

APPLICATION OF STUDENTS 'KNOWLEDGE AND SKILLS IN THE FIELD OF TRAFFIC

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Abstract: The mission of higher education is to continuously transfer and create scientific knowledge and professional competencies through organized studies and research, which enable, first of all, social, cultural, economic and other progress of our country and its citizens, in constantly changing circumstances of life and development. Within the system of higher education, two types of studies are realized, academic (which are realized through three cycles) and vocational studies (which are realized through two cycles), and in order to ensure better quality, flexibility and transparency of higher education, the Higher Education Institution (HEI) will further specify the differences between vocational and academic studies in the learning outcomes, skills and competencies acquired in these types of studies by consistently respecting the missions of those studies. We are educated and learn throughout our lives when we gain experience and knowledge at the same time - values that will mean something to us in a later period. That is why it is important to acquire knowledge and skills at school age and during studies, which can be used later in work. Within the Academy of Technical-Educational Vocational Studies in Nis, one of the study programs is Road Traffic. Although the students who are in this study program study and acquire knowledge in the field of traffic, the aspiration was to check other students in other study programs through research, through a survey. The surveyed students answered the questions by circling one of the offered answers on the questionnaire. The most interesting questions and answers will be presented in this paper. The current education strategy in Serbia is concerned with establishing goals, directions and mechanisms for the development of education during the following ten years. Taking all daily traffic events into account, as well as the fact that the young constitute a large number of traffic users, it is necessary to consider their knowledge of traffic regulations and traffic signalization. The target group of this research are students from College of Applied Technical Sciences Niš. The paper provides the statistical data of the students' test results, as well as the most common questions and the topics to which students paid special attention. Special importance is given to the parts, i.e. topics students found difficult to understand and to the extent to which they are familiar with the law on the road traffic safety.

Keywords: education, students, traffic regulations

1. INTRODUCTION

Education is a process of changing the personality in the desired direction by adopting different contents depending on the age and needs of the individual. The need for traffic education stems from the need to move people, as well as the need to transfer various goods. The growing need that people show for movement, as well as for the transport of various goods in order to satisfy basic human existence and improve the quality of life, leads to increasing consequences of side effects from the need caused to move people and satisfy their existential needs. Due to the reduction of the consequences caused by the need to move people and satisfy their existential needs, it is necessary to respect certain rules that apply to all participants under the same conditions. In order for these certain rules to be respected, a certain traffic education is necessary. Various Universities around the world are involved in traffic science, profession and education.

Within the Academy of Technical-Educational Vocational Studies in Nis, one of the study programs is Road Traffic, which deals with the study of traffic science and profession, and which educates professional staff by transferring the accumulated knowledge, skills and values. Although the students who are in this study program study and acquire knowledge in the field of traffic, the aspiration was to check, through research, through a survey, other students in other study programs. The surveyed students answered the questions by circling one of the offered answers on the questionnaire. The most interesting questions and answers are presented in this paper.

The first part describes the structure of higher education within the education strategy. Special attention is given to describing the development of vocational studies in next period. The third chapter explains the structure of the subjects in which the areas that were the subject of the research in the survey are studied. The results of this research, which are presented graphically and for certain questions that were singled out as interesting, are further continued.

2. STRUCTURE OF HIGHER EDUCATION IN LIFELONG LEARNING

The mission of vocational studies is that by improving, transferring and exchanging knowledge, they provide opportunities for society and the individual to benefit from knowledge and skills aimed at the world of the profession and the job market.

The development of higher vocational education is aimed at achieving the desired state of general strategic features - coverage, quality, efficiency and relevance - and specific strategic features - social recognition, cooperation with the environment, research and teaching staff development. In the period until 2020, the development of higher vocational education will achieve a vision that is expressed by the following characteristics:

a) Coverage:

- at least 30% of students who enroll in the first year of undergraduate studies, enroll in vocational studies...

b) Efficiency:

- the average study is at most a year longer than provided by the study program, and in that period at least 70% complete the enrolled studies,
- a maximum of 15% of students leave studies

c) Quality:

