



Paweł Andrzejczyk

Association of the Institute of Environmental Economics and Transport in Legnica, Poland

ORCID ID: <https://orcid.org/0000-0002-8696-573X>

Czesław Dul

Railway Personnel Training Centre at the Association of the Institute of Environmental and Transport Economics in Legnica, Poland

ORCID ID: <https://orcid.org/0009-0009-3665-6523>

Ewa Rajczakowska

Association of the Institute of Environmental Economics and Transport in Legnica, Poland

ORCID ID: <https://orcid.org/0000-0001-5568-1972>

Kamila Andrzejczyk

Henryk Pobożny Technical and General Education School Complex in Legnica, Poland

ORCID ID: <https://orcid.org/0009-0007-2392-6630>

**A PROPOSAL TO STANDARDISE THE RULES FOR TRAINING
TRAIN DRIVERS IN TERMS OF EXTENDING THE DRIVER'S
CERTIFICATE TO INCLUDE A CATEGORY (SUBCATEGORY)
OF THE CERTIFICATE OR A TYPE OF VEHICLE AND THE
METHOD OF ACQUIRING KNOWLEDGE OF THE
INFRASTRUCTURE**

Introduction

On January 1, 2023, significant legislative changes were introduced regarding the training and supervision of Polish train drivers, forcing railway companies and driver training organizations to adapt to the new conditions. Also on January 1, 2023, the Centre for Examination and Monitoring of Train Drivers was established, operating at the Office of Rail Transport (Urząd Transportu Kolejowego [UTK], 2024). Due to the above, a somewhat revolutionary change



was introduced in the Polish system of training and examining train drivers, which was of both mental, organizational and legislative nature (Andrzejczyk et al., in press). The changes introduced mean that train driver license and certificate courses starting after January 1, 2023, will conclude with state examinations taken externally, rather than on-site, as was previously the case. Currently, the President of the Office of Rail Transport is responsible for train driver examinations.

The changes to the train driver training and examination system are related to the need to improve safety in rail transport, standardize requirements for train driver candidates, and eliminate undesirable practices in the preparation of these personnel (DIRECTIVE 2007/59/EC).

The safety of rail transport in Poland and worldwide depends on many factors, among which the human factor is the greatest variable (Reason, 1997). Therefore, the way in which the training process for railway personnel is organized, conducted, and evaluated is of paramount importance. This applies to all positions directly related to the management and safety of railway traffic, and particularly to those operating railway vehicles. Training train drivers has always been, and hopefully will remain, a continuous process, lasting from the moment the candidate begins training for a train driver's license, through training for a train driver's certificate, which culminates in obtaining a train driver's certificate, until the end of their professional career. It is important to remember that a good train driver continues to hone their skills until they retire from the profession. It is worth noting that training using railway vehicle simulators has become a common requirement (Andrzejczyk et al., 2022; ERA, 2025).

It is worth noting, however, that despite the changes introduced, there are still several areas in the train driver training system that would require standardization of procedures by individual training institutions, which requires the introduction of appropriate regulations in this regard. Such areas include training to extend the driver's certificate to include a category, subcategory, or type of railway vehicle, or infrastructure. Current legislation allows carriers considerable freedom in organizing the training system in this area, which creates too much room for various threats to the proper preparation of train drivers to safely perform their duties (ERA, 2025).

Currently, it is noted that in Poland, there is considerable flexibility in the form and scope of train driver training, including extending the driver's certificate to include a specific category (subcategory) or vehicle type, as well as the method of acquiring infrastructure knowledge. Virtually every Polish carrier establishes its own rules, and these vary widely. Some carriers over-engineer their programs, while others limit them to the limit, thus exceeding the limits of common sense and even safety. This state of affairs is undesirable for rail transport and can pose a significant threat to rail safety. Therefore, the aim of this article/project is to present a proposal to standardize the requirements for train driver training, including extending the driver's certificate and acquiring knowledge of the railway



line section, while incorporating modern IT solutions. The expected results and benefits include a coherent and transparent way of organizing training for extending driver's certificates and acquiring knowledge of the railway line section, as well as reducing bad practices in this area.

This article is based on an analysis of formal and legal documents and normative acts in force in the area described, observations and research conducted as part of the "Time for Railway" research project, as well as the experiences and opinions of instructors gathered by individuals collaborating with the Institute of Environmental Economics and Transport in Legnica, within which the Railway Personnel Training Center was established. This study contributes to ongoing research, thus providing a basis for further consideration in this area.

Description of the current system of training and examination of train drivers in Poland

Before the introduction of the current changes to the train driver training and examination system in Poland, there were many different approaches to organizing training and conducting driver examinations. Despite a single legal source, varying levels of driver preparation were observed in the training services market. This situation related to differences in staff preparation between different carriers and driver training and examination centers. Differences in the level and quality of training were also noticeable within a single carrier in different regions of the country. This situation resulted, among other things, from different entities' different approaches to statutory requirements and from unequal respect for the provisions contained in specific legal acts.

