NATIONAL UNIVERSITY OF PUBLIC SERVICE
Doctoral Council

RÓBERT VÉG ENG. LT. COL.

The role of technical education in road driver training

Dissertation (PhD) author's review and formal critiques

Budapest
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Supervisor:

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reader

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1. SCIENTIFIC PROBLEM

In recent years law has significantly changed in the area of road driver training. This changing makes the casemaps and the examination system of the training. Compared to car technology regulation is in lag with many years and there are a lot of essential knowledge missing or outdated. Knowledge needs to be based on theory and practice mainly with practical application.

The statue defines just the minimum hours for the training so to expend more hours for it could work, but this is just a theoretical possibility in the competitive market. In the reality this is an unresolvable problem. Almost every driving school uses the minimum hours because schools can only optimalize their expenses and be competitive that way.

28 hours (24/2005. GKM statue 3. appendix) are defined for all of the theoretical hours in vehicle category „B", but this includes „Traffic Fundamentals", „Driving Theory", „Structural and Operational Knowledge" courses. In practice driving schools gives about two-four hours for the course of „Structural and Operational Knowledge". During this time students have to get knowledge about the structure and operation of the cars. The National Traffic Authority published a curriculum and a guide about category „B". This document states students have to learn about the structure of the car, the operation of the engines and auxiliary equipments, electrical and power transmission equipments, the suspension, car steering, the braking system, vehicle operation and driver assistance devices. As it can be clearly seen from the list this is impossible.

The „Structural and Operational Knowledge" subject has to lay the foundations for the safe control of the vehicle, so to reach this aim it's important to let the taught curriculum cover the prescribed requirements. It has to include the optimal technical knowledge that does not impose excessive requirements for the organizations that provide these courses, but at the end of the training the necessary training for the safe vehicle leadership and the acquisition of sufficient technical knowledge is provided for those students who have the minimal qualitication needed for the enrolment.

In the training of vehicle category „C" it is possible to face a problem of a different kind. In category „C" for the education of subject „Structural and Operation Knowledge" and „Safety Control and Operation" the lessons provided are relatively sufficient, although it is not never possible to conduct enough training sessions for these subjects. The problem stems in the fact that the curriculum of these subjects and the technical content of vehicles that have been used in education after 2003 December 1 do not quite match. Teaching includes deaerating the serial Bosch meter, and the vaporizer antifreeze pump, but it is almost not possible to meet these equipments on trucks that run on roads today. It is possible to mention similar examples where there is a difference between the curriculum that needs to be taught and the real vehicle construction.

When I prepared my dissertation the main viewpoint was the problem of Hungarian soldier officer candidates's driver training. The training documents define which level of driving licence is needed for a prospective officer, but nevertheless my opinion is that in the first officer's post, which is a commanding, managerial post, they should know those technical equipments that belong to their supervision, and also acquire basical driving skills. Condisering these viewpoints I deal with the training problems of vehicle category „B" and „C". Of course because driver training is regulated on a national level I can use my results attained here in the whole driver training area, so these results are not only valid for the Hungarian soldier officer candidates's training.

The task of the dissertation is to find a solution for the problems above and adjust the training, even with the alteration of the legal environment.

2. RESEARCH AIMS

During the procession of the topic I set the following research aims:

1) to analyse and examine the legal environment of road driving training, propose to create an integrated training organization in the National University of Public Service in favor of the Hungarian soldier officer candidates' training in accordance with the regulation of the National Traffic Authority (NTA);
2) in the training of vehicle category „B" to examine the education and examination of the subject „Structural and Operation Knowledge", the definition of necessary number lessons, and splitting it into topics;
3) in the training of vehicle category „B" to modernize the curriculum of subject „Structural and Operation Knowledge", to revise the exam test database, to define missing exam questions;
4) in the training of vehicle category „C" to revise the examination and education of subject „Safe Control and Operation", to analyze its necessity, to ensure the adequacy of the current technical level of curriculum and exam questions;
5) in the training of vehicle category „C" to analyze the necessary objective conditions and lessons of education for the subject „Safe Control and Operation", to clarify the necessery conditions of training, to determine those absent conditions which have to be provided in order to fulfill the requirements determined by the Traffic Authority;
6) in the training of vehicle category „C" to modernize the curriculum of the subject „Structural and Operation Knowledge", to refine the examination questions, to determine the missing examination questions;

