

The role of continuing education in the formation of professional skills in the process of individual driving training

El papel de la educación continua en la formación de habilidades profesionales en el proceso de entrenamiento de manejo individual

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ABSTRACT

This article presents solutions that are defined as a paradigm shift in driving schools, which will allow restructuring the process of driver training and reducing the risk of accidents. Thus, the study discusses ways to reduce the accident rate of drivers who have recently received a license to drive a car. To achieve the goal, accident statistics were analysed depending on driving experience and driver age. The influence of the Internet and computer games on the psychology of novice drivers was also studied. Finally, the process of driving skills formation in the entrepreneurial educational process of driving schools is described. We suggested that novice drivers should demand the proper driving school and consider the criteria by which they can choose a suitable and effective driving school to obtain complete and in-depth knowledge.

Keywords: Dangerous driving, training, driving schools, transport, traffic safety, traffic accidents, novice driver

RESUMEN

Este artículo presenta soluciones que se definen como un cambio de paradigma en las autoescuelas, lo que permitirá reestructurar el proceso de capacitación de conductores y reducir el riesgo de accidentes. Por lo tanto, el estudio analiza formas de reducir la tasa de accidentes de los conductores que recientemente recibieron una licencia para conducir un automóvil. Para lograr el objetivo, se analizaron las estadísticas de accidentes según la experiencia de conducción y la edad del conductor. También se estudió la influencia de Internet y los juegos de computadora en la psicología de los conductores novatos. Finalmente, se describe el proceso de formación de habilidades de conducción en el proceso educativo emprendedor de las escuelas de conducción. Sugerimos que los conductores novatos deben exigir la escuela de manejo adecuada y considerar los criterios por los cuales pueden elegir una escuela de manejo adecuada y efectiva para obtener un conocimiento completo y profundo.

Palabras clave: conducción peligrosa, formación, autoescuelas, transporte, seguridad vial, accidentes de tráfico, conductor novato

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Recibido: 29/05/2019 Aceptado: 20/08/2019

INTRODUCTION

In the Russian Federation, at the level of state policy, a regular search is underway for effective mechanisms for legal, organizational and material support for road safety. One of the ways to ensure the proper level of safety in road traffic is the impact of administrative responsibility on road users, aimed at eliminating and preventing road traffic accidents by forming an attitude towards lawful behavior on the road. This is due to the fact that the driver or pedestrian, realizing the consequences of traffic violations in the form of administrative responsibility for them personally, will try to prevent violations and behave lawfully, which should ultimately lead to an increase in the degree of responsibility of road users (Delhomme et al, 2014).

Before considering administrative responsibility for offenses in the field of traffic, it is proposed to consider administrative responsibility in general, that is, refer to the concept, signs, principles, basis, goals and functions of administrative responsibility.

Administrative responsibility, is an independent type of responsibility in public law. Measures of administrative punishment for committed administrative offenses are aimed at protecting various relations regulated by private and public law, both in the exercise of the rights and legitimate interests of individuals and legal entities, and in the functioning of public authorities. Administrative responsibility ensures the operation and implementation of regulatory standards of all branches of private and public law. The characteristic features of administrative responsibility are determined by the nature of the administrative offense as the basis for the occurrence of administrative responsibility and the legal consequences that have arisen in the process of their application.

DEVELOPMENT

Literature review

In legal literature, including in the educational literature on administrative law, there are many options for the definition of administrative responsibility. Thus, administrative responsibility is traditionally understood as the implementation of administrative sanctions, the application of administrative penalties by an authorized body or person to citizens and legal entities who have committed an offense. This point of view was widespread among Soviet scientists.

So, A.B. Agapov notes that administrative liability establishes physical and moral coercion measures applicable to the person guilty of an administrative offense, restricting the personal property rights of the violator, or his public rights (Agapov, 2015).

B.V. Rossinsky defines administrative responsibility as a type of legal responsibility, expressed in the designation by the body and official endowed with the relevant powers, of administrative punishment to the person who committed the offense (Rossinsky, 2004).

Questions of psychology of road safety are acute in transport psychology (Gaymard, 2017; Novaco, 2015), at the same time, the psychological aspects that determine the aggressive driving style are not studied to the extent that this is required to ensure safety on the roads (Tan *et al.*, 2017). It is the contradiction between the expressed social order for road safety and the lack of theoretical certainty of the “dangerous (aggressive) style” phenomenon, its psychological determination, which determines the relevance of the project.

