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Changing training needs of port workers due to future trends

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Abstract

The operating environment in ports has changed considerably during the past decades. The public ownership is decreased at the same time when the private international operators have taken bigger involvement in business. The technological development has been rapid. Vessel sizes increase all the time, the share of container cargo increases and due to the cargo handling automation the cargo is handled much faster. As a result of more globalized trade, the containers handled in the port have much more variety regarding to their geographical origin or destination. The development of port operations has posed new requirements for port workers. The traditional port worker requirements were ability to do heavy physical work in a group. Due to automation, the work requires less physical strength. In addition, the work is increasingly done in small group without supervisor's presence or completely alone. As the number of handled cargo per worker has increased and the variety of the origins of the cargo has increased, the probability that some threats emerge has also grown. Therefore, nowadays part of the port work is the ability to observe exceptions and decide whether these should be reported before the threats become crisis situation, as an example of changed working requirement. The purpose of this paper is to propose how the recent and future trends of the port operations affects for the education and training needs of port workers in Europe. The question is addressed at first by studying status quo of port worker conditions in the European port sector and then evaluating the development of Finnish educational system by using case study research methodology. In Finland, 80–90% of the foreign trade is transported via ports making Finland as suitable case. Case study research included qualitative research methods such as interviews. In addition, the Finnish system is compared with the systems of other European countries and ILO regulations. As a result, this paper considers pros and cons of harmonizing port work education and training in European Union countries.

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1. Introduction

Ports are important nodes in global transport chains. Due to increasing global trade, volumes of transported cargo are supposed to continue its increase also in the future. However, the number of port workers has not increased at the same pace as the handled cargo. The enablers for increased volume of handled cargo per worker has mainly been increased automation, better use of different supporting technologies, better organization of work, improvements of vessels and adjustment of port infrastructure and workforce capability to better response for the type of vessels using the port. (Drewry, 2014)

To enable improvements in port workers performance in changing operational port environment, there is a need to ensure that the workers get appropriate focused training. The purpose of this paper is to outline the future training needs of port workers in Europe. This paper uses Finland as case country for this study.

2. Methodology

This paper uses single case study methodology (Yin, 1994). The case country is Finland. In Finland, 80–90% of the foreign trade is transported via ports making Finland as suitable case for considering the current and future challenges of port workers' training. The detailed information from Finland is then compared with more general level information about status quo in European Union (EU) Member States.

To get relevant information about current education and training practices, the authors interviewed representatives of the most relevant organizations. The following organizations were interviewed:

- Transport Workers' Union AKT, who represents road transport, stevedoring and related branches' (vehicle maintenance etc.) workers.
- The Finnish Port Operators Association, who represents stevedoring and terminal service companies.
- MeduPort Oy, a training service provider specialized in port operations.
- Ministry of Social Affairs and Health.
- The Centre for Occupational Safety, an association for promoting occupational safety. One of its key tasks is to maintain occupational safety certifications.
- Trade Union Pro, the largest private sector union for clerical employees in Finland.

In addition to six interviews above, the authors organized two day workshop where the interviewed persons and representatives of some other similar relevant stakeholder groups were invited. There were participants from ten different organizations in the workshop. The purpose of the workshop was to discuss current global trends related to maritime industry, and education and training practices in more detail. As a result of workshop, the participants formed common understanding about future education and training needs in port sector and verified the results of analysis of this paper.

3. Status quo of port worker conditions in the European port sector

3.1. Labor market

Port labor arrangements in the European Union took their present shape in the 20th century. The great variety of reform measures during the last 25 years has led in remarkable organizational differences between EU Member States and even between individual ports inside the same country. In some countries, the labor system has already been reformed under pressure of European institutions. For example, in Belgium, Greece and Portugal, reform schemes are currently being prepared or implemented. (Van Hooydonk, 2013).

Dock work covers all and any part of the work of loading or unloading any ship as well as any related work (ILO C152, Art. 1). Port workers in the EU are employed by a diversity of employers. Usually, private terminal operators are the employers. However, sometimes the public port authorities (e.g. crane drivers in Cyprus) or commercial

service providers controlled by a state-owned entity (e.g. Poland) are the employers. Some port workers are self-employed and mostly united in professional associations, some of which at the same time act as employers of other workers.