3. RESEARCH METODS

To achieve the research aims i applied the next research methods:

- I searched, studied and systemized the related laws in connection with the topic, the measures, the literature which can be found and the latest research results;
- I analysed the documents attached to the research topic, scientific works;
- I applied the method of the comparison and conclusion during the examination of the sources;
- I consulted specialists of the National Traffic Authority and the Government Agency Traffic Inspectorate of State Pest;
- I consulted theoretical and practical trainers who take part in road driver training and also school leaders. During this time I collected and analysed the problems and specifics that emerged during the driver training;
- I made a survey in the form of questionnaire among those Hungarian soldier officer candidates who successfully passed the technical exam. This questionnaire was about the utility level of this knowledge, I analysed statistics and drew conclusions, identified regularities.

4. BRIEF DESCRIPTION OF THE ACHIEVED EXAMINATION CHAPTER BY CHAPTER

I prepared the dissertation in accordance with the objectives of the research topic in consideration of the hypotheses, so according to this logic the dissertation consists of an

introduction, three main parts and a summary with the results of the dissertation. The paper is supplemented with illustrations and a table of contents.

In the introduction I established in a brief overview the importance and topicality of the topic that I wanted to process, I drew up the scientific problem and research hypotheses here, I reviewed the research methods, the expected results and their utility possibilities.

In the first chapter I summarize the mosz important stations of road driver training development. I examine the function and legal scope of the official institution system that controls the vehicle driver's training and I examine the correlations between them. I summarize the foundation and operation conditions of a driving school, those effective measures that have the largest effect on the training, the operation of the training organization and the minimal requirement system of personal and objective conditions. I define the change potentials of measures in a summary at the end of the chapter, taking into consideration the Hungarian soldier officer candidates' training, and the opportunities of the formation of a driving school reflecting the interest of Hungarian Army better inside the army itself.

In the second chapter I examine, analyze and evaluate the vehicle category „B" „Structural and Operation Knowledge" subject, the examination and educational requirement system of the safety control of the vehicle, its operation and the objective conditions of the training. By using the statistical data of the Traffic Authority regulations, the educational statistical data of training organizations, and test data concerning the Hungarian soldier officer candidates' training, I define the time needed for the education of the subject „Structural and Operation Knowledge" in category „B". I examine the curriculum of the subject named „Structural and Operation Knowledge" by topics, I analyze the relevant test exam questions which can be found in a data bank and I define the scope of the necessary test questions.

In the third chapter I examine, analyze and evaluate the educational and examination requirement system of subject „Safety Control and Operation", „Structural and Operation Knowledge" in vehicle category „C". I define those necessary, currently absent parts of these subjects needed for education, I refine and replace the necessary questions for education in order to make the requirements made by the Traffic Authority prevail. In the final part I announce my new scientific results, I draft my recommendations and the areas requiring additional research. The bibliograpy implies the cited literature in detail, and the publicational register implies the list of my appeared scientific publications in this topic.

5. SUMMARISED INFERENCES

By the examination that is based on the legal environment of road driver training I state that the I. statue of the year 1988 regulating road traffic provides the legal background of the possibility of a different regulation for the Hungarian Army in certain cases. Hereby we may create a training organization that is different from other driver schools, which complies with the measures, but reflects and asserts the interest of the Hungarian Army better.

I examined and summarized the personal and objective conditions of the driver training and I establish that in the National University of Public Service Faculty of Military Sciences and Officer Training the conditions are given to set up a training organization with a new system.

By using my experiences that I got in the ZMNDU Bolyai driving school that operated earlier, in the possession of the knowledge of the NUPS training system, using the legal potentials, I propose to create a road driver training organization that works in an integrated system and not independently. This educational system uses the training system of NUPS, fits in it, however it is fully complies with the relevant measures of the traffic authority. I propose to acquire the training permit only for the theoretical training, because the University has got the best conditions to this.