Most researchers analyze the activity of the driver and the psychological reasons that reduce his professional reliability. So, within the framework of the system approach of transport psychology, they turn to driving in the context of extremity and personal determination of behavior behind the wheel (Markšaityte *et al.*, 2017). Experts give predictions of the main types of behaviour of road users (including styles of driving). The emphasis on the operational characteristics of the driver's activity is made by M.A. Regan and C. Hallett (2011). In these and other publications, driving a vehicle is considered as an activity, and activity in special (extreme) conditions.

Methodology

Theoretical and methodological basis of the research includes the leading domestic and foreign papers in the field of educational process of driving schools, including monographs, articles, and analytical reviews. The research is based on common methods, like methods expert analysis, statistical analysis and comparative analysis, a system approach, synthesis, expert assessments, tabular and graphical data visualization techniques. Interactive methods as contrasted with passive and active education methods require joint education: both students and a lecturer are education subjects, a lecturer comes as more experienced educational process organizer, given that all the participants interact with each other, exchange information, collectively solve problems, model situations, evaluate colleagues' actions and their own behavior.

Discussion

Since 2007, there has been a steady tendency in Russia to reduce the number of accidents with injuries. In 2000, there were 157.6 thousand such accidents, but then, due to the rapid growth in car use, their number in 2005 exceeded

220 thousand.

According to the data of the State traffic inspectorate of the Russian Federation, in 2015 in Russia there were 184 thousand traffic accidents with victims, which killed 23 114 people, 231 197 people were injured and injured. For comparison, in 2005 the number of accidents amounted to 223,342 (a decrease of 17.6%), 33,957 people died (-31.9%), 274,865 people (-15.9%) were injured.

The mortality rate from road accidents in 2015 is 15.8 per 100 thousand people. For comparison, in 2005 this indicator was 23.6 per 100 thousand people. In 2015, Moscow (more than 10 thousand traffic accidents) and St. Petersburg (7.2 thousand) became the most emergency regions, however, the Moscow region (1.3 thousand dead) and Krasnodar Territory (1.1 thousand). 8.6% of accidents were caused by drunk drivers (in 2014 - 9.4%).

According to the World Health Organization (WHO), more than 3 thousand people die every day as a result of road accidents and about 100 thousand are seriously injured. Every year, from 20 million to 50 million people are injured in road accidents, and more than 1.25 million people (186 thousand of them children) are victims, this figure has remained virtually unchanged since 2007.

Traffic accidents are the leading cause of death for people between 15 and 29 years old. The least protected road users are motorcyclists (23% of all deaths due to road accidents), pedestrians (22%) and cyclists (4%). 90% of fatal accidents occur in low- and middle-income countries (African and Asian states).

According to the latest published WHO data, China and India are leading in the number of deaths in road accidents: in 2013, 261 thousand and 208 thousand people died in car accidents, respectively. Moreover, by the ratio of death to population, these countries are considered relatively safe. In China, in 2013, 18.8 people per 100 thousand people died, in India - 16.6 people. In Russia in 2013 this indicator was 18.9 (in 2015, 15.8).

The safest, according to statistics, are the roads of Europe, Canada, Australia, New Zealand and Japan, where this figure does not exceed 10 people per 100 thousand people. The lowest rates are in Sweden and the UK (2.8 and 2.9 deaths per 100 thousand people, respectively). In the United States in 2013, the figure was 10.6 per 100 thousand people. The only country in the world where more than 40 deaths were recorded on the roads per 100 thousand people is Libya (73.4). From 30 to 40 dead were recorded in Iran, Thailand, and sub-Saharan Africa.

Signs of an administrative offense differ from elements of its composition. In the scientific literature, the composition of an administrative offense is defined as a set of features that identify the act as administratively punishable. If at least one sign of an offense is missing, then this implies the absence of the composition as a whole - this indicates a limited composition. Article 24.5 of the Code of Administrative Offenses of Russian Federation stipulates that it is impossible to start proceedings in the case, and if proceedings have already begun, then it will be subject to termination if there is no administrative offense.

Administrative offenses are found in all areas of administrative law, and the field of traffic is no exception. Road traffic should be understood as a complex of social relations that arise in the process of movement of people and goods, both with the help of motor vehicles and without them (Haeger et al, 2018).

When characterizing an administrative offense in the road sector, it is necessary to highlight the signs of this offense:

- Unlawful act;
- Guilty act;
- Subject (individual or legal entity);
- Public danger;
- The punishable act.

The wrongfulness of these offenses consists in non-compliance with the norms of regulatory legal acts that regulate legal relations in the field of traffic, the Rules of the road can serve as an example of such legal acts (Hayes et al, 2017).