Driver training and examination are crucial processes for rail traffic safety. It's important to remember that this is a continuous process. Drivers hone their skills throughout their professional career, from the moment they begin their initial training until they retire or resign from their position (Andrzejczyk et al., 2022). The train driver training process, both before and after the reform, can be divided into two stages. Stage I involves acquiring the qualifications to operate a train by a new entrant to the profession, where the train driver candidate obtains a train driver's license; and Stage II, which consists of three parts: on-the-job training, a theoretical part, and supervised driving, culminating in obtaining a train driver's certificate (Andrzejczyk et al., 2022). Until the end of 2022, this process was lengthy and complex; its progress is illustrated in the table below (see Table 1).



Table 1. The train driver training system in Poland before 31 December 2022 and the transitional period until 31 December 2023.

Stage I				Stage II											
License training (lectures and practical classes)				Train driver certificate training - Driver certificate category A1 (A4) + B **											
				Part I: On-the-job internship and practical training						Part II: Theoretical training (lectures and practical classes)		Part III: Driving a railway vehicle under supervision			
										Theoretical training on a railway vehicle	Theoretical training on railway infrastructure	Number of hours driving a railway vehicle			
Theory:	240 h	Train driver license examination*	Work on the repair and maintenance of rolling stock:	260 h	Work as a rolling stock auditor:	40 h	Work related to the driver's duties:	500 h	Theory:	118 h	Theory:	142 h	Maneuvering:	200 h	Train driver certificate examination*
Practice:	58 h			Practice:		66 h		Practice:	138 h	Train work: in freight traffic in passenger traffic:	600 h	600 h			
Carried out by the training and examination center for train drivers and train driver candidates			Carried out by the carrier's workshop, the carrier in cooperation with the training and examination center for train drivers and train driver candidates						Carried out by the training and examination center for train drivers and train driver candidates			Carried out by the carrier in cooperation with the training and examination center for train drivers and train driver candidates			
Duration***	from 2 to 4 months		from 2 to 3 months		one week		from 3 to 12 months		od 1 do 3 miesięcy		from 2 to 4 months		od 9 do 24 miesięcy		

Legend:

* Exams after course completion are held at the training center. A change is planned from 2023, which assumes that the train driver's license and certificate exams will be administered by the Office of Rail Transport.

** Train driver's certificate authorizing the driving of freight trains (B2) and shunting operations (A1(A4)).

*** Course duration is based on averages. The length of time depends on the individual curricula of individual training centers, carriers, and technical capabilities related to access to rail infrastructure and rolling stock.

Source: own study based on: Journal of Laws 2019, item 2373, Notice of the Minister of Infrastructure of 8 November 2019 on the announcement of the consolidated text of the regulation of the Minister of Infrastructure and Development on train driving licenses and Journal of Laws 2014, item 212, Regulation of the Minister of Infrastructure and Development of 10 February 2014 on the train driving certificate and Directive 2007/59/EC of the European Parliament and of the Council of 23 October 2007 on the certification of train drivers operating locomotives and trains on the Community railway system. and: Andrzejczyk P., Rajczakowska E., Gaidys J., The use of modern IT technologies in the process of training train drivers, on the example of Poland and Lithuania [w.] Smart Economy, Ed. Lewandowska-Bratek J. Gnitecka R., Wątopek B. Polish Economic Society, Poznań 2022, pp. 9-29.

It should be noted that prior to the changes, the training and examination system did not include external verification of acquired and maintained skills for new train drivers. This was changed by the amendment of the Rail Transport Act in 2022 and the introduction of new regulations in this area. Based on these changes, the conduct of examinations for train driver licenses and the train driver certificate was transferred to the Office of Rail Transport, within which the Centre for Examination and Monitoring of Train Drivers (CEMM) was established (Centrum Unijnych Projektów Transportowych, 2024), see Table 2.).



It should be emphasized that the changes introduced in the training and examination system have brought tangible benefits in the form of shortening the duration of the entire train driver training cycle from the theoretical two years to one year (compare Table 1 with Table 2). The external examination system introduced a uniform standard for preparing train driver candidates, which forced entities training train drivers to adhere to these standards, eliminating undesirable practices, which currently means that all entities training future train drivers have equal opportunities in accessing the market.

Table 2. The train driver training system in Poland after December 31, 2023.

Stage I			Stage II									
License training (lectures and practical classes)			Train driver certificate - Train driver certificate category A1 (A4) + B **									
			Part I: On-the-job internship and practical training					Part II: Theoretical training (lectures and practical classes)			Part III: Driving a railway vehicle under supervision	
Theory:	240 h	Train driver license examination *						Theoretical training on a railway vehicle	Theoretical training on a railway	Number of hours driving a railway vehicle		
Practice:	58 h			Work on the repair and maintenance of rolling stock: 160 h	Work as a rolling stock auditor: 40 h	Work related to the train driver's duties: 80 h	Theory: 88 h	Theory: 24 h	Maneuvering: 160 h	Train driver certificate examination *		
						Practice: 64 h	Practice: 40 h	Train work: in freight traffic and in passenger traffic: 800 h				
Carried out by the training center for train drivers and train driver candidates and train		Carried out by Rail Transport Office	Carried out by the carrier's workshop, the carrier in cooperation with the training center for train drivers and train driver candidates					Carried out by the training center for train drivers and train driver candidates			Carried out by the training center for train drivers and train driver candidates	
Duration***		from 2 to 4 months	from 1 to 2 months	one week	from 1 to 2 weeks	from 1 to 2 months	from 0,5 to 1 month	from 7 to 30 months				

Legend:

* Examinations after course completion are held at the training center. Starting in 2023, the train driver's license and certificate examinations will be administered by the Office of Rail Transport.