Work can be organized in a permanent or in a casual way. Permanent employees have a contract with an individual employer, either for an indefinite or a fixed term. A third possibility for port work is more or less irregularly employed supplementary workers organized in pools.

Port labor arrangements in the EU show a great variety in terms of the level of regulation. The two extremes in the spectrum are:

1. A strictly regulated pool system based on a reservation of market access for authorized operators-employers and an exclusive or preferential right of employment for registered pool workers
2. A fully liberalized or deregulated system, where employers are free to select workers, to rely on general temporary work agencies, and where employment is fully governed by general labor law.

Some EU Member States have a regime of registration of port workers, which may be based on either law or agreement. Other countries have no such arrangements at all. In most cases, registration entitles the worker to exclusivity or priority of employment. **Currently, 16 out of 22 EU States have a regulated port labor market.**

Four categories in the port labor system can be distinguished (Van Hooydonk, 2013):

1. Classic, fully regulated pool or registration systems
2. Classic pool or registration systems based on self-employment
3. Relaxed pool or registration systems (characterized by less absolute restrictions or partly liberalized rules)
4. Free labor markets

With the variety of employment relationships, the number of employers of port workers in the 22 maritime EU Member States is approximately 1.5 million (European Commission, 2015). Countries with particularly large numbers of employers include Italy, Germany, Poland, the UK and Belgium and the Netherlands. The number of port workers totals around 110,000 in those countries.

Trade unions defend port workers' rights. As well as for the number of employers and employees, it is very difficult to estimate the percentage of trade union membership. But in all EU Member States union density among port workers is higher than the average in the national labor market and often reaches very high percentages of between 90% and 100%.

3.2. *Qualifications and training*

The training requirements for EU port workers vary a lot. In a first group of countries, legal, contractual or factual requirements necessitate a specific training for all workers. For a second group of countries, equipment operators (e.g. crane drivers) must obtain a special training certificate. Countries in the third group have no specific training requirements except obligatory occupational health and safety training. Currently, there are no specific EU rules on training for port workers with one exception for bulk terminals. The "Bulk Terminals Directive" requires safety training for personnel at solid bulk terminals.

In over half of the EU Member States, training is organized by institutions at national level. Such training can be organized by a national port authority or by a port training school. Mostly, that school is located in a major port and caters for the training needs of employers in different ports. In addition, a training provider should not be linked to a specific port. The second group consists of countries which focus on training arrangements for the local port community. In a third group countries (Ireland, Latvia, Poland, UK), individual employers are responsible for training. (Van Hooydonk, 2013).

There are educational institutions, schools or training centers available in about 75% of all Member States. Despite the existence of these institutions, in some cases training is mainly organized by individual employers. Especially in the container market, the global container terminal operators organize well-structured in-house training. (Van Hooydonk, 2013).

Management of port worker training can be carried out:

1. By the State, a public agency or a port authority

2. Jointly by employers' and workers' organizations
3. By employers or employers' organizations

In around 50% of the Member States, national qualification and certification systems are in place for all port workers.

3.3. Health and safety

Port work is one of the most dangerous jobs in the industry sector. It includes manual work in tricky accessible workplaces as well as deep interaction with heavy machinery, hazardous cargoes and dense traffic and movement. Technical developments, for example in the cargo handling equipment, have to a great extent enhanced the safety of port workers. This is due to automation, substantially reduced exposure to risks of several categories of workers, a strengthening of safety standards, policies and awareness in the ports industry and at individual port terminals. However, some of the technical developments have introduced new risks, and therefore ports remain to be dangerous working environment.

Depending on the job category of port worker, there are different risk levels. A container yard planner working in an office is exposed to a safety risk that is much lower than the risk for a waterfront worker (e.g. the mooring personnel). Differences in risk levels also exist between the types of terminals. For example, modern dry bulk terminals are highly automated and have lower staff numbers than a car terminal.

Regarding to legal arrangements on occupational health and safety in port labor, there are generally two categories:

1. Member States with port-labor specific laws and regulations
2. Member States with general occupational health and safety laws.

Currently, about half of EU Member States has specific laws and regulations. The category "Lex specialis on specific matters" includes countries with special rules on the handling of dangerous goods, for example.