Regarding the permission of the training I drew up a „Training Program”concerning the education of vehicle category „B” and „C” and I defined the necessary subjects to perform the training programs. With these documents we can display the road driver training in the training system of the NUPS and it is possible to create the curriculum in the administrative system Neptun to be able to assign the Hungarian soldier officer candidates who are on training. I elaborated in detail and defined the personal and objective conditions which are necessary for operating, and the tasks that have to be done later. After the analysis I summarized the advantages that the University can gain by creating the integrated training organization. This material provides a basis for a managerial decision.

My proposal is to create an integrated training system that works by fully keeping the relevant regulation of the currently effective education and examination system. This proposal is expedient and cost effective, and it takes advantage of the abilities and conditions of the NUPS.

The driver has to know the safety control tasks of the vehicle before a departure, he has to be able to do these tasks, and has to be able to deduct the suitable conclusions from it, that is, to decide if he can start with the vehicle or not. The driver has to be able to recognise the technical problems and has to decide whether to go on. In case of the vehicle category „B” training the driver has to acquire the abilities in a practical level which are defined by the traffic authority. The structural and operation knowledge that the driver got during the education has to lay the foundations for the safety control of the vehicle. The traffic authority defines the number of the minimal theoretical and practical lessons, but the decomposition of this number of lessons onto subjects is the school leader’s task. The school leader takes the personal and objective conditions of his own training into consideration, and distributes the number of lessons according to this.

I set it as a task that I should determine the minimal time that is necessary for the education of „Structural and Operation Knowledge” subject, in order to do this I examined the hour distributions applied by the different training organizations According to the best practice I made a probable distribution of training subjects required by the Traffic Authority in order to determine whether the mandatory training requirements can be fulfilled. I established that in the more frequently employed number of lessons it is impossible to accomplish the regulations. I surveyed the adaptability level of the student’s technical knowledge, focusing the person who fills in the questionare, looking at how proficient he was in the given topic, how sure he was in his own knowledge, or if he was able to execute a task alone. I prepared a chart presenting the percental distribution of the appropriate and inappropriate knowledge after the aggregated assessment. I defined the minimal necessary lessons of the education based on the deducted experiences as the result of the executed examinations. These lessons are necessary to the acquisition of the knowledge and skills precribed by the traffic authority. To define the number of lessons I took the applied numbers of lessons on the University into consideration, and I selected them so that they comply with the magisterial regulations and fit into the educational (credit) system of the University. After the definition of all the number of lessons I unfolded in detail the curriculum of subject Structural and Operation Knowledge, I defined those time requirements that are necessary for the education in every subject and topic. Using these number of lessons I worked out the training porogram necessary for the vehicle category „B”.

During the analysis of the curriculum of the subject i examined the changing numbers of the test questions in different years and my conclusion is that the test questions did not change in the last ten years while the vehicles got modernized rather continually. I unfolded the curriculum onto groups of questions and i examined it according to the exam test questions focusing on the present technical standard. I made my proposals arguing which questions need to be withdrawn, and which questions I advise to put into the exam test bank. With the

modification most of the questions are not changed in number, therefore it is not necessary to reorganize the full vehicle category „B" exam, so it is not needed to apply separate exam questions in Tectonics Knowledge, the currently used manner is appropriate when the Traffic Knowledge is a test topic and the Tectonics Knowledge is built into its syllabus. I establish that the modification does not impose an extra burden compared to the education until now, but the new modern knowledge added, and with the utilisation of more accurate educational time, and with more useful, relastic knowledge in the driver's training it is possible to accomplish the regulations concerning the particular technical training.

Truck drivers need to fulfill higher professional requirements than in vehicle category „B", they have to perform tasks on a skill level, they have to know the structure of their vehicle and they have to be able to keep it in good condition according to regulations in any kind of circumstances. By educating the „Structural and Operation Knowledge" we have to lay the foundations for the subject „Safety Control and Operation", and it has to help the acquisition of the technical treatment of the vehicle. I did the examination of the technical subjects according to employees in category „B", that is, I examined twenty driving schools. As the result of the examination I established that the subjects „Structural and Operation Knowledge" and „Safety Control and Operation" show much bigger fluctuation in the difference of the number of lessons. This does not cause a problem, because the eighty hours available for the training is enough if the training organization selects adequately the number of lessons of the subjects. To determine how many lessons are necessary I used the evaluation of the students' questionnaires. My experience is that the percentage is smaller in the circle of students than in category „B".