- vocational study programs provide professional competencies to graduates based on learning outcomes and based on long-term cooperation with potential users of their knowledge, and teaching is oriented towards achieving practical knowledge and professional skills and abilities, with a curriculum in which practical training occupies an important place,
- significantly improved teacher competencies, so that all teachers have top practical knowledge, skills and achieved results in areas that are relevant to the study program,
- improved resources that enable students to acquire the necessary practical knowledge and skills, and applied research has been organized in the areas in which master studies are conducted...

d) Relevance:

- the relevance of vocational studies (harmonization of the number and type of study programs with the needs of the job market, the requirements of the profession and the interests of students) is increased through stronger connections of these studies with the economy and public sector of the region and local government...

e) Cooperation:

- Vocational studies are included in European associations EURASHE (European Association of Institutions in Higher Education), UAS (European Network for Universities of Applied Sciences) and The Copenhagen process and achieve international cooperation in education and training,
- long-term cooperation has been established with the business world,
- in the area of higher education, an institutional dialogue has been established with academic studies and cooperation has been established in the field of education and research...

f) Social recognizability:

- a number of joint programs with higher education institutions (HEI) from abroad have been developed,
- a coherent structure of two-level study has been established in accordance with the Bologna Declaration - basic, specialist and master vocational studies, and horizontal and vertical mobility of students between academic and vocational studies is possible, with additional conditions defined by the HEI,
- professional titles are harmonized in the legislation that defines labor relations,
- the titles of teaching staff have been harmonized with world practice and criteria for the selection of teachers...

g) Research and innovation activity:

- research activity is performed in applied research, which is mostly performed in cooperation with the economy,
- research activity has become a structural element built into the organization of the higher vocational school, it is connected with the programs of vocational specialist and master studies,
- the scope of research and professional activity and the number of active research staff has increased ...

h) Teaching staff:

- there are several teaching titles and all of them are re-elected and the conditions for selection, employment, evaluation and re-election of teachers of these studies have been redefined, specifically differentiated from the conditions that apply to academic studies,
- more than 50% of teachers have doctorates, relevant scientific or professional results in the field they teach, and other teachers have top practical knowledge, skills and results achieved during the work of at least three years in areas relevant to the study program...

2.1. Vocational studies development strategy

The generally accepted agreement in the following attitudes and commitments is important for the development of vocational studies. First, the system of vocational studies must be harmonized with the principles of the single educational space of Europe and based on the internationally comparable foundations of the binary system of higher education. Second, it is necessary to establish a clear program and institutional definition and non-overlap of academic and vocational studies.

Vocational studies, by their outcomes, must be in the function of achieving the mission, harmonized with the needs of the labor market and the profession, and strongly connected with the economy and the public sector.

The vision of higher vocational education will be realized through consistent commitment to the realization of the following strategic directions:

- 1) cooperation with the environment;
- 2) research and artistic activity as a basis for further development;
- 3) regulated environment;
- 4) attractive and competitive system of higher vocational education.

3. EDUCATION OF STUDENTS IN THE FIELD OF TRAFFIC

The questions for this survey mostly referred to two subjects that belong to the group of traffic systems, namely the Theory and Regulation of Traffic Flows and the Technique of Traffic Safety and Control. The basic content of the course is the acquisition of necessary and specific knowledge about the basic parameters and characteristics of traffic flows and the legality of movement in traffic flows, as well as standards and regulations necessary for the design of vertical, horizontal and light traffic signals and traffic management. Also, students acquire specific knowledge about the methods and procedures of conducting inspections, and special attention is given to traffic control.

The previous research was conducted with the generation of students in 2015 on the same questions, and the results will be comparatively explained with the current data obtained.