The following laws and regulations apply to occupational health and safety in port labor:

- Bulk Terminals Directive (Annex II, Art. 1-4)
- OSH Framework Directive 89/391/EEC of 12th June 1989
- Directive 2003/88/EC ("Working Time Directive"), Art. 17(3)(c)(ii): Derogations for dock and airport workers
- Charter of Fundamental Rights of the European Union (Art. 31 (1) and (2))
- European Social Charter (Part I, items 2 and 3; Part II Art. 2, 3 and 11)

Only a minority of EU Member States keeps national port labor-specific statistics, and no EU-wide statistics on occupational accidents are available. Therefore, it is quite difficult to assess the EU-wide safety level for port work. But detailed statistics for single countries like Belgium, Cyprus and Italy show that the frequency and severity of accidents remain among the highest in the economy, although the safety record has considerably improved during the past decades.

There are a few EU-wide initiatives with the aim to improve health and safety conditions for port workers. One example is the "Lighten the Load" campaign from 2007 and 2008 which aimed at preventing musculoskeletal disorders. Another example is the annual meeting of Belgian, Dutch and German labor inspectors with practical experience on inspection of working conditions in ports.

4. Different viewpoints for training of port workers

Unlike education, which has broader approach and is related especially to a future job of the learner, training is considered to be related to the present job of the learner and it is expected to bring immediate improvement in job-related performance. Vocational training is a form of training which focuses on practical applications of skills learned, and is generally unconcerned with theory or traditional academic skills. An effective training is expected to influence on the development of cognitive, psychomotor and affective skills. Cognitive skills refer to the knowledge

structures that can be viewed as a sequence of the progressive contextualization of materials. Psychomotor skills are manual or physical skills needed to physical movement, coordination and the use of motor skills area. The affective skills or sometimes referred as attitude skills includes the manner in which the worker deal emotionally with situations and people, ranging from mere awareness to the internalization of values. In practice, training of cognitive skills of forklift driver enables him to know what to do with a forklift, psychomotor skills enable him to handle and drive forklift, and training of affective skills enable him to use forklift safely without causing injuries or damages.

Another viewpoint is to divide training as time-based training or competence-based training. In time-based training, the worker goes through certain courses that have predefined length, and based on passed training courses, the worker has those skills that the courses were all about. In competence-based training the starting point is to define those skills that the worker already has and skills that are needed for a job that the worker has or is going to have. Then, the worker is trained to achieve the missing skills. (Emad and Roth, 2008).

5. Background information about port sector in Finland

5.1. Finland – small country with multiple ports

Sea freight is the most important transportation mode of foreign trade in Finland (Punakivi and Hinkka, 2006). In 2014, 80% of Finnish imports and 90% of exports were transported by sea freight (Finnish Customs, 2015). This foreign sea trade was transported through 44 different ports, from which 10 are inland water ports, with total import and export volumes of 96 million tons (Finnish Transport Agency, 2015). 23 ports operated year round, and ten largest ports handled 81% of the trade. There was 48 million tons of sea export transports from Finland, and 80% of them was directed towards EU countries. Export cargo in 2014 consisted of oil products and chemicals (11.2 million tons), sawn timber (3.8 million tons), other forest industry products (12.0 million tons), parceled goods and metals (9.1 million tons), and other export (12.2 million tons). (Finnish Transport Agency, 2015) The majority of the export unit goods were transported in containers (7.8 million tons) and in lorries and trailers (6.2 million tons). (Finnish Port Association, 2015)

There was 48 million tons of sea import transports to Finland, and 59 per cent of them arrived from EU countries. Import cargo in 2014 consisted of oil products and chemicals (17.8 million tons), coal and coke (5.3 million tons), other dry bulk (12.0 million tons), parceled goods and metals (9.2 million tons), and other import (3.4 million tons). The majority of the import unit goods were transported in lorries and trailers (13 million tons) and in containers (12 million tons). (Finnish Transport Agency, 2015).

Some of the biggest ports like the Port of Helsinki utilize the landlord port model, whereas some smaller traditional ports in Finland utilize tool model. The most of the ports are utilizing a combination of landlord port and tool port. Port authority owns the land and leases it to operating companies similar to land lord model, but superstructure is usually partly owned by port authority. The operation of port authority equipment is performed both by port authority labor and cargo-handling firms. Port of Tornio can be considered as concession port as city of Tornio has leased the port area and all of the port operations as a whole to stainless steel company Outokumpu with a 50 year long contract. (Rönty et al. 2011)

From the beginning of 2015 all the Finnish ports act as independent companies. The common practice before 2015 was that ports were parts of municipalities. The municipalities still own the ports but acting as a company gives more financial freedom and responsibilities to ports.