Guilt is a person's mental attitude to a committed socially dangerous act. As noted above, an act is found guilty if it is expressed in one form of guilt (intent, negligence). The subject of an administrative offense in the field of traffic is a person who committed an unlawful act in this area and who is able to bear responsibility for its commission. In turn, the subjects are divided into three groups: general, special and special (Hatfield et al., 2018). Common subjects include sane individuals who have reached the age of sixteen years and have committed an administrative offense in the field of traffic. The special group includes: deputies, judges, prosecutors, military personnel, disabled drivers, as well as other entities with special rights (Lang et al., 2018).

The group of special subjects includes two subgroups. The first includes persons performing professional functions (for example, traffic police officers of the Ministry of Internal Affairs of the Russian Federation) (Petrov, 2017). The second group includes persons who are granted special rights (drivers of vehicles). A driver is recognized as a person who drives a vehicle, regardless of whether he has received the right to drive a vehicle, has it been deprived

of it or not (Shimada et al, 2018). In accordance with the rules of the road, the driver is the person driving the vehicle.

The public danger of an administrative offense is formulated as an unlawful act (inaction) committed by an individual or legal entity for which administrative liability is provided on the basis of the law. Speaking about administrative responsibility in the field of traffic, we can conclude that we are talking about a violation of the Rules of the road and regulations in this area.

Some young drivers have extremely high accident rates. For example, in 1995 in the United States, 16-year-old drivers became participants in 15 thousand accidents, compared to drivers aged 20 to 40 who participated in nine and four accidents, respectively (Wu et al., 2018). The main reason why young drivers are more vulnerable to road accidents is that they do not have the necessary skills and driving capabilities (Freydier *et al.*, 2016). This is not surprising, because driving is a complex, independent activity, involving many basic tasks (for example, steering, braking) and skills of higher order (for example, perception of danger, problem solving), many of which are necessary for the safe operation of vehicles (Carter *et al.*, 2014).

In view of the limited number of hours in driving schools, of course, it is desirable that young people receive the initial driving skills. Usually parents or older comrades teach the basics of driving, tell the driving mechanism, or teach institutes in technical specialties the appropriate discipline.

To obtain a driver's license in Russia, it is necessary to take an examination in Public Authority, which called - the State Traffic Safety Inspectorate (STSI) of the Ministry of Internal Affairs of the Russian Federation. Nevertheless, the teaching of driving skills in driving schools required to pass the STSI exam is not the sole purpose of training future drivers. The main goal of many driving schools is to train the driver's future driving skills, both on the technical side and on the psychological side.

It is assumed that drivers who have recently completed training in a driving school and who obtained the license should have a lower accident rate than those who did not study in a driving school or completed it long ago. Despite the belief in the value of safety, the program of driving schools for future drivers has not been proven effective (Isler *et al.*, 2011). This may seem contradictory, but according to statistics, many driving schools teach formally, without considering such problems as the basics of medical knowledge, the psychology of drivers and others.

The authors of this article came to the conclusion that an adjustment of educational programs in driving schools is necessary. Driver training can be improved if attention is focused not only on knowledge of the basic theoretical driving skills, but also on solving the urgent problems of emergency situations. In this context, priority should be given to the study of driving conditions in which young drivers will be presented in an emergency risk situation. Of course, the challenge is to obtain such learning skills, both in real and virtual environments.

The content of training programs in driving schools should be based on empirical data and focus on those psychomotor, cognitive and perceptual mental disorders that were shown to be associated with a high accident rate for novice drivers. The curriculum should examine the experience of demonstrating existing safety methods and thus motivate young drivers to drive safely.

Results

The analysis showed that the main culprits of accidents are drivers with experience of up to 2 years, their share in the total number of accidents up to 3 years is almost 40% annually distribution of the number of accidents depending on the experience (Pyankova, and Fattakhov, 2017).

In a detailed analysis of road accidents, depending on the driving experience, a certain regularity was established: the peak of accidents among novice drivers falls around the end of the first year, the end of the second and the end of the third, i.e. in the ninth month, in the twenty-second month, and in the thirty-third (Table 1, Figure 1). In the analysis of accidents among novice drivers, you can highlight some features.

Table 1. The analysis of accidents in 2018

Driver experience, years	Driver age, years			
	Less than 25	25-35	35-45	Over 45
1-2	23	19	18	16
2-4	20	19	16	13
4-7	18	16	13	18
7-11	16	13	11	9
More than 11	–	12	10	7

The main types of accidents are, in contrast to experienced drivers, where collisions and hitting a pedestrian lead

almost equally (Petrov, 2017). The main places of the accident are the span and intersections, and on the span there are almost twice as many.