** Train driver's certificate authorizing the driving of freight trains (B2) and shunting operations (A1(A4)).

*** Course duration is based on averages. The duration depends on the individual curricula of individual training centers, carriers, and technical capabilities related to access to railway infrastructure and rolling stock.

Source: prepared based on: Journal of Laws 2023, item 2402, Regulation of the Minister of Infrastructure of October 20, 2023, amending the regulation on train driver's certificates, Journal of Laws 2023, item 100. 2402, Regulation of the Minister of Infrastructure of 20 October 2023 amending the regulation on the train driver's certificate and Directive 2007/59/EC of the European Parliament and of the Council of 23 October 2007 on the certification of train drivers operating locomotives and trains on the Community's railway system.

Experience and opinions of instructors in organizing training related to the extension of a driver's certificate to include a certificate category (subcategory) or vehicle type and the method of acquiring knowledge of the infrastructure

On April 5, 2023, changes to the train driver training and examination system were finally finalized in Poland. This was achieved, in part, by the first

train driver license exams being held at the Centre for Examination and Monitoring of Train Drivers (CEMM) in Warsaw (Urząd Transportu Kolejowego [UTK], 2024). Fifteen participants participated in the first state examination for train drivers' licenses, conducted by the President of the Office of Rail Transport (UTK). Today, external examinations for train drivers' licenses and certificates are now a common practice, and no one is surprised. The training system for train drivers' licenses and certificates has slowly normalized. Training centers know what and how to conduct their trainees so that they can take external examinations organized by the UTK.

Interestingly, while training centers and carriers quickly adapted to the new reality regarding the new driver training and examination system, they remain suspended when it comes to organizing training courses for extending driver certification to include a specific certificate category (subcategory) or vehicle type, as well as the method for acquiring infrastructure knowledge. Based on the conducted research, it can be concluded that both drivers/instructors, as well as the operators themselves and their managers, have different perspectives on these issues. Therefore, pilot studies were conducted in the form of interviews with instructors, drivers, and their managers to explore their perceptions of the reality surrounding the existing training systems for extending driver certification to include a specific certificate category (subcategory) or vehicle type, and the method for acquiring infrastructure knowledge.

The conducted research clearly shows that the management staff organising the train driver training system in terms of extending the train driver certificate to include a category (subcategory) of the certificate or a type of vehicle and the method of acquiring knowledge of the infrastructure, knows the legal basis in this respect, but the situation is different with train drivers who do not actually consider the basis on which they acquire individual authorizations to drive a specific type of vehicle (see Table 3).



Table 3. Knowledge of the legal basis for extending a driver's certificate to include a certificate category (subcategory) or vehicle type and the method of acquiring knowledge of the infrastructure

Are you familiar with the legal regulations regarding the extension of a train driver's certificate to include a certificate category (subcategory) or vehicle type and the method of acquiring knowledge of infrastructure.				
	People responsible for organizing extensions		Train drivers	
Yes	34	68,00%	21	21,00%
No	10	20,00%	54	54,00%
No opinion	6	12,00%	25	25,00%
Total:	50	100,00%	100	100,00%

Source: Own study.

A particularly disturbing phenomenon revealed during the interviews is the significant uncertainty surrounding the application of legal standards regarding driver certificate extensions. Fortunately, both those responsible for extensions and drivers themselves have significant difficulty properly understanding the legal standards related to organizing driver certificate extension training (see Table 4). During the research, there was considerable reluctance to discuss how drivers obtain driver certificate extensions and the procedures involved.

Table 4. Level of understanding of the legal basis for extending a driver's certificate to include a certificate category (subcategory) or vehicle type and the method of acquiring knowledge of the infrastructure

Are the applicable legal standards regarding the extension of a train driver's certificate to include a certificate category (subcategory) or vehicle type and the method of acquiring knowledge of the infrastructure understandable/clear to you?				
	People responsible for organizing extensions		Train drivers	
Yes	9	18,00%	12	12,50%
No	28	56,00%	65	67,71%
No opinion	13	26,00%	19	19,79%
Total:	50	100,00%	96	100,00%

Source: Own study

This state of affairs is confirmed in the next question. Respondents clearly state that the current legal standards regarding extending a driver's certificate to include a certificate category (subcategory) or vehicle type, as well as the method of acquiring infrastructure knowledge, are insufficient. Interestingly, both those



responsible for conducting extensions and drivers themselves share similar views in this regard (see Table 5).

Table 5. Level of fulfillment of expectations of the provisions contained in the legal basis regarding the extension of the driver's certificate to include a category (subcategory) of the certificate or a type of vehicle and the method of acquiring knowledge of the infrastructure.