3.1. Research results

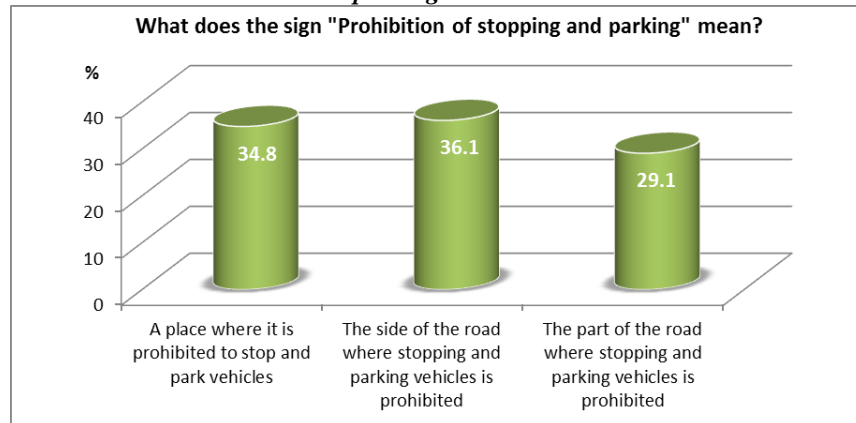
A total of 155 students, male and female, who have a driver's license, were interviewed. The largest number of respondents (52%) have a driver's license in the period between 3 and 5 years, up to 2 years, 37%, other respondents have more driving experience over 5 years. In the group of general questions, it was important to determine how often they drive the vehicle. 56% drive a car every day, 39% several times during the week, and the rest use the car several times a month or rarely. One of the important questions is how well they know traffic signals and traffic regulations. 35% of them said "excellent", 52% said "very good", and only 13% knew "good" traffic regulations and signalization.

After the general questions, the students were waiting for the main group of professional questions, which were insisted on. Each question contained a picture and three offered answers, and the respondents answered by circling one of the offered answers.

Picture 1: Traffic sign "Prohibition of stopping and parking" (II-34)



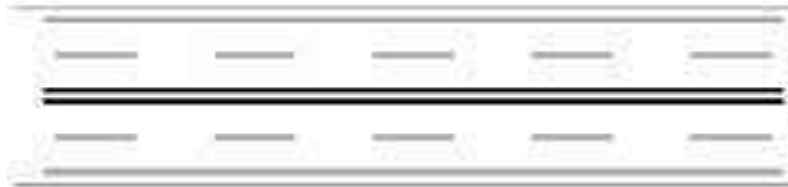
Graph 1: Percentage share of respondents' answers to the question - What does the sign "No stopping and parking" mean



According to the Rulebook on traffic signals ("Official Gazette of RS", No. 85/2017), communication. sign II-34 indicates the side of the road on which stopping and parking of vehicles is prohibited. A variety of answers to this question could be expected. Namely, regardless of the fact that we encounter this sign every day, its true meaning does not seem to be completely known. The largest number of surveyed students said that it marks the side of the road where stopping and parking vehicles is prohibited (36.1%). Only a third of students answered that the sign indicates a place where stopping and parking is prohibited (34.8%). A slightly lower percentage (29.1%) said it marked the part of the road where stopping and parking vehicles was prohibited.

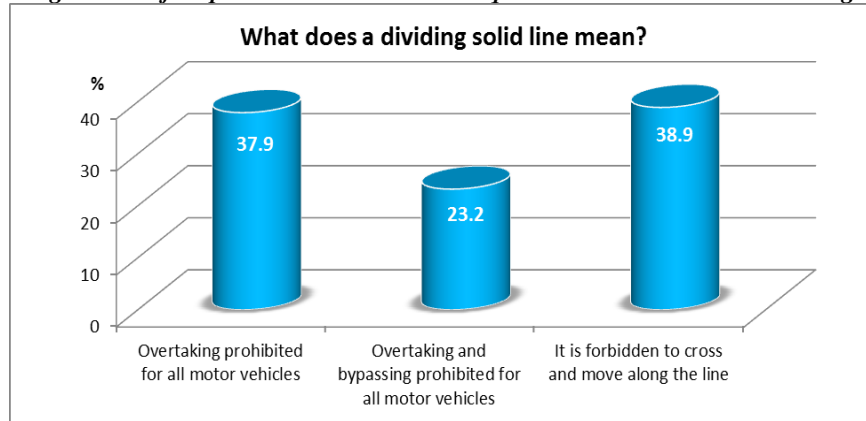
Unlike the previous research, the answer "A place where it is forbidden to stop and park vehicles" was given by 58.2%, and only 22.7% of students answered correctly.

Picture 2: Demonstration of the application of a dividing solid line



According to ("Official Gazette of RS", No. 85/2017), the dividing dashed and uninterrupted line can be: ordinary or double. A dividing unbroken line means a ban on crossing that line and a ban on moving along that line.