5.2. Current education of port workers in Finland

Basically, the employer can hire someone without any kind of education to work for the simplest port work tasks. Depending of the port, the only “training” for this kind of worker is the orientation for all new workers that spans one or two day depending on the port. Therefore, some of the current Finnish port workers who have permanent working contract, have no formal education.

The National Board of Education has defined the basics of vocational qualification in cargo handling. In order to be able to any training, the organizer of the training must get an approval for the curriculum, which must be based on the Regulation 38/011/2005. Competence-based qualification includes both informational and operational parts.

Theoretical parts may be partly organized by distance learning using the Internet and e-mails. The training includes vocational skills demonstration which can be taken immediately after the theoretical training or after a few months practical training sections. The assessment is mostly done based on the practical working skills. Also simulations, interviews, group assessments and self-assessments can be used.

The further vocational qualification in cargo handling is based on four compulsory and six voluntary modules. In addition to compulsory parts at least one voluntary part must be chosen to receive the certificate of qualification (Table 1).

Table 1. The content of further vocational qualification in cargo handling. (Regulation 38/011/2005).

Compulsory:	Voluntary:
Knowledge of companies, customers and products	Lashing
Basics of cargo handling	Tallying
Cargo handling with machines	Deck lifting
Signalling and traffic control	Cranes
	Special machines
	Port specific special work (not included in other voluntary modules)

The assessment is done based on the following criteria, where the candidate:

- works based on the instructions and quality system
- works independently
- communicates by using the field specific terminology
- operates flexibly with colleague and foreman during normal situations and incidents
- works by following a secure and ergonomic working method
- uses proper protective equipment
- knows workplace's risks related to incidents, fire and environment
- knows customer specific quality requirements and work accordingly
- understands the meaning of own work in the quality of the service
- Understands the possibilities to affect the financial performance and work accordingly.

Education for foremen is diverse. There is two year spanning specialist vocational qualification which is performed in apprentice. This was seen as the preferable way of educating foremen, but in practice suitable stevedore workers are usually not very interested to become foremen due to small salary difference between foremen and experienced stevedore workers, and fear of losing social relationships among the group of stevedore workers. Therefore, the stevedore companies have usually ended up hiring seamen and logistics engineers as foremen.

5.3. Current training of port workers in Finland

There is a Collective Agreement (valid until 31.1.2017) for permanent employees in stevedoring between the Finnish Port Operators Association and Transport Workers Union AKT (Collective Agreement, 2014). Based on the Collective Agreement (2014), the permanent port worker can participate in different qualification courses after which he/she will be paid a qualification allowance defined in the Agreement. In order to get the qualification and allowance in a certain qualification area, a port worker needs to take and pass a training course followed by a three months training period. The Collective Agreement is applied only in Finnish, even though Swedish is also an official language in Finland.

There are six categories of qualification areas:

1. Qualification in being an ordinary port worker (dock hand)
2. Qualification in machinery work (forklift less than 20 tons, front-end loader, etc.)

3. Special qualification in machinery work (forklifts over 20 tons, side loaders, straddle carriers, etc.)
4. Qualification in crane operations
5. Qualification in being a foreman
6. Qualification in ADP (automatic data processing)

Only by having the qualification in a specific qualification area(s), person is allowed to do the work from that category. E.g. a general worker cannot drive a forklift. On the other hand, a person having qualification e.g. in cranes can also do general worker’s tasks. Port worker can have qualification in all six qualification categories, which are independent from each other; there are no specifications of the sequence in which the qualification trainings should be taken.

The General Agreement defines that port worker should be able to participate in qualification trainings locally. The allowances from the training period are also defined in the agreement.

6. Assessment of the port workers training system in Finland and its relation to the ILO guidelines

Table 2. SWOT analysis of the Finnish port workers’ training system.