Are the applicable legal standards regarding the extension of a train driver's certificate to include a certificate category (subcategory) or vehicle type and the method of acquiring knowledge of the infrastructure sufficient for you?				
	People responsible for organizing extensions		Train drivers	
Yes	5	10,00%	30	31,25%
No	41	82,00%	45	46,88%
No opinion	4	8,00%	25	26,04%
Total:	50	100,00%	100	104,17%

Source: Own study.

It should be noted that the regulations regarding extending a train driver's certificate to include a category (subcategory) of the certificate or vehicle type, as well as the method for acquiring infrastructure knowledge, require further clarification. This is a point emphasized by both train drivers and those responsible for organizing this process (see Fig. 1). The most frequently mentioned areas in the train driver training system that require further clarification include:

- duration of training for extending a train driver's certificate to include a vehicle type,
- duration of training for extending a train driver's certificate to include a category,
- description of requirements for a rail vehicle simulator regarding acquiring route knowledge,
- the possibility of using a rail vehicle simulator to acquire infrastructure knowledge,
- the method for acquiring authorizations for a new vehicle type,
- publication of a framework training program for specific types of train driver's certificate extensions,
- databases of test questions for knowledge and skills tests,
- databases of test questions for train driver's license and train driver's certificate examinations.

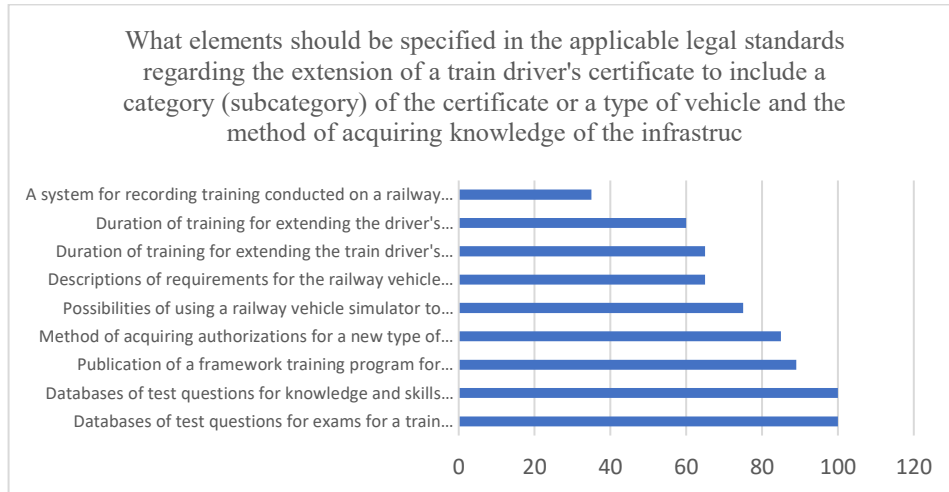


Fig. 1. Expectations regarding the detailed legal regulations regarding driver training. Source: prepared by the authors.

Source: Own study.

DRAFT Amendments to the Regulation of the Minister of Infrastructure of 1 December 2022 on the train driver's certificate (Journal of Laws of 2022, item 2680, as amended)

Rail transport requires regulation in many areas, including those related to the acquisition of specific qualifications by train drivers. A team composed of representatives cooperating with the Railway Personnel Training Centre, which operates at the Institute of Environmental Economics and Transport Association in Legnica, decided to develop, as part of the Project entitled: "Training conscious and safe railway personnel - pilot program", a DRAFT Amendment to the Regulation of the Minister of Infrastructure of 1 December 2022 on the train driver's certificate (Journal of Laws of 2022, item 2680, as amended). In light of the above, the team proposes the following solutions:

1. Taking into account the need to regulate the rules for obtaining an extension of a train driver's licence to another train driver's certificate category A (subcategory A1, A2, A3, A4, or A5), a train driver's certificate category B (subcategory B1 or B2), or another type of traction vehicle, in Chapter 2 of the Regulation of the Minister of Infrastructure of 1 December 2022 on the train driver's certificate (Journal of Laws 2022, item 2680, as amended), §4a should be added (or the numbering of the paragraphs changed) as follows: §4a. The programme and duration of training for train drivers applying for an extension or renewal of their train driver's licence to another train driver's certificate category: A (subcategory A1, A2, A3, A4 or A5), train driver's certificate category B (subcategory B1 or B2), or another type of traction vehicle are specified in Annex



3a to the Regulation." (the numbering of the annexes may be maintained with the addition of "Annex No. 3a" or changed taking into account the proposed additional annex, placed immediately after "Annex No. 3").

2. In Chapter 5 "Scope of data included in the train driver's certificate and the register of train driver's certificates", in order to specify the amount of data necessary to be included in the train driver's certificate to clearly determine the qualifications of a given train driver by the authorities authorized to carry out inspections during inspections at the train driver's workstation in §13 section 1. "The train driver's certificate includes" "The Team proposes to add the following point: "4) a list of types of railway vehicles which the driver is authorized to drive"

and a new paragraph: "3. In order to determine the railway line sections on which a driver is authorized to drive a railway vehicle, the railway carrier employing a given driver keeps a "Railway Line Section Knowledge Card".

