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PraLe >

Practical learning at remote
in the transport sector

Result 1 : analysis of the survey





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1. Introduction

A first phase of the PraLe project investigated to what extent the various basic competences for obtaining the C (truck) or D (bus-car) driving licence are already taught and consequently acquired through distance learning. The Covid 19 pandemic demonstrated the importance of continuity of training for these professions that have an important social role.

Not only the training courses themselves but also the assessment of competences were included in this study.

First, for both training courses, the basic competences were identified for both the theoretical and practical part of the training. By means of a survey conducted in the project partners' countries, the extent to which these different basic competences were trained and attested by taking the necessary exams was first examined.

It also asked how the training or attestation was carried out and what technologies were used. For these technological applications, the necessary support for the trainers on the one hand and for the trainees on the other was probed. If the training or attestation could not be carried out during the lockdown periods, the reason why this was not possible was asked.

2. Identification of the core competences

Based on the expertise present in the project's training organizations, the core theoretical and practical competences for both driving licences were defined.

Table 1 below shows these competences.



Table 1 : Theoretical and practical core competences TRUCK and BUS

Theoretical core competences TRUCK										
traffic regulations	Theoretical principles of ecodriving and defensive driving	Loading / Unloading	Load securing	Regulation on driving- and resting times and tachograph	Knowledge on behaviour in case of accident	Knowledge on ergonomic principles	Knowledge of the basic technical principles of the vehicle			
Theoretical core competences BUS										
traffic regulations	Theoretical principles of ecodriving and defensive driving	Regulation on driving- and resting times and tachograph	Knowledge on behaviour in case of accident	Knowledge on ergonomic principles	Knowledge of the basic technical principles of the vehicle	Handling luggage	Passenger safety	Communication skills (with customers, management and maintenance)		
Practical core competences TRUCK										
Preliminary inspection of the vehicle	Understanding and handling the dashboard	Loading / Unloading	Load securing	Handling the digital tachograph	Basic vehicle manoeuvres	Riding on public roads	Applying principles of eco- and defensive drive	Behaviour in case of an accident	Applying ergonomic principles	Filling in legal transport documents
Practical core competences BUS										
Preliminary inspection of the vehicle	Understanding and handling the dashboard	Handling the digital tachograph	Basic vehicle manoeuvres	Riding on public roads	Applying principles of eco- and defensive drive	Behaviour in case of an accident	Applying ergonomic principles	Communication skills	Handling luggage	Filling in legal transport documents



3. Method and target group

The survey was prepared in Limesurvey and sent to training organisations in the countries of the project's partners, being Finland, Poland and Belgium. As both TTS (Finland) and FCBO (Belgium) are members of Eurotra, Eurotra members were also invited to complete the survey and possibly forward it to organisations in their countries. Eurotra is an international non-profit organisation that includes organisations that provide training in the transport sector (passenger and/or freight transport) and are linked to at least one social partner.

In addition, the survey was also sent to organisations doing attestations for both driving licences.

The questionnaire was available in 5 languages, namely, in Finnish, Polish, Dutch, French and English.

A number of reminders were also sent by the partners, after the initial mailing.

The contents of the survey questions are annexed to this document.

4. The respondents

Table 2 shows the number of respondents to the questionnaire. A total of 108 people opened the survey. Only 40 of them answered the questions fully. The answers of the remaining 68 respondents were not useful for the analysis because not enough questions were completed.

Table 2 : Respondents to the survey

country	# respondents	# not completed	# opened
Belgium	18	17	35
Poland	9	20	29
Finland	12	18	30
other	1	13	14
Total	40	68	108

Table 3 shows the percentage distribution of respondents' activities. It shows that the majority of the respondents are active in training. About 50% are involved in the assessment of the trained potential drivers.



Tabel 3: activity of the respondents

country	initial training truck	initial training bus	assessment truck	assessment bus
Belgium	50%	83%	44%	61%
Poland	100%	78%	11%	11%
Finland	100%	58%	92%	50%
other	100%	100%	0%	0%
Total	78%	75%	50%	45%

Respondents in Belgium are more active in the bus sector while respondents in Poland and Finland are more active in the truck sector.

5. The training

Theoretical training

In the survey, respondents indicated for which theoretical core competences the training could not be given remotely during the lockdown periods and for which the training consequently had to be postponed. Table 4 below shows the percentage of each competency for both theoretical truck and bus training.

