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The Question of Pan-European Qualifications

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Global Political Economy (GPE) Research Group

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The aims of the project are to:

- 1. Promote Lifelong Learning within the European Steel Industry
- 2. Support workers' adjustment to new ways of working.
- 3. Promote equal opportunities.
- 4. Support workers' adjustment to new technologies.
- 5. Provide workers with transferable skills.

In meeting these aims the project undertook the following:

- 1. Mapped existing qualifications using new and existing research to ascertain the level of need in new and transferable skills.
- 2. Developed transnational qualification modules comprising new and transferable skills.
- 3. Developed an on-line training programme.

The duration of the project was three years, from December 2000 to November 2003.

The research for the Reports was undertaken by: Peter Fairbrother, Dean Stroud, Amanda Coffey, Jan Clark, Jenifer Daley, Nikolaus Hammer and Steve Davies, with contributions from all partners.

The Reports are:

- 1. New Steel Industry Challenges
- 2. The Internationalisation of the World Steel Industry.
- 3. The European Steel Industry: From a National to a Regional Industry.
- 4. The Changing European Steel Workforce.
- 5. Skills, Qualifications and Training in the German Steel Industry: A Case Study
- 6. Skills, Qualifications and Training in the Italian Steel Industry: A Case Study
- 7. Skills, Qualifications and Training in the Netherlands Steel Industry: A Case Study
- 8. Skills, Qualifications and Training in the Polish Steel Industry: A Case Study
- 9. Skills, Qualifications and Training in the British Steel Industry: A Case Study
- 10. Future Skill Needs in the European Steel Industry
- 11. Training and Qualifications in the European Steel Industry.
- 12. The Question of pan-European Vocational Qualifications
- 13. Equality and Diversity in the European Steel Industry

The Question of Pan-European Qualifications

Introduction

This report considers whether it is possible to develop trans-national qualifications and in this respect bridges Workpackages One and Two. The report asks the questions:

- Is it possible to develop a pan-European qualification to meet the training needs identified of Europe's steelworkers?
- If a pan-European qualification (or its equivalent) is possible what form should it take?

This report deals with these questions in the following ways. First, the report considers possibilities for pan-European qualifications in light of past and present attempts for their development within the European Union (EU). Second, the report examines whether national systems are comparable and if they can be used as models through which trans-national qualifications can be realised. Section Three reviews different frameworks for measuring the equivalence of qualifications. Fourth, on the basis of the analysis about comparability and the diverse and uneven data available on the steel industry, an accredited programme of learning is proposed. Finally, an overall assessment is provided.

Section One: Pan-European Qualifications

The free movement of skilled labour across a merging Europe has long been a target of the EU. Moves to facilitate this ambition have included attempts to establish frameworks for the comparability of vocational training qualifications and initiatives for the development of pan-European qualifications. The mutual recognition of diplomas, certificates and other formal qualifications is considered to be a pre-requisite for enabling workers to freely employ their labour across EU Member States. Other initiatives to facilitate the movement of economically active people include the development of pan-European qualifications.

For a number of reasons initiatives for the development of pan-European qualifications have been more limited than have efforts to improve the transparency and transferability of nationally based qualifications. Nevertheless, there have been some developments in this direction. Online qualifications are one example of formal qualifications recognised Europe-wide. The European Computer Driving Licence (ECDL), for example, offers certification in using personal computers and common computer applications, which is valid across Europe. The ECDL is part of the 'eEurope Action Plan' to improve the mobility of the EU's labour force. Other qualifications are recognised internationally and well established, such as the International Baccalaureate.

The EU has also sought to internationalise study and qualifications in other ways. The ERASMUS and NARIC programmes, for example, operate at higher education level. The ERASMUS programme guarantees full academic recognition of study periods abroad (within participating countries) through a European Credit Transfer System (ECTS). NARIC encourages Europe-wide co-operation and mobility within higher education. For some

professions, moreover, a person formally qualified to practice a profession in one EU country is similarly qualified, on application, to do so in other Member States. These kinds of initiatives bring elements of 'trans-nationality' to nationally based qualifications. In addition to these initiatives, the LEONARDO DA VINCI programme is a vocational action training programme that fosters trans-national co-operation to devise innovative approaches to training methodology, content, delivery and materials. One outcome of which might be the development of a pan-European qualification of some kind.