Strengths:	Opportunities:
<ul style="list-style-type: none"> • The training system is flexible and demand-based. • Strong relationship with export industry. • The training is well organized. • Port workers have will and stamina to work (when collective labor agreements apply). • Port workers have routines for receiving directions (and handling with bureaucracy). • General trustworthiness (security, reliability of operations, etc.). • Occupational health and safety structure is established and collaboration is functional. • Occupational health and safety training is recognized important and is increasing. 	<ul style="list-style-type: none"> • The flexible training system allows fast reaction to changing environment. • 80-90% of the foreign transportation is transported via Finnish ports. • Ports are relatively appealing workplaces (good income compared with education/competency). • Low hierarchy of the Finnish work culture. • Apprenticeship contract enables to receive a diploma proving competence. • The work itself is tempting in the long run; not just as a temporary job. • Increasing ICT: need to train people for new operations and machines increases. • Ports are development oriented. • Due to the well-functioning occupational health and safety structure, it is possible to reach zero accident level in ports.
Weaknesses:	Threats:
<ul style="list-style-type: none"> • Companies need to pay the training. • No national education available. • Port workers are relatively small occupational group thus organizing a study program would require relatively high resources compared to the number of students. • The number of port workers is so low in this economic situation that critical mass to organize supplementary training is hard to gather. • The basic training is not compulsory (not a shared weakness). • The port’s systems (e.g. ISPS) should be better trained to port workers. • Lack of competitiveness of the Finnish ports (i.e. minimum/small investments in ports). • Lack of sense of proportion: several small ports having massive development visions. • Regarding occupational health and safety, collaboration and supervision of the interests need to be well separated. 	<ul style="list-style-type: none"> • The business will become more centralized and the need of new employees will not increase. • Port workers are dependent on economic situation. • The weak economic situation; unemployed people, less emphasis on training (using of untrained people and lower quality of training), and already small sector is withering. • Small cargo volumes and a lot of ports. • New generation of workers – how to motivate them? • How to maintain occupational health and safety structure when structural changes are remarkable?

6.1. Assessment of the port workers training system in Finland

The assessment included a SWOT analysis and it was fulfilled based on the interviews (Finnish Port Operators Association, Transport Workers' Union AKT, Ministry of Social Affairs and Health (industrial safety and safety education), and the evaluation of the researchers.

The results of the SWOT analysis are presented in the Table 2. In conclusion, the flexibility of the system is considered as a strong strength even though it may lead to variety of training. Ports are seen as appealing working environments, but the uncertainty of the economic situation in Finland may threaten the development efforts.

6.2. Finnish system's relation to the ILO guidelines on training in the port sector

ILO guidelines are not very well known in Finnish ports and associations. Anyhow, it does not mean that the training methods and principles in Finnish ports would be in conflict with the ILO guidelines. The interviews of employee and employer associations reveal that the principals of ILO guidelines are mostly used in practice although the training has not consciously been developed based on the guidelines. The practices presented in ILO guidelines are at most parts a certainty for Finnish ports. Though, there are slightly variation in practices of different ports depending e.g. on the size of the port.

1. Training policy

Most of the companies (at least the big ones) have written training policies which direct the training in practice at the company level. There is also a policy statement written in safety regulation but it is written in a very general level.

2. Delivering the training

Port training is mainly organized by official education institutions as well as by using company's own trainers. There are three accredited institutions/training providers in Finland:

- The Etelä-Kymenlaakso Vocational College (Ekami): a multi-disciplinary education institution offering port related training in Kotka
- Winnova: a vocational education and training institute in Rauma
- Meduport: a family company, which offers vocational education and training in logistics.

It is employers' responsibility to take care of that the port worker knows how to perform their work safely. According to the safety regulation employer must offer proper training on safety matters. In Finnish ports The Center of Occupational Safety is used as a training institute in safety issues. Also port's own industrial safety delegate provides information on safety matters to the companies working in port. The Center of Occupational Safety provides also certification on safety by admitting an occupational safety card after having safety training and passing a test. The card is valid for five years. At the moment occupational safety card is not compulsory but only in a couple of ports.

Some operators have considered also taking training courses from foreign training institutes but it was not considered viable. The training is mostly needed in Finnish but there are also some Swedish speaking port workers at Finnish ports.

The qualification committee accredits the training providers. At the moment there hasn't been demand for more institutions and companies to become accredited trainers. The number of trainees is moderate and therefore the demand for trainers is low. At the moment there are experienced unemployed port workers who can start working with having only some orientation and therefore there is little need to train port workers starting from basics.