The responses show that theoretical training for different subjects could continue from a distance in the project partners' countries. In Poland, the problem appeared to be the least significant and most training could continue. For Belgium, on the other hand, it was indicated that for most subjects more than half of the training courses could not be given remotely and were therefore postponed.

When the answers of all respondents are analysed, we find that the theoretical training of those competences that have a very direct link to practical training were given least remotely. These include subjects such as load securing, loading itself, luggage handling,....

Table 5 shows the reasons given by respondents as to why training could not continue from distance. For Finland, where many theoretical training courses could continue, the main reason for postponement was due to the fact that distant solutions were not suitable for theoretical training. In fact, this was the main reason in every country. By contrast, in Belgium, where distant training was least present, several other reasons were cited. The training courses were not authorised, not suitable or not available.



Table 4: % of respondents indicating that theoretical training of various core competences could not be delivered through distance learning and therefore was postponed

TRUCK	traffic regulations	Theoretical principles of ecodriving and defensive driving	Loading / Unloading	Load securing	Regulation on driving- and resting times and tachograph	Knowledge on behaviour in case of accident	Knowledge on ergonomic principles	Knowledge of the basic technical principles of the vehicle
Belgium	44%	56%	67%	67%	67%	56%	67%	56%
Poland	0%	0%	11%	22%	11%	0%	0%	0%
Finland	8%	17%	75%	67%	8%	50%	8%	8%
other	100%	100%	100%	100%	100%	100%	100%	100%
Total	19%	26%	55%	55%	29%	39%	26%	23%

BUS	traffic regulations	Theoretical principles of ecodriving and defensive driving	Regulation on driving- and resting times and tachograph	Knowledge on behaviour in case of accident	Knowledge on ergonomic principles	Knowledge of the basic technical principles of the vehicle	Handling luggage	Passenger safety	Communication skills (with customers, management and maintenance)
Belgium	47%	73%	53%	60%	60%	60%	67%	60%	67%
Poland	0%	0%	14%	14%	0%	0%	0%	0%	0%
Finland	0%	0%	14%	57%	29%	57%	71%	14%	43%
other	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total	27%	40%	37%	50%	40%	47%	53%	37%	47%



Table 5 : Reasons why theoretical competences were not learned through distance learning

TRUCK	not available	not suitable	not affordable	not allowed	other
Belgium	29%	100%	100%	100%	29%
Poland	50%	50%	0%	50%	0%
Finland	0%	100%	0%	0%	0%
other	0%	0%	0%	100%	0%
Total	16%	89%	37%	47%	11%

BUS	not available	not suitable	not affordable	not allowed	other
Belgium	36%	91%	27%	9%	9%
Poland	0%	100%	0%	0%	0%
Finland	0%	100%	0%	0%	20%
other	0%	0%	0%	100%	0%
Total	22%	89%	17%	11%	11%

Distant tools used for theoretical training

Table 6 shows which distant tools were used for the theoretical core competences that could be given in the countries concerned during the lockdown periods. It is clear that in general, distant training for the theoretic core competences was most often delivered by live lessons through distant video solutions. Only in Finland, according to survey responses, virtual reality technology was also used for some training. In most countries, training platforms were also used where feedback from a trainer was provided.



Table 6: Distant tool used in theoretical training

TRUCK	Learning with live lessons through distant video solutions	Learning with recorded lessons	Learning with non-interactive digital materials	Learning with interactive platforms software with feedback from the teacher	Learning with interactive platforms software with automatic (robot) feedback	Learning with Simulating software	Learning with Virtual Reality (VR)	Learning with Augmented Reality (AR)
Belgium	40%	20%	0%	60%	0%	0%	0%	0%
Poland	67%	33%	33%	33%	11%	22%	0%	0%
Finland	92%	17%	58%	33%	0%	8%	17%	0%
Total	73%	23%	38%	38%	4%	12%	8%	0%