The students applying for the course of category „C" have driving licence, it is necessary to consider this knowledge as a starting point and it is not recommended to assume that they know nothing about traffic knowledge. If we keep this in our mind it is not necessary to devote more number of lessons for the traffic knowledge and we have more time left for the technical subjects. If we have distinguished conditions for „Safety Control and Operation" and „Structural and Operation Knowledge" education, then it is suitable to apply the number of lessons by sharing 60-40 % the subjects „Structural and Operation Knowledge" and „Safety Control and Operation". In „Safety Control and Operation" education and examining there may be differences between the driving schools. Even is the requirement system of the traffic authority is the same, if the practical conditions are different, there will be essential difference between the drivers' level of knowledge.

I considered the vehicles on which the students will execute the practical training as an initial technical level when examining the requirement system of „Safety Control and Operation". While analysing the exam questions I measured the questions that are necessary to withdraw from the exam material and which ones I propose to get into it. I examined the magisterial regulations concerning facilities for education of „Safety Control and Operation". I compared it with the requirement system modified by me, and I identified the circle of those objective conditions which are necessary to add to the equipment of the exam and classrooms. With my suggestions my aim was to focus on the qualitative education.

As I defined the curriculum of subject „Safety Control and Operation" I considered this as a starting point and keeping this in my mind I examined the curriculum of subject „Structural and Operation Knowledge". I decided that it is necessary to educate only the really useful knowledge, at the same assuring that „Safety Control and Operation" foundations are well laid. I analysed the course of the examination of the curriculum in the different years to the education of the tectonics knowledge compiled questions. During the examination I took those vehicle types into consideration that are the most widespread ones today in Hungary. I examined the curriculum of „Structural and Operation Knowledge" by group of questions,

and I made my proposals regarding which questions need to be withdrawn and which to put in the exam question bank.

6. NEW SCIENTIFIC RESULTS

1) I made a proposal in the interest of the Hungarian soldier officer candidates' training to create an educational system that accomplishes a road driver training integrated into the educational system of the National University of Public Service. I worked out the training programs that are necessary for the education.

2) I defined, in the case of training category „B", the time needed for the acquisition of subject „Structural and Operation Knowledge" by breaking it down to topics. I carried out the modernization of the curriculum, focusing on the present technology level of vehicles. I reviewed the test databank and I defined the absent exam questions.

3) I defined in the case of training category „C" the curriculum of subject „Safety Control and Operation", the necessary education objectives and the circle of the exam questions in order to match the present technical level.

4) I did in training vehicle category „C" the curriculum modernisation of subject „Structural and Operation Knowledge", correcting the exam questions, the definition of the absent exam questions.

7. THE PRACTICAL USABILITY OF THE RESEARCH RESULTS

Expectedly it is possible to utilize the results of the research in the areas mentioned below:

- because this is about the definition of new curriculas and exam materials, and the development fills gaps, it is possible to use it in the road driver training and examining;
- it is possible to build the new curricula partly or fully into a system of specialized professional courses and further trainings;
- my dissertation is usable for any additional research of the topic as literature;
- during the education of the Hungarian soldier officer candidate's and non-commissioned officer students', as they will encounter traditional and modern regular vehicles during their work in the long run;

8. RECOMMENDATIONS

I wrote my dissertation with the aim of helping with the resolution of problems experienced in road driver training, so I propose it:

- the attention of those specialists, who are responsible for the legal and technical regulations, because there is an opportunity of the formation of a driver training organization working inside the Hungarian Army focusing on the interests of the Hungarian Army;
- the attention of the competent specialists working for the National Traffic Authority, because it is about new and gap-filling curricula and exam materials that are possible to use in road driver training and examining;

- for the leaders of the National University of Public Service, because I drew up integrated conditions and training documents of creating a training organization that operates at the National University of Public Service but comply with the regulations of the traffic authority;
- for colleagues dealing with driver training and training organizations, who can build the new curricula into their driver training system, and the initial professional training and further training system of GKI;
- for specialists working with the Hungarian soldier officer candidate's and non-commissioned officers' training, as they will encounter traditional and modern regular vehicles during their work in the long run;
- my dissertation as further research topic for the specialists working in driver training.