Port operators also deliver training and orientation by using their own trainers and employers e.g. when the machines are updated/upgraded. When the training is conducted by using port's own trainers, trainee may not get an official qualification, although the knowhow and skills are equal to the ones having accredited qualification.

3. Competence profiling

When a new employee is recruited, he/she is told about the possibilities to have different career paths in port and to participate in training courses. At this stage, the personal competence profiling is done by assessing person's

current knowledge and skills. Person's competence is compared against the needs of specific skills required in that specific port. Based on this assessment/gap analysis the individual learning plan is done and the person is directed to training courses relevant to his/her job. Usually the competence profiling is done more in a working group level than in an individual level. It is common that companies plan in a yearly basis the need for different kinds of trainings and based on that plan suggest/recommend workers to participate in the relevant training courses.

4. Demonstrating the competencies

According to the National Board of Education "Basics of competence-based qualification – Further vocational qualification in cargo handling" the competence-based qualification includes vocational skills demonstration which can be taken immediately after the theoretical training or after a few months practical training sections. The assessment is mostly done based on the practical working skills. Also simulations, interviews, group assessments and self-assessments can be used.

In Collective Agreement (2014) it has been agreed that the competence in different qualification areas can be achieved by taking and passing the training course and also by having a three months practical training period at port after the course. The practical training period is one part of demonstrating the competence.

5. Certification procedure

The three Finnish training institutions/companies provide diploma of competencies after the candidate has taken the vocational skills demonstration. The validation of the diploma is not limited. Though, the employer is responsible for making sure that the skills and knowhow are being updated when necessary.

6. Workers participation in the training of port workers

In almost every port, there are labor protection delegates and trustees through which the port workers can e.g. discuss about the training possibilities. Anyhow, the discussions at the operational level are rare. There aren't any other discussions related to training at the association level than the ones related to the collective agreements (allowances). In further vocation training committee the future needs of competencies are being discussed but the training issues are not handled in the long run.

7. Conclusions

Ports have significant economic impact for EU. Therefore the port operations should be handled in efficient way. The education and training of port workers play significant role for developing ports to respond for the future challenges.

The importance of health and safety issues is increasing in port workers' training as port work is one of the most dangerous jobs in the industry sector. In addition to focusing on accident prevention, recently more attention is paid to slowly developing sicknesses e.g. container fumigant exposures and poor ergonomics of port vehicles. Also increased threat of terrorism is considered.

There are major differences between EU countries how education and training of port workers is organized. Even if skillful workforce is needed to enable efficient port operations and to avoid health and safety risks, the Finnish case revealed that the education level of workforce varies a lot. Even if especially younger workers have formal vocational education and related qualifications, there are numerous port workers whose "training" consists of one or two days' orientation for the habits of port.

In order to ensure that ports and port workers are able to respond for the future trends of the port sector, the question of harmonizing education and training of port workers in EU emerges. However, there are pros and cons for this progression.

The main benefit for harmonizing the port work education and training is to enable better movement of workforce between European countries. Especially in Finland, where the industry is encountering major structural changes and important transition traffic to Russia has substantial variation due to political and economic tendencies, the need for port workers has considerable changes. If the workforce had qualifications that enable them to work abroad, it would be easier for port workers to move to those countries where skilled workforce is needed. The other reason for harmonizing is that it increases working safety when unloading vessels if the port workers would use

similar approaches and methods when loading vessels everywhere in Europe. In addition, trends and future challenges are rather similar everywhere. So, it would be easier for education providers to have common efforts to develop education if they all have similar objectives.

However, there are also factors that do not favor harmonizing. The most obvious challenge is different circumstances in different countries. E.g. in Finland, the ports are small and handle different kind of cargo. Therefore, there is need for multi-skilled workers, but they do not need to be trained to work in highly automated environment. The big European ports instead, are highly automated and those ports require workers who are expert in certain tasks to be able to work efficiently and use automation. The other variation comes from differences in climate, cargo types, place of origins of cargo, etc.

One option could be to propose recommendation for uniform education without coercive laws. In that option, the education providers could offer optional training that offer EU-level qualification. Even if the employer in most case pays the costs of training, it would be up to employer to have work force that are able to work in other countries, as stevedoring companies are international, and they would benefit if they are able to move easier their work force between ports depending on the demand. In that case, the education providers are encouraged to harmonize their offer in different European countries.

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