to deepen their knowledge, in driver education, in inclusion and attention to diversity, so that they act as true educators and not just as teachers.

Dr. Etienne Krug, Director of the Department of Social Determinants of Health highlights the following... "More than 50 million people have died on the world's roads since the invention of the automobile. This is more than the number of deaths in the First World War or in some of the worst epidemics" (Vial, 2021).

It's time to put into practice what we know works and move to a much safer and healthier mode of transport. This new plan will put countries on a more sustainable path, referring to the ambitious goal of preventing at least 50% of road traffic deaths and injuries by 2030. The WHO and the United Nations regional commissions, in cooperation with other partners of the United Nations Collaboration for Road Safety, they have developed a Global Plan for the Decade of Action.

There are countries in Latin America, Europe and the rest of the world where regulations have been applied, high fines for offenders, cities where they encourage their people to use bicycles to go to work, there are few places where there are optimal courses and through investigations, they train the real Road Instructors.

### 4. Conclusions

Through the investigation of this article, where important points were addressed that upon completion, we realize that they are all intertwined and that the only way to seek improvements for the good of society and try to reduce the mortality rate from traffic accidents at the level national.

Socialize and raise awareness of the importance that we must report and disclose illicit acts in all areas of our country, from a driving school that offers an approved course without going to training to the user who asks, bribes and encourages that way. We see the consequences reflected in the news, and daily.

Design true cities with responsibility for sustainable mobility, where avenues, streets, highways are created with inclusions for pedestrians, cyclists and all those who participate in the mobility pyramid.

Propose the restructuring of pedagogical content for future drivers on the roads, both professional and non-professional, where their training and their responsibility with respect to life is truly reflected.

Preparation of a career, or a professional technical profile for teachers, instructors who are the ones who train professional and non-professional drivers, can be trained by the Universities or Higher Education Institutions that have professionals in curricular designs and designs of careers through specifications of control entities.

# References

- Baranova, M. (26 de DICIEMBRE de 2019). NEO MOTOR. Obtenido de NEO MOTOR: https://neomotor.sport.es/conduccion/clasificacion-cual-es-el-pais-con-las-mejores-carreteras-delmundo.html
- EKOS. (13 de AGOSTO de 2019). EKOS. Obtenido de https://www.ekosnegocios.com/articulo/paises-con-mejores-vias-de-la-region
- Bartolomé, E. S. (22 de MARZO de 2021). AUTOBILD. Obtenido de https://www.autobild.es/listas/10-paises-mundo-carreteras-peligrosas-conducir-834177
- Ecuador, e. t. (20 de ENERO de 2018). RADIO LA CALLE. Obtenido de https://radiolacalle.com/ecuador-el-tercer-pais-con-mas-muertos-por-accidentes-de-transito-en-laregion/
- Merino, Á. (1 de SEPTIEMBRE de 2020). EL ORDEN MUNDIAL. Obtenido de https://elordenmundial.com/mapas-y-graficos/muertos-accidentes-trafico-mundo/
- 6. Vial, L. O. (2021). *World Healt Organization*. Obtenido de World Healt Organization: https://www.who.int/news/item/28-10-2021-who-kicks-off-a-decade-of-action-for-road-safety
- 7. Vizcaíno, D. S. (24 de Noviembre de 2005). *Derecho Ecuador.com*. Obtenido de https://derechoecuador.com/queacute-es-un-accidente-de-traacutensito/
- INEC. (s.f.). Archivos. Obtenido de https://www.inec.gob.pa/archivos/P4361CONCEPTOS.pdf
   Ecuatoriana, E. g. (2017). cienciAmerica. Obtenido de
- Ecuatoriana, E. g. (2017). *cherchamerica*. Obtenido de http://cienciamerica.uti.edu.ec/openjournal/index.php/uti/article/view/80/66
   Ecuador, A. d. (2018). *Dialnet*. Obtenido de
- https://dialnet.unirioja.es/servlet/articulo?codigo=6955481
- AMBATO, E. C. (2015). *Repositorio Universidad Técnica de Ambato*. Obtenido de Repositorio Universidad Técnica de Ambato : http://repositorio.uta.edu.ec/handle/123456789/9919
- 12. Montero, G. (2013). *Revista Ciencias de la Salud*. Obtenido de Revista Ciencias de la Salud: http://www.scielo.org.co/scielo.php?script=sci\_arttext&pid=S1692-72732020000400174
- Marco Cabrera, D. R. (2012). Repositorio Institucional de la Universidad Politécnica Salesiana. Obtenido de Repositorio Institucional de la Universidad Politécnica Salesiana: https://dspace.ups.edu.ec/handle/123456789/2721
- 14. Delgado, W. Q. (2019). *Repositorio Digital ULVR*. Obtenido de Repositorio Digital ULVR : http://repositorio.ulvr.edu.ec/handle/44000/2701
- 15. Diario el Comercio. (17 de Junio de 2015). *Diario el Comercio*. Obtenido de Diario el Comercio: https://www.elcomercio.com/deportes/futbol/futbol-accidentes-transito-recordados.html
- Primicias. (16 de Febrero de 2020). Primicias. Obtenido de Primicias: https://www.primicias.ec/noticias/jugada/grupo-de-hinchas-de-barcelona-sufre-accidenteautomovilistico/
- 17. El Universo. (06 de Septiembre de 2010). *Diario El Universo*. Obtenido de Diario El Universo: https://www.eluniverso.com/2010/09/06/1/1422/enfrentamientos-via-perimetral-tras-muerte-ayer-15-personas.html/
- 18. Pizza Jose. (27 de Enero de 2020). *EL Expreso*. Obtenido de https://www.expreso.ec/guayaquil/perimetral-imbatible-reina-accidentes-4084.html
- LA NACION TV. (06 de Abril de 2021). LA NACION TV.EC. Obtenido de LA NACION TV.EC: https://www.lanaciontv.ec/index.php/features/sucesos/item/5931-tres-camiones-se-incendiarontras-accidente-de-transito-en-la-via-yaguachi-jujan
- Leray, J. P. (17 de Diciembre de 2019). MoviliBlog. Obtenido de https://blogs.iadb.org/transporte/es/un-vistazo-al-futuro-diseno-de-la-red-vial-nacional-deresiliencia-de-ecuador/
- 21. Vásquez, W. (s.f.). *Presidencia de la República del Ecuador*. Obtenido de https://www.presidencia.gob.ec/infraestructura-vial-es-justicia-social-un-analisis-de-wernervasquez/
- Ramírez, S. (21 de Mayo de 2016). *EL COMERCIO*. Obtenido de https://www.elcomercio.com/actualidad/negocios/terremoto-genero-danos-usd-100.html
- Galeano, E. (2020). Revista Gestión. Obtenido de Revista Gestión: https://www.revistagestion.ec/economia-y-finanzas-analisis/por-que-el-ecuador-se-ha-estancadoen-el-subdesarrollo
- 24. Comision de Transito. (s.f.). *Valores / Misión / Visión*. Obtenido de https://www.comisiontransito.gob.ec/valores/
- Alarcon, M. (25 de Enero de 2021). DIario Expreso.ec. Obtenido de DIario Expreso.ec: https://www.expreso.ec/actualidad/ecuador-percibido-pais-corrupto-120152.html
- 26. El Universo. (21 de Julio de 2021). *Diario EL Universo*. Obtenido de Diario EL Universo: https://www.eluniverso.com/guayaquil/comunidad/director-de-la-cte-denuncia-que-vigilantes-de-la-institucion-supuestamente-cobran-dinero-para-dejar-salir-sin-revision-a-unidades-de-transporte-de-la-terminal-terrestre-de-guayaquil-nota/
- 27. Jimenez, R. J. (25 de enero de 2021). *expreso*. Obtenido de expreso.ec: https://www.expreso.ec/actualidad/ecuador-percibido-pais-corrupto-120152.html
- Guia. (s.f.). Consejo de Participación Ciudadana y Control Social (CPCCS). Obtenido de Consejo de Participación Ciudadana y Control Social (CPCCS): https://www.cpccs.gob.ec/wpcontent/uploads/2017/02/GUIA-GAD.pdf