BUS	Learning with live lessons through distant video solutions	Learning with recorded lessons	Learning with non-interactive digital materials	Learning with interactive platforms software with feedback from the teacher	Learning with interactive platforms software with automatic (robot) feedback	Learning with Simulating software	Learning with Virtual Reality (VR)	Learning with Augmented Reality (AR)
Belgium	89%	22%	56%	33%	0%	11%	0%	0%
Poland	86%	29%	43%	43%	0%	14%	0%	0%
Finland	100%	14%	71%	29%	0%	14%	29%	0%
Total	91%	22%	57%	35%	0%	13%	9%	0%



Practical training

In addition to the core competences for theoretical training, the extent to which distant learning could not be applied to the training of practical core competences was also surveyed, again for both truck and bus drivers. Table 7 summarises the responses from the survey. In Belgium, the answers are almost unanimous that the practical competences were not taught from a distance and were therefore deferred. Similarly, in Finland, an overwhelming majority indicated that solutions were not given from a distance. In Poland, answers were more moderate.

Taken together, all answers point to an average of 70-75% of respondents believing that practical training could not be carried out remotely and should therefore be postponed.

This percentage is clearly higher than for the theoretical competences, which was somewhat to be expected.

Table 8 shows again for the practical training the reasons why distant learning was not applied.

Again, the answer is almost unanimous. The main reason indicated is that distant learning applications are not suitable for teaching the competences concerned. A large number of respondents also indicated that no applications were available.

Distant tools used in practical training

Table 9 summarises the types of technologies or applications used in practical training in the previously rare cases.

Again, most applications appear to be live lessons delivered via remote video applications. In addition, simulating software is also used in some cases. Again, Finland is the only country where the survey indicated that virtual reality applications are also used.



Table 7 % of respondents indicating that practical training of core competences could not be delivered through distance learning and postponed

TRUCK	Preliminary inspection of the vehicle	Understanding and handling the dashboard	Loading / Unloading	Load securing	Handling the digital tachograph	Basic vehicle manoeuvres	Riding on public roads	Applying principles of eco-defensive drive	Behaviour in case of an accident	Applying ergonomic principles	Filling in legal transport documents
Belgium	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Poland	44%	44%	33%	33%	22%	44%	44%	44%	44%	22%	11%
Finland	75%	58%	83%	67%	25%	33%	75%	83%	42%	50%	17%
other	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total	74%	68%	74%	68%	48%	58%	74%	77%	61%	58%	42%

BUS	Preliminary inspection of the vehicle	Understanding and handling the dashboard	Handling the digital tachograph	Basic vehicle manoeuvres	Riding on public roads	Applying principles of eco-defensive drive	Behaviour in case of an accident	Applying ergonomic principles	Communication skills	handling luggage	Filling in legal transport documents
Belgium	93%	93%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Poland	29%	29%	14%	29%	29%	14%	43%	0%	0%	14%	0%
Finland	71%	71%	57%	57%	71%	57%	71%	57%	71%	71%	29%
other	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total	73%	73%	70%	73%	77%	70%	80%	67%	70%	73%	60%



Table 8 : : *Reasons why practical competences were not learned through distance learning*

TRUCK	not available	not suitable	not affordable	not allowed	other
Belgium	44%	89%	0%	0%	11%
Poland	40%	60%	0%	40%	0%
Finland	20%	90%	0%	10%	0%
other	0%	0%	0%	100%	0%
Total	32%	80%	0%	16%	4%

BUS	not available	not suitable	not affordable	not allowed	other
Belgium	67%	93%	13%	13%	7%
Poland	33%	67%	0%	33%	0%
Finland	0%	100%	0%	0%	0%
other	0%	0%	0%	100%	0%
Total	46%	88%	8%	17%	4%



Table 9: Distant tool used in practical training

TRUCK	Learning with live lessons through distant video solutions	Learning with recorded lessons	Learning with non-interactive digital materials	Learning with interactive platforms software with feedback from the teacher	Learning with interactive platforms software with automatic (robot) feedback	Learning with Simulating software	Learning with Virtual Reality (VR)	Learning with Augmented Reality (AR)
Belgium	/	/	/	/	/	/	/	/
Poland	63%	25%	38%	25%	25%	25%	0%	0%
Finland	82%	18%	55%	18%	9%	18%	18%	0%
Total	74%	21%	47%	21%	16%	21%	11%	0%

BUS	Learning with live lessons through distant video solutions	Learning with recorded lessons	Learning with non-interactive digital materials	Learning with interactive platforms software with feedback from the teacher	Learning with interactive platforms software with automatic (robot) feedback	Learning with Simulating software	Learning with Virtual Reality (VR)	Learning with Augmented Reality (AR)
Belgium	67%	33%	33%	0%	33%	0%	0%	0%
Poland	71%	29%	29%	14%	14%	29%	0%	0%
Finland	100%	40%	100%	40%	0%	20%	40%	0%
Total	80%	33%	53%	20%	13%	20%	13%	0%



6. Assessment

In addition to training, the survey also asked about the application of distant learning. As a result, the project probed every possible application, whether in training or in the assessment of theoretical or practical core competences. As indicated, the number of respondents active in the assessment was clearly lower.