9. THE PUBLICATIONAL REGISTER IN CONNECTION WITH DOCTORAL CANDIDATE'S TOPIC

Egyetemi/főiskolai jegyzet:

- VÉG Róbert: Belsőégésű motorok I. Budapest: Zrínyi Miklós Nemzetvédelmi Egyetem, 2001. 121 p.
- VÉG Róbert: Belsőégésű motorok II. Budapest: Zrínyi Miklós Nemzetvédelmi Egyetem, 2003. 243 p.
- VÉG Róbert: Belsőégésű motorok III. Budapest: Zrínyi Miklós Nemzetvédelmi Egyetem, 2003. 283 p.
- VÉG Róbert: Áruszállító járművek I. Budapest: Zrínyi Miklós Nemzetvédelmi Egyetem, 2004. 203 p.
- VÉG Róbert: Áruszállító járművek II. Budapest: Zrínyi Miklós Nemzetvédelmi Egyetem, 2004. 240 p.
- VÉG Róbert, KISS László: Járművek szerkezete multimédiás jegyzet (+CD formátum). Budapest: Zrínyi Miklós Nemzetvédelmi Egyetem, 2007. 195 p.

Időszaki kiadványok cikkei:

- VÉG Róbert: Belsőégésű motorok töltetcsere folyamata. Bolyai Szemle különszám (HADITECHNIKA 2002-szimpózium). Budapest: ZMNE nyomda, 2002. p. 163-175. ISSN: 1416-1443.
- VÉG Róbert: Technikai kiszolgálási műveletek összehasonlító vizsgálata a GAZ-66 és U-4000 terepjáró tehergépkocsiknál. Bolyai Szemle különszám (HADITECHNIKA 2004-szimpózium). Budapest: ZMNE nyomda, 2004. 7. p. ISSN: 1416-1443.
- VÉG Róbert: Új oktatástechnikai eszközök alkalmazása a gépjárműtechnikai képzésben. Bolyai Szemle különszám (HADITECHNIKA 2006 szimpózium). Budapest: ZMNE nyomda, 2006. 7. p. ISSN: 1416-1443.

Tudományos folyóirat cikkei:

- VÉG Róbert: Belsőégésű motorok kipufogógáz visszavezetése. Bolyai Szemle 2002. XI. évf. 4. szám. Budapest: ZMNE nyomda, 2002. p. 5-12. ISSN: 1416-1443.
- VÉG Róbert: A forgattyús hajtómű csavarólengés-csillapításának néhány lehetősége. Bolyai Szemle 2003. XII. évf. 1. szám. Budapest: ZMNE nyomda, 2003. p. 42-48. ISSN: 1416-1443.
- VÉG Róbert: A belsőégésű motorok feltöltésének lehetséges megoldásai. Bolyai Szemle 2004. XIII. évf. 3. szám. Budapest: ZMNE nyomda, 2004. p. 5-19. ISSN: 1416-1443.

- Prof. Dr. BEREK Lajos – VÉG Róbert: Autósiskola létesítésének feltételei. Bolyai Szemle 2009. XVIII. évf. 4. szám. Budapest: ZMNE nyomda, 2009. p. 13-21. ISSN: 1416-1443.
- VÉG Róbert: The comparison of the vehicles used in driver training int he function of the changing of the law background. Bolyai Szemle 2009. XVIII. évf. 4. szám. Budapest: ZMNE nyomda, 2009. p. 23-30. ISSN: 1416-1443.
- Prof. Dr. BEREK Lajos – VÉG Róbert: Presurre regulation of tyres. Bolyai Szemle 2012. XXI. évf. 1. szám. Budapest: ZMNE nyomda, 2012. p. 79-88. ISSN: 1416-1443.
- VÉG Róbert: Változások a járműkategóriákban és az oktatásba bevont járművekre vonatkozó előírásokban. Hadmérnök 2012. VII. évfolyam 3. szám. Budapest: NKE Online kiadvány, 2012. p. 145-149. ISSN: 1788-1919.
- Dr. GYARMATI József – VÉG Róbert: Jogszabályváltozás hatása a gépjárművezető képzésre. Hadmérnök 2012. VII. évfolyam 3. szám. Budapest: NKE Online kiadvány, 2012. p. 150-154. ISSN: 1788-1919.
- VÉG Róbert: Defekttűrő és defektmentes gumiabroncsok. Bolyai Szemle 2012. XXI. évf. 2. szám. Budapest: NKE HHK kiadványa, 2012. p. 173-184. ISSN: 1416-1443.