Measures for the development of pan-European qualifications are also taken at an industry level. The European Metalworkers' Federation (EMF), for example, is seeking to develop a pan-European qualification for metalworkers. The European Trade Union Confederation (ETUC), the Union of Industrial and Employers' Confederations of Europe (UNICE) and the European Centre of Enterprises with Public Participation and of Enterprises of General Economic Interest (CEEP) follow a mandate for the recognition and validation of qualifications and competencies. This decree includes 'identifying the possible links and complementarities with recognised diplomas', and signals possibilities for the development of trans-national qualifications.

Clearly the development of trans-national qualifications is a strategy considered and employed by a number of supra-national organisations, to facilitate geographical and occupational mobility and increase efficiency in the labour market. The success of existing programmes is one indicator of possibilities for trans-national qualifications. Crucial however, to the development of programmes for nationally based qualifications recognised in a trans-national way and trans-national qualifications, is agreement on educational standards across a defined region and/or profession. A pan-European qualification, for example, must be recognised in the same way across Europe. This point applies whether the qualification is industry specific or has wider application. The educational profile of an industry specific workforce will reflect that of wider society (See Report Four). Trans-national gualifications must be sensitive to standards of qualification within individual states. They must, then, parallel the general systems of education and training of the countries for which they are intended. However, can the education and training qualifications of countries be meaningfully compared and educational standards properly gauged so as to apply across a number of countries? This question is at the centre of education and training debate within the EU, particularly where worker mobility across the region is concerned.

Section Two: Possibilities for comparing educational standards across the EU

Establishing comparability is considered to be one of the prerequisites for "enabling workers to make better use of their qualifications, in particular for the purpose of obtaining suitable employment in another Member State" (Article 1 of Council Decision 85/368/EEC). Despite increased social and economic integration across the EU, establishing comparability of Member States' qualification systems is little closer than when the European Community (EC) was first established in 1957. The EU has never wished to harmonise, regulate or influence national qualifications. Rather, the emphasis has always been on establishing the comparability of educational standards across the region. While this ambition was a major focus during the early years, efforts have now shifted towards showing the relationship between different States' qualifications. This shift of focus entails the development of initiatives aimed at making qualification systems more transparent.

The focus on the transparency of systems derives from the inability of Member States to come to agreements on the comparability of qualifications. At a broad level, qualification (and education and training) systems across the EU are similar. That is, most operate parallel systems of educational provision (academic and vocational qualifications) and a set of generic categories to classify this provision (qualifications at primary, secondary and post secondary/tertiary levels) (Steedman *et al* 1997). However, the education, training and qualification systems of EU Member States remain particular to individual countries, and any similarity between them often ends here.

A major problem with comparing qualifications across national borders is because qualification systems are very much part of a national fabric. Qualifications are embedded deeply in political and social cultures:

The persistence of national qualifications can be explained by: the pivotal role which they possess within each national education and training system; their use by Government and other agencies as an instrument of control; and within cultural systems in society... Qualifications are... deeply embedded in the operation of complex systems, and carry a complex and interacting mix of functions, many of them highly politicised, particularly where national governments use qualifications as a means of effecting curriculum control and maintaining public accountability (Oates 1999: 22).

Individual states are responsible for the control and accountability of their education and qualification systems. A major barrier to comparisons of qualification systems is the reluctance of national Governments to find agreement in the control of learning programme content, assessment methods, standards, qualification targets, and accountability measures. Hence, across EU Member States the range of qualifications is both vast and diverse.

The diverse nature and multiplicity of qualifications across the EU means that measures of standards between Member States' respective qualification systems are difficult to gauge and compare. In Germany, for example, a young person today might attain a *Realschule* leaving certificate. In the UK an individual might sit *GCSEs* and in France a *Brevet*. However, the equivalence of *Realschule* leaving certificates, *GCSEs*, or *Brevets* is difficult to know, without a proper understanding of the standards reached by those taking the qualifications (see Steedman *et al* 1997). This applies even where the educational level at which a qualification is taken (i.e. primary, secondary or post-secondary level) is the same or similar. The consequences of this are difficulties in ascertaining national (and industry) skill levels for comparison and for the free movement of 'qualified' labour across the EU.

There are, then, major problems of comparability and equivalence in the measure of qualifications across the EU. It is difficult to know to what standard individuals are educated/trained. The EU has attempted to by-pass this problem in a number of ways:

- through the development of pan-European qualifications
- initiatives for agreement on qualification standards
- moves towards increased transparency of education systems.