Nor were any significant differences or different technologies or applications noted than those in training. For completeness, we summarise the results in the tables below.



Theoretical assessment

Tabel 10: % of respondents indicating that theoretical assessment of various core competences could not be delivered through distance applications and therefor was postponed

TRUCK	traffic regulations	Theoretical principles of ecodriving and defensive driving	Loading / Unloading	Load securing	Regulation on driving- and resting times and tachograph	Knowledge on behaviour in case of accident	Knowledge on ergonomic principles	Knowledge of the basic technical principles of the vehicle
Belgium	100%	100%	100%	100%	100%	100%	100%	100%
Poland	0%	0%	0%	0%	0%	0%	0%	0%
Finland	36%	55%	82%	82%	45%	64%	55%	55%
Total	60%	70%	85%	85%	65%	75%	70%	70%

BUS	traffic regulations	Theoretical principles of ecodriving and defensive driving	Regulation on driving- and resting times and tachograph	Knowledge on behaviour in case of accident	Knowledge on ergonomic principles	Knowledge of the basic technical principles of the vehicle	Handling luggage	Passenger safety	Communication skills (with customers, management and maintenance)
Belgium	91%	91%	91%	91%	91%	91%	91%	91%	91%
Poland	0%	0%	0%	0%	0%	0%	0%	0%	0%
Finland	33%	50%	50%	50%	50%	50%	67%	50%	67%
Total	67%	72%	72%	72%	72%	72%	78%	72%	78%



Table 11 : Reasons why theoretical competences were not assessment through distance applications

TRUCK	not available	not suitable	not affordable	not allowed	other
Belgium	75%	38%	0%	50%	13%
Poland	/	/	/	/	/
Finland	11%	89%	0%	11%	0%
Total	16%	89%	37%	47%	11%

BUS	not available	not suitable	not affordable	not allowed	other
Belgium	64%	36%	9%	45%	9%
Poland	/	/	/	/	/
Finland	25%	75%	0%	0%	0%
Total	53%	47%	7%	33%	7%

As with the results for training, distant assessment is also reported as being not suitable and there are also insufficient applications available. It is also reported by a large proportion of respondents that such applications are not allowed.

In terms of the nature of the applications that are brought along, there are also few differences with the results relating to training, as shown in the following table



Table 12: Distant tool used in theoretical assessment

TRUCK	Assessment through distant video solutions with active assessor	Assessment with recorded video's	Assessment with non-interactive digital materials	Assessment with interactive platforms software	Assessment with Simulating software	Assessment with Virtual Reality (VR)	Assessment with Augmented Reality (AR)
Belgium	/	/	/	/	/	/	/
Poland	100%	100%	100%	0%	0%	0%	0%
Finland	71%	0%	57%	29%	14%	14%	0%
Total	75%	13%	63%	25%	13%	13%	0%

BUS	Assessment through distant video solutions with active assessor	Assessment with recorded video's	Assessment with non-interactive digital materials	Assessment with interactive platforms software	Assessment with Simulating software	Assessment with Virtual Reality (VR)	Assessment with Augmented Reality (AR)
Belgium	100%	100%	100%	100%	0%	0%	0%
Poland	100%	100%	100%	0%	0%	0%	0%
Finland	75%	0%	50%	0%	25%	25%	0%
Total	83%	33%	67%	17%	17%	17%	0%



Practical assessment

Table 13 % of respondents indicating that practical assessment of core competences could not be carried out through distance and was postponed