3. Recognizing the need to incorporate the ability to recognize and categorize stressful situations and stress management skills training into the training process for train drivers, the Team proposes including classes conducted by a transport psychologist employed at the Training Center for Train Drivers and Train Driver Candidates into the theoretical and practical training process for train drivers. Therefore, in "Appendix No. 3" the "Team" proposes to expand "Part I. Practical training": in paragraph 1. Module No. 3) with the following entry:", including psychological aspects related to the performance of train driving duties" and in paragraph 4. " add the following points: "5) learns skills in the field of personality training for railway vehicle operators; 6) learns about the sources of stress related to driving a railway vehicle and responsibility for passengers and cargo; 7) learns about methods of coping with stress related to driving a railway vehicle and responsibility for passengers and cargo; 8) learns about and trains ways of replacing aggression caused by stress;".

4. In paragraph 5.a, regarding the need to change the number of hours required to conduct training with the participation of a transport psychologist, the Team recommends moving 16 hours for each category of the train driver's certificate from the "Work on repair and maintenance of rolling stock" module to the "Work on driver's activities" module, increasing the number of hours in this module to 96, while maintaining the previously specified number of hours for the entire training cycle. Another proposal is to move these 16 hours from the "Work on repair and maintenance of rolling stock" module to "Part II. Theoretical training (lectures and practical classes)" in paragraph 1. Add a new row to the table, obtaining this part of the table in the following format.



Theoretical training on railway infrastructure	Number of hours*		
	lecture	practical classes	total
Driving technique and maximum speed in relation to the characteristics of railway lines (shunting technique)	2	28	30
Knowledge of railway lines (maneuvering area)	4	12	16
Railway traffic safety	16	-	16
<i>psychological aspects related to the performance of driving duties</i>	8	8	16
Transport of dangerous goods	2	-	2
Total	32	48	80

5. Referring to point 1 of this summary, the "Team" proposes to add "Appendix No. 3a" or "No. 4" after "Appendix No. 3" while changing the numbering of the remaining Appendices, taking into account the proposed additional appendix, placed directly after "Appendix No. 3".

Taking into account the professional experience of a train driver applying for the extension or renewal of his/her authorisation to the next category of train driver's certificate: A (subcategory A1, A2, A3, A4 or A5), category of train driver's certificate B (subcategory B1 or B2), or another type of traction vehicle, as well as having previously completed a full training cycle when acquiring the initial category of train driver's certificate, the "Team" recommends:

1) The requirement for on-the-job training has been omitted, as it was completed before the initial training cycle began. Practical training has been included in the module "Operating a Railway Vehicle Under Supervision, Including Shunting and Train Driver Activities."

2) The module "Repair and Maintenance of Railway Rolling Stock" can be omitted, as this section was completed during the initial process of obtaining a train driver's certificate, with the exception of the first extension to include hydrogen- and steam-powered vehicles, as the former is a relatively new technical solution recently introduced on the railways, while the latter is an archaic concept operating under almost forgotten principles.

3) The "Working as a Rolling Stock Auditor" module can be omitted due to the completion of this part of the training during the original process of obtaining a train driver's certificate.

4) The "Working as a Train Driver" module, due to the completion of this part during the original process of obtaining a train driver's certificate, has been incorporated, to the extent necessary for a specific vehicle type, into the "Driving a Railway Vehicle Under Supervision, Including Shunting Work," creating a new module, "Driving a Railway Vehicle Under Supervision, Including Shunting Work and Working as a Train Driver."



5) A new "Transport Psychologist" module has been added to develop appropriate stress coping mechanisms in train drivers.
as presented on the following pages:

Appendix No. 3a (CKKK Proposal)

PROGRAM AND DURATION OF TRAINING FOR TRAIN DRIVERS
APPLYING FOR EXTENSION OR RENEWAL OF THEIR EXISTING
LICENSE FOR ANOTHER CATEGORY, SUBCATEGORY OF THE TRAIN
DRIVER CERTIFICATE OR TYPE OF TRACTION VEHICLE

Part I. Practical Training

1. Practical training includes the following modules:

1) working on the repair and maintenance of railway rolling stock (applies to the extension of qualifications to include vehicles with steam or hydrogen propulsion);

2) working on train driving duties;

3) psychological aspects related to the performance of train driving duties.

2. Within the module on the repair and maintenance of railway rolling stock, the train driver candidate (applies to the extension of qualifications to include vehicles with steam or hydrogen propulsion):

1) familiarizes himself with the scope and cycle of inspections and repairs;

2) identifies typical faults in railway vehicles;

3) participates in repair and inspection activities as part of the railway vehicle maintenance process, documents the course of maintenance activities, and makes entries in the logbook of the railway vehicle with a steam or hydrogen propulsion.

3. As part of the "Working with Train Drivers" module, the train driver candidate:

1) participates in activities related to accepting, driving, and returning a railway vehicle as an observer;

2) participates in brake tests;

3) checks the train documentation for completeness, necessary equipment, and information entered into the train documentation;

4) learns procedures for dealing with serious accidents, incidents, and accidents.