Graph 2: Percentage share of respondents' answers to the question - What does the dividing solid line mean?



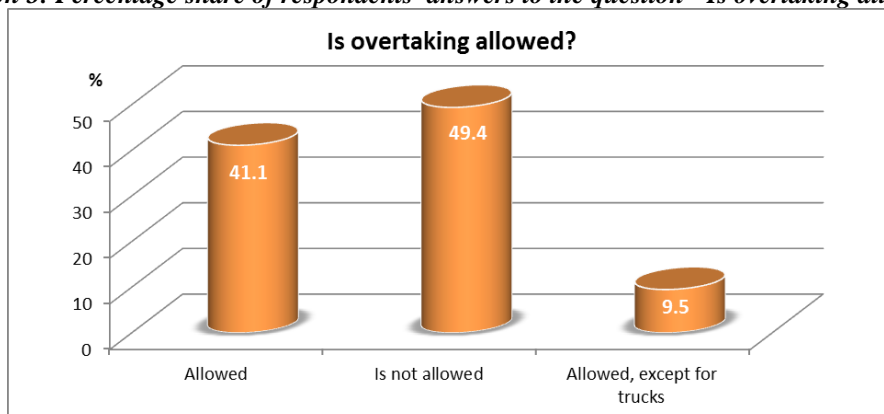
With approximately equal percentages in the answers, the correct answer was in the first place with the accuracy of the answer with 38.9%. The offered answers "Prohibited overtaking for all motor vehicles" and "Prohibited overtaking and bypassing for all motor vehicles" are represented in the answers with 37.9% and 23.2%, respectively. In a previous survey, 26.4% gave the correct answer to this question. It can be stated that the greatest progress has been made on this issue, because a special thematic unit is dedicated to this area of traffic regulation.

Picture 3: Vehicle movement on the road



The picture shows two passenger cars moving on the road. The road is not marked by a dividing line, so it is not known exactly where the boundaries of the road lane are for both directions. The road continues to bend, so the question arises whether, in the situation as in the picture, overtaking is allowed or not.

Graph 3: Percentage share of respondents' answers to the question - Is overtaking allowed?



The surveyed students are in 41.1% of the opinion that on this part of the road, under the given circumstances, it is allowed to overtake this passenger car. With the answer that overtaking is not allowed, 49.4% of them answered, so it can be said that the students knew the correct answer to this question. Other respondents (9.5%) think that the situation in the pictures allows overtaking, except for trucks.

The correct answer to this question in the previous research was in 35.6% of students. It can be seen in this case that the students' knowledge of this regulation has improved.

4. CONCLUSIONS

Education in the function of lifelong learning is the primary task for each of us. With the development of the strategy until 2020 and the realization of the planned mission, we can expect effects in terms of acquiring knowledge and better quality teaching content. The development of higher vocational education is aimed at achieving the desired state of general strategic and specific strategic characteristics. This research has shown that students, as young drivers, in the way of acquiring knowledge about traffic, must approach with special care and seriousness. The reading of the Rulebook and the Law must be more detailed and with greater understanding, because the survey showed that only 35% of students have excellent knowledge of traffic signals and traffic regulations. The issues that have been singled out in this paper are presented only in one part where they wanted to draw attention due to the fact

of misinterpretation. The opinion that something is true, correct and understandable was confirmed in this research as a misconception!

REFERENCES

- “Education development strategy in Serbia until 2020”, (Official Gazette of RS, no. 55/05, 71/05 - correction, 101/07, 65/08, 16/11, 68/12, 72/12)
- “Rulebook on traffic signals”, (Official Gazette of RS, no. 85/2017)
- “Road Traffic Safety Act” (Official Gazette of RS, no. 41/2009, 53/2010, 101/201, 32/2013 55/2014, 96/2015, 9/2016, 24/2018, 41/2018, 41/2018, 87/2018, 23/2019 i 128/2020)
- Stanković M., Bogičević D., Gladović P., & Stojanović N. (2015). *Poznavanje pravila saobraćaja u funkciji obrazovanja studenata*, Savetovanje sa međunarodnim učešćem na temu: Saobraćajne nezgode, Zlatibor.