TRUCK	Preliminary inspection of the vehicle	Understanding and handling the dashboard	Loading / Unloading	Load securing	Handling the digital tachograph	Basic vehicle manoeuvres	Riding on public roads	Applying principles of eco-defensive drive	Behaviour in case of an accident	Applying ergonomic principles	Filling in legal transport documents
Belgium	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Poland	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Finland	82%	82%	82%	82%	82%	82%	73%	73%	82%	73%	64%
Total	85%	85%	85%	85%	85%	85%	80%	80%	85%	80%	75%

BUS	Preliminary inspection of the vehicle	Understanding and handling the dashboard	Handling the digital tachograph	Basic vehicle manoeuvres	Riding on public roads	Applying principles of eco-defensive drive	Behaviour in case of an accident	Applying ergonomic principles	Communication skills	handling luggage	Filling in legal transport documents
Belgium	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Poland	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Finland	83%	83%	67%	67%	83%	67%	83%	67%	83%	83%	33%
Total	89%	89%	83%	83%	89%	83%	89%	83%	89%	89%	72%



Table 14 : Reasons why practical competences were not assessment through distance applications

TRUCK	not available	not suitable	not affordable	not allowed	other
Belgium	75%	63%	0%	50%	0%
Poland	/	/	/	/	/
Finland	22%	89%	0%	11%	0%
Total	47%	76%	0%	29%	0%

BUS	not available	not suitable	not affordable	not allowed	other
Belgium	75%	63%	0%	50%	0%
Poland	/	/	/	/	/
Finland	22%	89%	0%	11%	0%
Total	47%	76%	0%	29%	0%



Table 15: Distant tool used in practical assessment

TRUCK	Assessment through distant video solutions with active assessor	Assessment with recorded video's	Assessment with non-interactive digital materials	Assessment with interactive platforms software	Assessment with Simulating software	Assessment with Virtual Reality (VR)	Assessment with Augmented Reality (AR)
Belgium	/	/	/	/	/	/	/
Poland	100%	100%	100%	0%	0%	0%	0%
Finland	50%	0%	50%	50%	25%	25%	0%
Total	60%	20%	60%	40%	20%	20%	0%

BUS	Assessment through distant video solutions with active assessor	Assessment with recorded video's	Assessment with non-interactive digital materials	Assessment with interactive platforms software	Assessment with Simulating software	Assessment with Virtual Reality (VR)	Assessment with Augmented Reality (AR)
Belgium	100%	100%	0%	0%	0%	0%	0%
Poland	100%	100%	100%	0%	0%	0%	0%
Finland	50%	0%	50%	0%	50%	50%	0%
Total	75%	50%	50%	0%	25%	25%	0%



7. Teachers and students

Next, the survey also asked whether teachers needed to possess or acquire certain competences for appropriate use of the applications used to teach the competences remotely.

Table 16 : Are special competences needed for teachers when using these applications?

	YES
Belgium	56%
Poland	22%
Finland	83%
Total	57%

More than half of the respondents confirmed that teachers need specific competences when using the applications. Here, knowledge of IT applications and specific pedagogical skills were mainly mentioned.

Finally, the vast majority of respondents consider it absolutely necessary to provide the necessary support for students using these applications. 80% indicated that with the existing applications, this is also provided.

Table 17 : Is support for students provided?

	YES
Belgium	73%
Poland	100%
Finland	75%
Total	80%



8. Conclusions

In total, 40 usable answers were received, 68 other answers were incomplete and also unusable.

First of all, the answers showed that there were major differences between countries in the use of applications that enable distant learning or distant assessment. It is clear that such applications were and are used least in Belgium, which meant that training had to be postponed during the lockdown periods in the Covid 19 pandemic.

In Finland and, to a more limited extent, Poland, respondents point more to the use of distant learning in the bus and truck sector. When such applications are mentioned, they mainly concern training for the acquisition of certain theoretical core competences. Fewer applications are mentioned for practical training.

When asked why then such applications were not used, most respondents answer that such applications are not suitable for these training courses and are also insufficiently available. In many cases (and certainly for practical competences) it is also mentioned that these applications are not allowed.

The most frequently used applications are live sessions, using video platforms. For practical training, simulation programmes are also used. Only in Finland are applications with virtual reality mentioned.

Finally, it is clear to the respondents that the use of such applications requires specific competences of the trainers (such as IT skills and adapted pedagogical skills).

Finally, thorough support for the students using these applications is necessary.



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9. Annex : survey