4. As part of the "Psychological Aspects of Train Drivers" module, the train driver candidate:

1) learns skills related to personality training for railway vehicle drivers;

2) learns about the sources of stress associated with driving a railway vehicle and responsibility for passengers and cargo;

3) learns methods for coping with stress associated with driving a railway vehicle and responsibility for passengers and cargo;

4) learns and practices ways to replace stress-induced aggression;

5. Theoretical training (lectures) and practical classes (including supervised driving of a railway vehicle) – extension of the driver's certificate to one of the subcategories, drivers applying for an extension of their authorizations or renewal



of their driver's certificate in the scope of at least one of the following subcategories of the driver's certificate: A1, A2, A3, A4, A5, B1 and B2 should be carried out according to the employer's program in the number of hours necessary to achieve the appropriate level of driver training, carrying out training in the number of hours and days not less than specified in the table below:

Extension of a train driver's certificate by a category or subcategory or renewal of authorization								
No.	Category(s) of the traindriver's certificate held from which new authorizations will be acquired	The acquired subcategory of the train driver's certificate as part of the expansion	The values indicated in the table show the minimum number of training hours that must be completed (according to the employer's program)				The values indicated in the table show the minimum number of days needed to complete the training (according to the employer's program)	
			Theory	Transport psychology	Driving a railway vehicle under supervision, including shunting work and work related to the driver's duties *(1)	Total number of hours	Total number of days needed to complete theoretical classes (8 hours/day)	Total number of days spent driving a railway vehicle under supervision, including shunting and work as a train driver*(1)) (12 hours/shift)
A train driver who holds a category B driver's certificate or one of the subcategories B1 or B2 and does not have any authorisations in the shunting categories.								
1	B; B1; B2	A1	24	8	48	80	4	4
2	B; B1; B2	A2	24	8	48* ⁴⁾	80	4	4
3	B; B1; B2	A3* ³⁾	24	8	60* ⁵⁾	92	4	5
4	B; B1; B2	A4	24	8	48	80	4	4
5	B; B1; B2	A5	24	8	36	68	4	3
A train driver who holds a category B train driver's certificate or one of the subcategories B1 or B2, and whose shunting authority has not been transferred to the certificate from								



the last carrier or who has had a break in the performance of train driver's duties in a given subcategory lasting longer than 4 years ^{*(2)})

1	B; B1; B2	A1	16	8	36	60	3	3
2	B; B1; B2	A2	16	8	48* ⁴⁾	72	3	4
3	B; B1; B2	A3* ³⁾	16	8	60* ⁵⁾	84	3	5
4	B; B1; B2	A4	16	8	48	72	3	4
5	B; B1; B2	A5	16	8	36	60	3	3

A train driver who has an active B1 or B2 subcategory and acquires an extension to a new subcategory without previously having the authorization in the acquired subcategory or the driver has a break in performing the duties of a driver in a given subcategory lasting longer than 4 years

1	B2	B1	56	16	180	252	9	15
2	B1	B2	56	8	216	280	8	18

A train driver who has an active B1 or B2 subcategory and renews the previously held subcategory, which has not been transferred to the certificate of the last carrier or has a break in the performance of the driver's duties in a given subcategory lasting longer than 4 years ^{*(2)})

1	B2	B1	32	16	36	84	6	3
2	B1	B2	32	8	48	88	5	4

A driver who holds a driver's certificate in category A or one of the subcategories: A1, A2, A3, A4, A5 and acquires a category B extension to their certificate, without first having the qualifications in the category being acquired.

1	A; A1; A2; A3; A4; A5	B1	72	16	300	388	11	25
2	A; A1; A2; A3; A4; A5	B2	72	16	360	448	11	30
3	A; A1; A2; A3; A4; A5	B1 i B2	112	16	420	548	16	35

A train driver who holds an active train driver's certificate in category A or one of the subcategories A1, A2, A3, A4, A5, and whose shunting authorizations have not been transferred to the certificate from the last carrier or who has had a break in the performance of train driver's duties in a given subcategory lasting longer than 4 years ^{*(2)})

1	A; A1; A2; A3; A4; A5	B1	32	8	180	220	5	15
2	A; A1; A2; A3; A4; A5	B2	32	8	216	256	5	18
3	A; A1; A2; A3; A4; A5	B1 i B2	56	8	300	364	8	25

An hour of lectures equals 45 minutes, and practical classes (including driving a railway vehicle under supervision) equals 60 minutes.

In the case of training for more than one subcategory within category A or B, the driver completes the number of hours appropriate for one (longer) training cycle (training hours do not accumulate).



*^(1)) At least two shifts during the dark/night hours and one shift during the day are recommended.

*^(2)) To confirm previous authorizations, the driver must provide a copy of the driver's certificate confirming their authorization.

*^(3)) The driver has the required authorization to operate the vehicle/equipment covered by the specified extension of the driver's certificate.

*^(4)) Due to the specific nature of operating a work train, operating a railway vehicle under supervision should take place, in particular, on a closed track (at least 1/3 of the hours during driving and performing typical work of the work train). *^(5)) Due to the specific construction and purpose of a special railway vehicle, driving a railway vehicle under supervision should take place in particular on a closed track (at least 1/3 of the hour while driving and performing typical work as a work train).

6. Theoretical training (lectures) and practical classes (including driving a railway vehicle under supervision) – extension of the driver’s certificate to include a new type of railway vehicle.