Agreement of qualification standards covers EU directives that work on the assumption that some professional qualifications are of comparable standards (e.g. directives 92/51/EEC and 89/48/EEC). The directives assume that where an individual is fully qualified to exercise a profession in one EU country, he/she is qualified to do so in any other Member State. This initiative allows for individuals who have followed one-year or three years post secondary training or higher education programmes in one Member State to practice their profession within (some) other EU Member States.

Council Decision 85/368EEC outlines further efforts to establish the agreement on the comparability of vocational training qualifications between Member States of the EU. The Commission (through CEDEFOP) identified corresponding vocational training qualifications for occupations at the skilled-worker level in various employment sectors (e.g. the hotel and catering industry, motor vehicle repair, and, steelworks and foundry sectors), and published them in the *Official Journal of the European Communities*. However it is not a legally binding agreement, is not regularly updated and some Member States have expressed reservations about broadening its scope. Both of these measures, nevertheless, bring some level of comparability and trans-nationality to nationally based qualifications.

It is evident from the above discussion that the possibilities for taking national qualifications and comparing them with other nations' are limited. The EU has thus employed a Forum on Transparency (and Quality) of qualifications. The EU is looking to make more identifiable and available the 'legal prerequisites as well as information about the real substance of a given training sequence with a view to identifying differences and similarities between qualifications from different countries' (Corporate Europe 2001: 1). By making the means by which an individual attains a qualification more transparent, the standard to which an individual is educated should be clearer to relevant parties (e.g. employers, educational institutions). The EU has recently embarked on a strategy to open 'new European labour markets and (make) them... accessible' to all by 2005 (Corporate Europe 2001: 1). In order for this to be realised, 'gaps in the recognition of professional, academic and vocational qualifications' between Member States need to be closed (Corporate Europe 2001: 9).

Section Three: Frameworks for measuring the equivalence of qualifications

Despite these limitations, several frameworks for the measurement of educational standards in a trans-national way have been developed. The frameworks measure qualifications at the levels of Industry Specific, Educational Stage and the Educational Programme. A discussion of the frameworks follows. Some indication of how the comparability of qualification profiles might be achieved is illustrated through the application of steelworker qualification data to the frameworks.

Industry Specific Measures

The previously mentioned *Official Journal of European Communities* C182 Steelworks and *Foundry* document provides us with a framework by which we can classify qualifications used by and recognised specifically within the steel industry. The qualifications are categorised by occupation within the steel industry. The document details the qualifications required by each Member State of the EU for an individual to be employed as, for example, a production worker or maintenance worker. The document was originally developed to provide employers with a measure for the comparison of steel and foundry workers' qualifications across the EU. This

framework was devised with the intention of making it easier for employers to compare vocational training qualifications between the Member States of the EU, and thereby free up the movement of labour. However, the C182 document is dated and not officially sanctioned by all Member States. It would provide some context for qualifications specific to occupations within the steel industry, but is not generally credible as a measure of steelworkers' qualifications.

Educational Stages

One way of comparing and measuring qualification profiles is to focus on stages of education completed or certificates awarded as designating a completed stage, these are important labour market signals (Murray and Steedman 2000). The completion of an educational stage or the attainment of a credential signifies a level of competence. On completion of one educational stage an individual is deemed to have achieved a 'standard of education', they can then move on to the next educational stage. There is a similar categorisation of qualifications for labour market entry:

The fact is often overlooked that most advanced industrialised countries have very similar structures of educational progression and similar categorisation of qualifications with regard to labour market entry. These categories, when found across countries, can form the basis for an analysis and comparison of qualifications themselves.

Using these generic categories as a starting point, standards of attainment of students at comparable stages of education in a variety of countries can be investigated. (Steedman *et al* 1997: 2)

These are generic categories as defined by Steedman et al:

Within the educational structure, the stages of education – primary, secondary and tertiary; the certification of outputs at the end of each stage beginning with the end of compulsory schooling; progression to the next stage dependent on successful completion (certification) of the previous stage. In employment, recognition of educational certification as attesting different levels of 'general education' (literacy and numeracy), certification attesting competence in a given occupation or occupational area at a variety of levels, usually operative, advanced operative, technican/supervisor and management/specialised technical. (Steedman *et al* 1997: 2)

At the most general level data it is possible to measure profiles in terms of the 'certification of the outputs at the end of each stage' beginning with compulsory schooling.