Tudományos előadások:

- VÉG Róbert: Belsőégésű motorok töltetcsere folyamata. HADITECHNIKA 2002-szimpózium (IInd International Symposium on Defence Technology – 2002), Fegyverzettechnikai Tanszék, Páncélos- és gépjárműtechnikai eszközök szekció, Budapest: 2002. szeptember 16-17.
- VÉG Róbert: Technikai kiszolgálási műveletek összehasonlító vizsgálata a GAZ-66 és U-4000 terepjáró tehergépkocsiknál. HADITECHNIKA 2004-szimpózium (IIInd International Symposium on Defence Technology – 2004), Fegyverzettechnikai Tanszék, Páncélos- és gépjárműtechnikai eszközök szekció, Budapest: 2004. április 19-20.
- VÉG Róbert: Új oktatástechnikai eszközök alkalmazása a gépjárműtechnikai képzésben. HADITECHNIKA 2006-szimpózium (IVnd International Symposium on Defence Technology – 2006), Fegyverzettechnikai Tanszék, Páncélos- és gépjárműtechnikai eszközök szekció, Budapest: 2006. április 19-20.

10. THE DOCTORAL CANDIDATE'S PROFESSIONAL SCIENTIFIC CURRICULUM VITAE

Szakmai önéletrajz

Személyi adatok

Vezetéknév / Utónév(ek)	Vég Róbert László
Rendfokozat	alezredes
Telefon	06 1 432-9000 / 29-380
E-mail	VEGH.ROBERT@UNI-NKE.HU
Állampolgárság	magyar
Születési dátum	1969.11.29.

Szakmai tapasztalat, beosztások	
Időtartam	2011-től 2012-ig
Foglalkozás / beosztás	szakcsoportvezető
Főbb tevékenységek és feladatkörök	oktatás, kutatás, szakmai irányítás
A munkáltató neve és címe	Nemzeti Közszolgálati Egyetem Hadtudományi és Honvédtisztképző Kar Katonai Üzemeltető és Logisztikai Intézet Katonai Logisztikai Tanszék Haditechnikai Szakcsoport
Időtartam	2 év (2009-től 2011-ig)
Foglalkozás / beosztás	Autósiskola iskolavezető
Főbb tevékenységek és feladatkörök	oktatás, közúti gépjárművezető- képzésszervezés, ügyintézés
A munkáltató neve és címe	Zrínyi Miklós Nemzetvédelmi Egyetem ZMNE Bolyai autósiskola
Időtartam	1 év (2008-tól 2009-ig)
Foglalkozás / beosztás	Intézet igazgató
Főbb tevékenységek és feladatkörök	oktatás, kutatás, szakmai irányítás
A munkáltató neve és címe	Zrínyi Miklós Nemzetvédelmi Egyetem Bolyai János Katonai Műszaki Kar Katonai Gépész-, Műszaki és Biztonságtechnikai Mérnöki Intézet
Időtartam	1 év (2007-től 2008-ig)
Foglalkozás / beosztás	tanszékvezető
Főbb tevékenységek és feladatkörök	oktatás, kutatás, szakmai irányítás
A munkáltató neve és címe	Zrínyi Miklós Nemzetvédelmi Egyetem Bolyai János Katonai Műszaki Kar Katonai Gépész- és Biztonságtechnikai Mérnök Tanszék
Időtartam	1 év (2005-től 2006-ig)
Foglalkozás / beosztás	tanszékvezető helyettes
Főbb tevékenységek és feladatkörök	oktatás, kutatás, szakmai irányítás
A munkáltató neve és címe	Zrínyi Miklós Nemzetvédelmi Egyetem Bolyai János Katonai Műszaki Kar Katonai Gépészeti Tanszék