- 29. Universo, E. (4 de Agosto de 2015). *Comunidad*. Obtenido de https://www.eluniverso.com/noticias/2015/08/04/nota/5054008/que-debe-saber-sobre-tramitesagencia-transito-guayaquil/
- Ríos, D. A. (14 de abril de 2021). *EcuadorComunicacion*. Obtenido de EcuadorComunicacion: https://ecuadorcomunicacion.com/2021/04/14/atm-con-nuevos-equipos-para-el-control-develocidad-de-automotores/
- 31. Duna Noticias. (11 de mayo de 2022). *Duna Noticias*. Obtenido de Duna Noticias: https://deunanoticias.com/201-agentes-de-transito-ya-estan-operativos-en-duran/
- 32. EL COMERCIO. (21 de Enero de 2018). *Diario El Comercio*. Obtenido de https://www.elcomercio.com/actualidad/ecuador/accidente-vial-tragico-fallecidos-transito.html
- BANCO MUNDIAL. (09 de ENERO de 2018). BANCO MUNDIAL. Obtenido de https://www.bancomundial.org/es/news/press-release/2018/01/09/road-deaths-and-injuries-holdback-economic-growth-in-developing-countries
- 34. Sellán, K. A. (2019). *Repositorio Universidad de Guayaquil*. Obtenido de Repositorio Universidad de Guayaquil: http://repositorio.ug.edu.ec/handle/redug/45034
- 35. Sobenis, A. L. (2015). *Repositorio Digital ULVR*. Obtenido de Repositorio Digital ULVR: http://repositorio.ulvr.edu.ec/handle/44000/652
- 36. Leon Mayra, C. (18 de octubre de 2018). *Repositorio Universidad de Guayaquil*. Obtenido de http://repositorio.ug.edu.ec/bitstream/redug/38071/1/BFILO-PD-INF1-18-008.pdf
- 37. Polanco, A. V. (2020). *Repositorio Digital ULVR*. Obtenido de Repositorio Digital ULVR: http://repositorio.ulvr.edu.ec/handle/44000/4093