The first stage of this analysis focuses singularly on the educational stages completed. Two possible frameworks might be used here:

Standard Industrial Classifications

The first is the Standard Industrial Classifications (SIC) code, which is commonly used in the UK by the Office for National Statistics (ONS) (but with a Europe-wide understanding). The UK Standard Industrial Classification of Economic Activities (UKSIC [92]) classifies business establishments and other statistical units by the type of economic activities in which they are engaged. The classification is applicable across most European countries. Section 'M' of the code relates to education, and is a classification of educational stages, e.g. primary education, secondary education, higher education and so forth. This method of classification disaggregates further at each educational stage and includes other less formal types of educational activity (e.g. driving schools). It provides a means by which to classify the stage of formal (and some informal) education at which an individual has participated.

The Eurydice Framework

The Eurydice framework was established in 1980 to facilitate co-operation in the field of education across the EU and Europe more widely. Whereas the SIC framework provides a measure within which qualifications might be placed, the Eurydice framework already categorises qualifications (and examinations and titles, e.g. Doctorate) by educational stage. The framework covers qualifications offered by EU Member States, European Fair Trade Agreement (EFTA/EEA) Member States, ten central and eastern European nations and Malta and Cyprus. This framework can be used to categorise the educational stage (standard) to which steelworkers across Europe are educated. Within the Eurydice framework, the stages of education by qualification – Primary, Lower Secondary, Upper Secondary, Post Secondary and Higher Education.

Primary education is defined at that beginning between ages 5 to 7 years, and that lasts four to seven years. Lower secondary education is that comprising the two to four years following primary level. Upper secondary education usually consists of two to five years of education and admission to this stage normally requires completion of lower secondary education. Completion of this stage of education usually qualifies the individual for entry to higher education or the labour market. It might comprise general, technical and vocational branches of education. Post-secondary education tends to cover study or training that falls between upper secondary and higher education. The programmes it covers are not higher education level, and tend to be those that provide between 6 months and three years technical or vocational training. It is not always necessary to have completed upper secondary stages to gain entry to these courses. Higher education includes university and non-university level and sub-degree, degree and post-graduate qualifications. A minimum entry to these courses would normally require upper secondary qualifications.

However, the problem with both the SIC and Eurydice framework is that the basis for comparison is elastic, not based on a robust assessment of the content of educational stages. They provide a formal equivalence, thus overlooking the content that defines education in different countries, irrespective of formal stage reached. For an alternative it is necessary to look elsewhere.

The Educational Programme - An Alternative Framework

The most comprehensive of equivalence measures is the International Standard Classification of Education (ISCED). Designed in the early 1970s, it is routinely updated to incorporate new developments and changes in education, and was last revised in 1997. The basic unit of classification in ISCED is the educational programme. This is defined in terms of the educational content of a programme of study. That is, the content of each educational programme is measured by its 'principal characteristics' and 'classification criteria' (with

'complementary divisions') and recognised within ISCED as falling within one of seven levels. The seven different levels at which ISCED classify educational programmes are: pre-primary education, primary education, lower secondary education, upper secondary education, post-secondary non-tertiary education, first stage tertiary education and second stage tertiary education. This includes formal and non-formal programmes.

ISCED does however, have natural limitations for the direct classification and assessment of competencies and qualifications. As UNESCO (1997: 6) point out, 'this is because there is no close and universal relationship between the programmes a participant is enrolled in and actual educational achievement'. Rather, any classification is an approximation of individual skills and competence. As Green and Steedman (1997: i) argue, if comparisons are to be made between qualifications 'which provide valid evidence about levels of competence, we need to 'benchmark' or anchor... comparisons against indicators which tell us something about the standards reached by those gaining qualifications'.

As it is, the 'indicators' used in most national surveys that tell us something about a particular country's qualification levels are often informed by different sets of criteria, that are specific to one country or another. As Murray and Steedman (2000: 4) argue, this means that 'difficulties arise... (as) different criteria (are) used by national surveys when determining how to allocate an individual's highest level of qualification to the appropriate ISCED level' (see also Steedman 1999a). We therefore, at best, might only have an 'approximate' measure of different countries' qualification/skill levels/profiles. Moreover, as Steedman (1999b: 4) points out, the ISCED scale was never designed to guarantee equivalence in terms of embodied competence of a similar level across countries. Thus, where the ISCED scale is used to measure the equivalence of qualifications, it is often used in conjunction with other measures (the International Adult Literacy Surveys for example – see Murray and Steedman 2000).