Időtartam	2005-től
Foglalkozás / beosztás	főiskolai docens
Főbb tevékenységek és feladatkörök	oktatás, kutatás
A munkáltató neve és címe	Zrínyi Miklós Nemzetvédelmi Egyetem Bolyai János Katonai Műszaki Kar Katonai Gépészeti Tanszék Páncélos- és Gépjárműtechnikai Szakcsoport
Időtartam	6 év (1999-től 2005-ig)
Foglalkozás / beosztás	főiskolai adjunktus
Főbb tevékenységek és feladatkörök	oktatás, kutatás
A munkáltató neve és címe	Bolyai János Katonai Műszaki Főiskola Páncélos, Gépjárműtechnikai és Közlekedési Tanszék
Időtartam	1 év (1998-tól 1999-ig)
Foglalkozás / beosztás	főiskolai tanársegéd
Főbb tevékenységek és feladatkörök	oktatás, kutatás
A munkáltató neve és címe	Bolyai János Katonai Műszaki Főiskola Páncélos, Gépjárműtechnikai és Közlekedési Tanszék
Időtartam	3 év (1991-től 1994-ig)
Foglalkozás / beosztás	javító szakaszparancsnok
Főbb tevékenységek és feladatkörök	katonai személy- és gépjárművek javítása, üzembentartása, technikai kiszolgálása
A munkáltató neve és címe	MH 64. Boconádi Szabó József Ellátó Zászlóalj, Kaposvár

Tanulmányok

Időtartam	2012-től
Végzettség / képesítés	-
Oktatást / képzést nyújtó intézmény neve és típusa	Nemzeti Közszolgálati Egyetem, Katonai Műszaki Doktori Iskola PhD hallgató egyéni felkészüléses formában
Időtartam	2003-tól 2010-ig
Végzettség / képesítés	abszolutórium megszerzése
Oktatást / képzést nyújtó intézmény neve és típusa	Zrínyi Miklós Nemzetvédelmi Egyetem, Katonai Műszaki Doktori Iskola PhD hallgató

Időtartam	1994-1998
Végzettség / képesítés	mezőgazdasági gépészmérnök (gyártmány- és gyártástervező szakirány)
Oktatást / képzést nyújtó intézmény neve és típusa	Gödöllői Agrártudományi Egyetem Mezőgazdasági Gépészmérnöki Kar
Időtartam	1996-1998
Oktatást / képzést nyújtó intézmény neve és típusa	Zrínyi Miklós Nemzetvédelmi Egyetem Vezetés- és Szervezéstudományi Kar haditechnikai törzstiszti (GATE) tanfolyam
Időtartam	1988-1991
Végzettség / képesítés	harcjármű üzembentartó üzemmérnök
Oktatást / képzést nyújtó intézmény neve és típusa	Bolyai János Katonai Műszaki Főiskola harcjármű üzembentartó szak gépjárműtechnikai ágazat

Egyéni készségek és kompetenciák

Anyanyelv(ek)	magyar
Nyelvismeret/szintje	német középfok „C” típusú orosz alapfok „C” típusú angol alapfok „A” típusú
Szervezési készségek és kompetenciák	vezetés, szervezés, csapatszolgálat, szakcsoportvezetői, tanszékvezetői beosztás
Műszaki készségek és kompetenciák	1984-1987. 503. sz. Ipari Szakmunkásképző Intézet Kaposvár, autószerelő 2003. Unimog U-4000 típusú terepjáró tehergépkocsi típusismereti tanfolyam (MB AUTO Magyarország Kft.) 2004-2005. „E-tananyag fejlesztése közművelődési szakembereknek és pedagógusoknak” című képzés, Szent István Egyetem Gazdaság- és Társadalomtudományi Kar Közép-Magyarországi Regionális Távoktatási Központ 2005. Lapoda multimédia-szerkesztő tanfolyam (BioDigit Kft.) 2009. Iskolavezetői képesítés (Nemzeti Közlekedési Hatóság)

Számítógép-felhasználói készségek és kompetenciák	Írás, előadások elkészítése, jegyzetek, cikkek, tananyagok írása, műszaki rajzolás AutoCAD programmal, képszerkesztő programok használata, multimédiás tananyag (Lapoda) szerkesztő program használata az oktatásban, iskolavezetői programok és gépjárművezető képző programok használata,

Budapest, January 21 2013.