Theoretical and practical training of drivers applying for an extension of the authorisations of the driver's certificate in terms of the ability to operate and drive a given type of vehicle should be carried out according to the employer's programme in the number of hours necessary to achieve the appropriate level of driver training, carrying out the training in the number of hours and days not less than specified in the table below:

No.	The train driver has an entry in the train driver's certificate for the type of vehicle with traction (Type of traction in the vehicles for which the driver is authorized)	The train driver extends the entry in the train driver's certificate to include the type of drive vehicle (Drive type in the vehicles for which the driver is obtaining the license)	The values indicated in the table show the minimum number of training hours that must be completed (according to the employer's program)				The values indicated in the table show the minimum number of days needed to complete the training (according to the employer's program)	
			Theory	Work on the repair and maintenance of railway rolling stock	Transport psychologist	Driving a railway vehicle under supervision, including shunting work and work related to the	Total number of hours	Total number of days needed to complete theoretical classes (8 hours/day)



						driver's duties* ¹⁾			as a train driver* ^{^(1))} (12 hours/shift)
1	electric	electric	8			12	20	1	1
2	diesel	spalinowy	8			12	20	1	1
3	diesel	elektryczny	16			24	40	2	2
4	electric	spalinowy	16			24	40	2	2
5	diesel-electric (hybrid)	diesel-electric (hybrid)	8			12	20	1	1
6	wodorowy	wodorowy	8			12	20	1	1
7	electric or diesel	diesel-electric (hybrid)	16			24	40	2	2
8	electric or diesel	hydrogen* ³⁾	16	8* ⁶⁾	8	24	56	4	2
9	electric or diesel	steam* ⁴⁾	80	80* ⁷⁾	16	180	356	22	15

Godzina wykładów równa się 45 minutom, a zajęć praktycznych (w tym prowadzenia pojazdu kolejowego pod nadzorem) – 60 minutom.

- 1) Zalecane są co najmniej dwie zmiany w porze ciemnej/nocnej oraz 1 zmiana w porze dziennej (w zależności od potrzeb pracodawcy)
- 2) Maszynista posiada wymagane uprawnienia na obsługę danego pojazdu/danego sprzętu, którego dotyczy wskazane rozszerzenie świadectwa maszynisty (dotyczy pojazdów pomocniczych i specjalnych)
- 3) Program rozszerzenia należy uzupełnić o zagadnienia związane ze specyfiką budowy i zasadą działania napędu wodorowego oraz zachowania szczególnych środków ostrożności w postępowaniu z paliwem wodorowym na zasadzie odrębnego programu szkolenia w tym zakresie
- 4) Program rozszerzenia należy uzupełnić o zagadnienia związane z utrzymaniem i eksploatacją kotła parowego na zasadzie odrębnego programu szkolenia w tym zakresie
- 5) Przy rozszerzeniu o typ pojazdu na trakcję parową zalecane są co najmniej dwie zmiany w porze ciemnej/nocnej oraz 1 zmiana w porze dziennej, w pozostałych przypadkach według potrzeb danego pracodawcy
- 6) Program rozszerzenia należy uzupełnić o praktyczne zagadnienia związane ze specyficzną budową i zasadą działania napędu wodorowego oraz zachowania szczególnych środków ostrożności w postępowaniu z paliwem wodorowym na zasadzie odrębnego programu szkolenia w tym zakresie

7) Program rozszerzenia należy uzupełnić o praktyczne zagadnienia związane ze specyficzną budową i zasadą działania napędu parowego oraz zachowania szczególnych środków ostrożności w postępowaniu związanym z eksploatacją kotła parowego oraz zachowania szczególnej ostrożności ze względu na występujące w palenisku wysokie temperatury na zasadzie odrębnego programu szkolenia w tym zakresie.

Conclusions

The introduction of an external train driver examination system from 2023, implemented by the Office of Rail Transport, and the operation of the Train Driver Examination and Monitoring Center, was one of the most significant steps in the reform of the train driver training and certification system in Poland. These changes contributed to the unification of examination standards, increased objectivity of assessments, and improved comparability of exam results regardless of training center. As a result, the overall training cycle time was shortened while eliminating many undesirable practices from the previous model, in which final exams were administered by training entities.

Despite the positive effects of the reform, the analysis of existing legal regulations and the results of pilot studies clearly indicate that the train driver training system is still not fully coherent. A particularly problematic area remains the organization of training for extending the driver's certificate to include additional categories, subcategories, traction vehicle types, and the principles for acquiring knowledge of railway infrastructure. Current legislation leaves significant scope for interpretation to rail operators, leading to a wide variety of training programs – from overly extensive solutions to extremely limited ones, potentially endangering rail traffic safety.

Research conducted among train drivers, instructors, and management staff revealed a low level of understanding of applicable legal standards and a widespread belief that they are insufficiently precise. Respondents cited a lack of clear guidelines regarding the minimum duration of in-service training, the scope of practical training, the role of rail vehicle simulators in acquiring infrastructure knowledge, and the lack of publicly available framework training programs and databases of exam questions. This situation generates legal and organizational uncertainty and hinders effective oversight of the quality of train driver training.