What this highlights is that ISCED as the principal measure of educational standards falls short in providing a meaningful measure of inter-country equivalencies, and, therefore, a useful measure of qualification comparability. To fully implement this framework it would be necessary to analyse the standards of the educational content of every programme of study an individual might participate in all countries. ISCED might then prove a comprehensive framework for the measure of standards of education and training attained by individuals. However, the scale of this project in terms of time and resources prohibits this type of analysis.

The different frameworks do, however, allow for some indication of equivalencies between educational standards, on two levels. First, pan-European qualifications rely on equivalence of educational standards; application of the above to national systems provides one framework upon which equivalence might be measured. Second, the frameworks for measurement provide a means by which comparisons of educational standards can be measured for groups of workers in different countries. This facilitates the development of pan-European qualifications, particularly in their application to specific industries, by allowing a fuller understanding of how qualification profiles might compare. An understanding of qualification profiles is required to pitch pan-European qualifications at the appropriate level.

Section Four: Credit Accrual Qualifications

The collection of data on steelworkers' qualifications proved problematic. This was not least in locating data, but also in terms of the reliability of the data received. Moreover, two things became abundantly clear. Firstly, comparing qualifications across Europe must be questioned

because of the lack of an agreed platform and mutual recognition of this platform by companies and governments. Secondly, and in light of the previous point, what becomes clear is the need to place more emphasis on what is discovered about the detail, variability of steelworkers' qualifications and skills profiles from case studies (Reports Five, Six, Seven, Eight and Nine).

To facilitate comparability, the ISCED framework provides a starting point. It provides the most rigorous measure of the skills/ability required to reach a recognised level of qualification (i.e. input). It is this measure of steelworkers' qualifications that perhaps provides the most meaningful and robust measure of 'skill'. ISCED has been used previously to analyse skill profiles. Murray and Steedman (2000), for example, examined the educational attainment of the population in six EU countries: France, Germany, the Netherlands, Portugal, Sweden and the UK. The aim of the Murray and Steedman project was to establish the extent of low skills in the six countries and to chart the progress of the reducing low skills stocks between 1985 and 1997/98 (see Table 1). They grouped the 'principal education and initial training qualifications' of six EU countries by ISCED level to provide a measure for skill levels. Where possible the ISCED scale was qualified by data from the International Adult Literacy Survey, to add to the robustness of the classification of qualifications.

Level	Germany	Netherlands	UK	
ISCED 5,	All first and higher	University 3 years or	All first and higher	
6, 7	degrees	more	degrees.	
	All Meister and	HBO Higher professional	All teaching, nursing	
	Techniker	ed	qualifications HNC/HND	
ISCED 3	Abitur	VWO pre-university ed	1 or more A level	
			passes, GNVQ 3 and	
	Fachhoch-schulreife	HAVO senior general	equivalent, VQ 3 and	
		secondary ed	equivalent.	
	All apprenticeship		Trade apprenticeship	
	passes or equivalent	MBO secondary ed	GNVQ 2 or equivalent	
			NVQ 2 or equivalent	
ISCED 2	Leaving certificate of the	MAVO	1 or more O level/GCSE	
	Realschule or equivalent	Junior general	passes, 1 or more CSE	
		secondary ed	passes	
		VBO Pre-vocational		
		education		
ISCED 0, 1	No qualifications	Primary education only	No qualifications	

 Table 1. ISCED Framework applied across the principal education and training qualifications of Germany, the Netherlands and the UK

Source: Murray and Steedman 2000, p. 5, Table 1.

Murray and Steedman's framework gives some indication of how ISCED might be implemented and how qualifications, and thus educational standards, might be compared. Generally, when applied to this framework, the qualifications data suggests that substantial numbers of workers either have no or minimal formal qualifications in the steel industry (when defined as sector 27.1), Europe-wide. That is, they are at ISCED levels 0, 1 and 2. This agrees with existing evidence (see Moinov 1990, International Labour Office 1992, Fuller and Unwin 1999). Women, especially, are more likely to have minimal qualifications, while men are found to possess higher qualifications. This presumably reflects gendered processes of learning and recruitment in the Metals Industry. At a national level qualifications tend to be structured at a number of levels, and taken over a period of time. The UK's NVQ is a prime example, with five levels of competence that an individual might work towards in a structured way. Typically, competence led systems, such as the UK's, allow for workers to build towards qualifications by degree. This approach incorporates the credentialisation and accreditation of prior learning and expertise and also the opportunity to amass credits for new learning. These kinds of programmes tend to work in a modular way, with individuals able to buttress prior knowledge with modules that fill skill gaps.