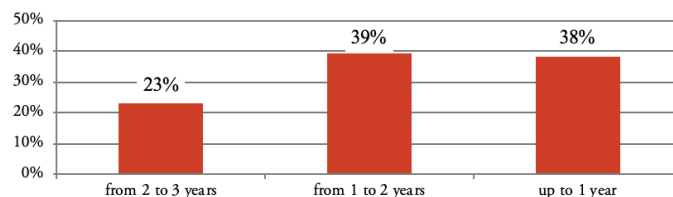


Fig. 1. The distribution of the number of accidents depending on the driving experience

The main road accident schemes are the passing direction of vehicles, vehicles do not turn, traffic accidents at intersections - the direction of vehicles - at a right angle, then comes a pedestrian outside the pedestrian crossing.

The main reasons for such traffic accidents among young drivers are the inconsistency of speed with specific driving conditions. Why is this happening? In our opinion, the answer lies in the lack of training in the auto school.

The number of families with a computer in our country is constantly growing, computers are becoming cheaper and more affordable, this problem is becoming global. For the time being, unfortunately, it is not discussed in the pages of scientific publications, which does not lead to its early resolution. Young people who are strongly influenced by the masses of media culture, after watching *Overdrive*, *Forsage*, *Taxi*, *Thirst for Speed*, *Race*, *Crazy Riding* and others, want to repeat similar actions in life as the characters of these films (Tronsmoen, 2008; Taubman-Ben-Ari, 2010).

From the above it can be concluded that as a result economic crisis and various reforms of the driving school market in Russia is not in the best position. Due to the influence of macroeconomic and microeconomic factors on their activities, the number of driving schools shrinking. Since not all driving schools can provide correctly equipped circuit and theoretical training classes, resulting in do not have a license to conduct educational activities. In the market of services there are only the largest and most popular driving schools.

IMPLICATIONS

Driving school education should focus on those aspects of driving that are related to the risk of accidents. It is necessary to consider specific options for accidents, statistics, the latest news from the media about accidents and propose solving problems to prevent accidents. Nevertheless, the statistics of accidents in the city are quite small, measures to prevent accidents have not been studied, research is practically not carried out, therefore the empirical basis for the development of training programs is limited.

The problem is that driving schools superficially study the theory and practice of driving because of the limited time. The total duration of classes is from 120 to 140 hours, 100 of which are in the theoretical part of the lesson. The effectiveness of the courses can be enhanced by a more meaningful choice of content, an increase in the number of training hours, with an emphasis on skills related to participation in emergency situations, such as hazard identification and risk assessment.

Driver training can be improved if attention is focused not only on knowledge of basic theoretical driving skills, but also on solving significant problems in emergency situations. It is worth noting that the age factor is also of great importance when driving. Adolescent novices are more likely to have crashes than older people (Shimada et al., 2018). And regardless of skill level, young people are relatively immature and not motivated in the field of safe driving. Driving schools teach basic safety skills, but students do not realize the full responsibility for road traffic.

Statistics from different countries, including Russia, show that young drivers aged 18 to 24 are participants and perpetrators of accidents 5-7 times more likely than drivers aged 30 or more. The main reasons for this are the lack of experience and a number of behavioral features, including those due to age-related brain development.

In the Netherlands, in 2017, drivers between the ages of 18 and 25 accounted for about 9% of all drivers, but were involved in 23% of fatal accidents and serious injuries. Similar patterns are characteristic of all countries, which can be explained by the peculiarities of the development of the psyche of young people and, accordingly, their behavior and the quality of education in driving schools.

The greatest risk of an accident exists during the first year after obtaining a driver's license, but then decreases with the acquisition of driver experience. If we talk about the degree of risk of driving for men and women aged 18 to 25 years, then men have a significantly higher level of accidents. Younger drivers more often than experienced ones get into so-called isolated accidents when the car leaves the road or crashes into a stationary obstacle.

CONCLUSION

Young people, as a rule, study the theory and skills of driving, for the sake of obtaining license. They are not particularly motivated to learn safe driving techniques, because at the moment they have very little driving experience. Optimal for driving schools would be homework with subsequent testing in the classroom, creative tasks, increasing the number of hours of theory and practice, writing the final work. The task facing the community for road safety is to find the best ways of training, which will reduce the accident rate, the risks of causing the life time and health of citizens.

The content of training programs in driving schools should be based on empirical data and focus on those psychomotor, cognitive and perceptual mental disabilities that have been shown to be associated with high accident rates for novice drivers. The curriculum should learn experience demonstrating existing safety practices and, thus, motivate young drivers to drive safely. Methods and methods of training should be developed to address lifestyle problems and psychosocial factors that can mitigate any learning effects and lead to dangerous driving.

It should include in the training of young drivers topics based on competence that recognize the individual differences of drivers and adapted to the various disadvantages of driving.

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