In response to the identified issues, a comprehensive draft amendment to the Regulation on Train Driver Certificates was proposed, including the introduction of a framework training program for extended authorizations, clarification of the data contained in the train driver certificate, regulation of the rules for documenting knowledge of infrastructure, and the inclusion of psychological support elements in the training process. Particular attention was paid to the need to develop soft skills among train drivers, including the ability to cope with stress and professional responsibility, which is crucial for occupational safety under conditions of high mental strain.



The proposed solutions are systemic in nature and can provide a basis for further standardization of the driver training process in Poland, while incorporating modern teaching tools and practical experience from the rail industry. Their implementation should contribute to increased system transparency, reduced undesirable practices, and further improved rail transport safety. This study also serves as a starting point for further research and legislative work, both at the national level and in the context of harmonizing solutions within the European rail system.

References

1. Andrzejczyk P., Dul Cz., Rajczakowska E., Andrzejczyk K., "Education of railway personnel in Poland in the aspect of preparing for the profession of train drivers" [ed.], *Magazyn Kultury Bezpieczeństwa (Security Culture Magazine)*, Urząd Transportu Kolejowego (Railway Transport Office), Warsaw 2022.
2. Andrzejczyk P., Rajczakowska E., Dul Cz., Andrzejczyk K., "The impact of legal changes on the system of training and examination of train drivers in Poland - evaluation of its functioning" [ed.], article submitted for publication - planned publication date: end of 2025.
3. Andrzejczyk P., Rajczakowska E., Gaidys J., "The use of modern IT technologies in the process of training train drivers, on the example of Poland and Lithuania" [ed.], *Smart Economy*, Ed. Lewandowska-Bratek J. Gnitecka R., Wątopek B. Polish Economic Society, Poznań 2022
4. DIRECTIVE 2007/59/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 October 2007 on the certification of train drivers operating locomotives and trains on the railway system in the Community, *Official Journal of the European Union* L 315/51.
5. *Journal of Laws* 2014, item 212, Regulation of the Minister of Infrastructure and Development of February 10, 2014, on the train driver's certificate.
6. *Journal of Laws* 2019, item 2373, Notice of the Minister of Infrastructure of November 8, 2019, on the announcement of the consolidated text of the regulation of the Minister of Infrastructure and Development on the train driver's license.
7. *Journal of Laws* 2022, item 2680, as amended, Regulation of the Minister of Infrastructure of December 1, 2022, on the train driver's certificate.
8. *Journal of Laws* 2023, item 2402, Regulation of the Minister of Infrastructure of 20 October 2023 amending the regulation on the train driver's certificate
9. Flin, R., O'Connor, P., Crichton, M., *Safety at the Sharp End*. Ashgate, 2008.
10. <https://www.era.europa.eu>
11. <https://www.era.europa.eu>
12. <https://www.utk.gov.pl>
13. Nęcka, E., Orzechowski, J., Szymura, B., *Cognitive Psychology*. PWN, Warsaw, 2013.
14. Reason, J., *Managing the Risks of Organizational Accidents*. Ashgate Publishing, 1997.

Abstract

The article discusses the functioning of the train driver training and examination system in Poland after the introduction of significant legislative changes in force from 1 January 2023r. (*Journal of Laws* 2022, item 2680), with particular emphasis on issues



related to extending the driver's certificate to include further categories, subcategories and types of traction vehicles, as well as ways of acquiring knowledge of the railway infrastructure. The introduction of an external examination system implemented by the Office of Rail Transport and the establishment of the Centre for Examination and Monitoring of Train Drivers significantly contributed to the unification of examination standards and improved transparency of the process of assessing the competences of train driver candidates (Urząd Transportu Kolejowego [UTK], 2025). At the same time, an analysis of the applicable legal regulations and the results of pilot studies conducted among instructors, drivers, and management staff revealed significant gaps and ambiguities in the organization of training regarding driver qualification extensions. This article presents the results of empirical research indicating a low level of understanding and insufficient precision of the applicable legal standards in this area, leading to significant latitude in interpretation and diversification of training practices used by rail carriers. In response to the identified problems, a draft amendment to the Regulation on Driver Certificates was proposed (Journal of Laws 2023, item 2402), including, among others, the introduction of a framework training program for certificate extensions, clarification of the scope of data included in the driver's certificate and the inclusion of elements of psychological support in the training process (Nęcka, et al., 2013; Flin, 2008). The proposed solutions aim to standardize training principles, reduce undesirable practices, and further improve safety in rail transport.

This article was prepared as part of the project entitled "Sustainable and Safe Railway Transport in Poland and Lithuania," implemented under the Erasmus+ Programme, contract no. 2024-1-PL01-KA210-VET-000257299, "Sustainable and Safe Railway Transport in Poland and Lithuania."

The project is carried out under Key Action 2 – Cooperation among Organisations and Institutions: Small-scale Partnerships, co-financed by the European Social Fund, within a partnership between the Foundation for the Development of the Education System (FRSE) – the National Agency for the Erasmus+ Programme and the European Solidarity Corps, based in Warsaw, and the Institute of Environmental Economics and Transport Association, based in Legnica.

Keywords: train driver training, train driver certificate, train driver examination, rail transport safety, legal regulations, Office of Rail Transport, CEMM, extension of train driver qualifications, railway infrastructure, vocational education system

JEL Classification: R41, K23, I21, I28