Alternatively, employees might follow a more general course of education. Competence led systems of qualification are often criticised for their concentration on developing 'sufficient', 'adequate' and 'suitable' skills, at the expense 'higher level theoretical pursuits' (Hyland 1994: 19). A typical question that might be asked of worker described as competent is, are they any good? The alternative to this is in more liberal approaches to curriculum construction and the development of coherent frameworks of general education.

To meet the immediate needs of the steel industry, the optimum shape for a pan-European educational programme is a three-level (A, B and C), modular, credit accrual framework (see Figure 1). This approach allows the qualification to be structured across a number of levels, with aims and outputs of a devised curriculum configured accordingly to develop competencies:

Modules taught at level A

Could incorporate a basic level of training that could be aimed primarily at older workers without qualifications, and those preparing to exit the industry. If level A modules utilised a competence based form of assessment, this could provide accreditation of existing skills for workers without qualifications.

Modules taught at level B

Could provide a bridge between levels A and C, facilitating progression, thus enabling participants to demonstrate the meta-competence of the ability to learn, arguably the most transferable skill of all.

Modules taught at level C

Could be based on computer simulation exercises, that could be aimed primarily at upskilling those members of the workforce that already possess qualifications and who are likely to remain in the industry. (For a schematic presentation see Figure One).

Figure 1. The credit accrual system operationalised

	MODULES							
	Health and safety awareness	Team-working skills	Customer and market awareness	IT skills	Problem solving skills	Generic skills		
Introductory level A	10 Credits	10 Credits	10 Credits	10 Credits	10 Credits	10 Credits		
Intermediate level B	20 Credits	20 Credits	20 Credits	20 Credits	20 Credits	20 Credits		
Advanced Level C	30 Credits	30 Credits	30 Credits	30 Credits	30 Credits	30 Credits		

European Steel Industry Certificate = 80 credits European Steel Industry Diploma = 180 credits

Please note: all values expressed in this example are hypothetical, and are designed to be illustrative.

Modules should be designed to buttress and reinforce the varied skills that are required. Whilst developing, for example, an understanding of global markets developed through a customer and market awareness module, an individual could arguably also facilitate an understanding of the rationale for new working methods within the team working module. The qualification might be accredited in the first instance at an industry level and where possible at a national level. Formal equivalence could possibly be found for the Team-working and Globalisation at NVQ levels 2 and 5 respectively, in this way it might be possible for workers external to the industry to sit the course. Credits would be fully transferable between participating countries. Levels also tackle different abilities and sensitive to workforce demographics.

Section Five: Assessment

This report provides a detailed assessment of possibilities for the development of a pan-European qualification for steelworkers. There are a number of points to make:

- First, pan-European qualifications are an educational reality, but their success depends on finding educational equivalence in a trans-national way. This problem has proved to be a stumbling block to plans for the formalising the comparability of qualifications across the EU and the facilitation of worker mobility and labour market efficiency. The EU has since focused on strategies for the increased transparency of nationally based qualifications, alongside a number of EU-wide initiatives.
- Second, problems for educational equivalence are major. Qualifications are very much part of social, political and economic structures and Governments are unwilling to relinquish governance over or agree equivalence on a number of different counts. Problems of equivalence also derive from the fluidity of educational structures and competing philosophies that structure national systems of education and qualification.
- Third, several frameworks for the measurement of educational equivalencies have been devised and when data on steelworkers' qualifications is applied to them, wider considerations for the development of pan-European qualifications are revealed. The frameworks highlight how steelworker qualifications have industry specific and crossnational equivalencies. This data in conjunction with case study data feeds directly into the possible development of pan-European qualifications.
- Fourth, the overall discussion highlights the need for a pan-European qualification to be sensitive to the skill profile of steelworkers, but in a way that reflects the diverse nature of those employed and employment in the European steel industry. Recommendations for pan-European steelworker qualifications are thus centred on a competence led, multi-level, modular, credit accrual framework.

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