The European Dictionary Of Skills And Competences (Disco)

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Abstract

The European Dictionary of Skills and Competences (DISCO) offers a much needed standardized vocabulary for the description of skills and competences and a website (www.disco-tools.eu) where learners can search for the translation of terms in seven (later on ten) European languages. DISCO website users may describe their competence profile, based on the standardized vocabulary of DISCO, store it in Europass CV format and translate it into other languages via a mouse click. The thesaurus structure supports the understanding of a field of interest and increases the awareness for skills and competences that could be relevant too.

The Dictionary of Skills and Competences is based on existing standards and classifications and is useful for describing competences in different contexts: for the description of occupations, personal competence profiles, the requirements for a job as well as for the description of learning outcomes in curricula and European transparency documents. DISCO supports not only the comparability of competences acquired in an educational or work context but also the transferability of competence descriptions within Europe.

DISCO is based on a comprehensive understanding of skills and competences that includes personal attitudes, values, behavioral patterns etc., independent of whether they have been acquired formally or informally. The thesaurus consists of about 10.000 terms (about 7.000 preferred terms and 3.000 synonyms) per language for seven European languages: Czech, English, French, German, Hungarian, Lithuanian, and Swedish. Within the DISCO II project (Nov. 2010 – Oct. 2012) three more languages (Italian, Slovakian, Spanish) and new competence descriptions for the booming branches health and social work, environmental protection and information technology will be included.

Within the following paper we would like to briefly present the aims of the DISCO project and discuss different usage scenarios of the terminology within the educational context based on examples from career guidance, matching of supply and demand and describing learning outcomes.

1 Introduction

To reduce the barriers to mobility, work on transparency instruments has been ongoing in Europe for some years. For example the developments of the European Credit system for Vocational Education and Training (ECVET), the European Skills/Competences, qualifications and Occupations taxonomy (ESCO), the European Qualifications Framework (EQF), and the European transparency documents (Europass) have been developed for quite some time. What is essential to all these transparency instruments is the issue of the transparent description of qualifications as well as skills and competences and their comparability within Europe. To facilitate this, the European Dictionary on Skills and Competences (DISCO) was developed during the first project (September 2004 – February 2008) and will be enlarged during the follow-up project DISCO II (November 2010 – October 2012).

DISCO provides a much needed standardized vocabulary for the description of skills and competences. Unlike other classifications DISCO offers a vocabulary that is neither linked to occupations nor to qualifications and thus can be used for the description of competences in different contexts: occupations, personal competence profiles or the requirements for a job as well as for the description of learning outcomes, curricula, skill profiles in Diploma or Certificate Supplements etc. DISCO supports not only the comparability of competences acquired formally or informally in an educational

or work context but also the transferability of competence descriptions within Europe by offering several language versions.

2 DISCO – The Dictionary of Skills and Competences

The DISCO I project was funded by the European Commission (Leonardo da Vinci programme) and the Austrian Federal Ministry for Education, Arts and Culture. It took place between September 2004 and February 2008. During the project the following main products were developed:

- a multilingual thesaurus of skills and competences (CZ, EN, FR, GE, HU, LT, SE)
- a website (www.disco-tools.eu) offering:
  - search and translation of single terms
  - a multilingual tree-structure view of the thesaurus
  - a tool for the creation/translation of competence profiles, Europass CV and Mobility Passes
- a trilingual print version of the thesaurus (EN, FR, GE) [1]

The DISCO thesaurus is based on a comprehensive understanding of skills and competences and consists of about 10.000 terms (about 7.000 preferred terms and 3.000 synonyms) per language for seven European languages: Czech, English, French, German, Hungarian, Lithuanian, and Swedish.

DISCO was developed in accordance with several already existing European qualification classifications and standards like the following national classifications of project partner countries and international classifications:

- AMS-Qualifikationsklassifikation (AT)
- Kompetenzkatalog (GE)
- Répertoire Opérationnel des Métiers et des Emplois – ROME (FR)
- Taxonomy database of Arbetsförmedlingen (SE)
- EURES CV (EU): http://ec.europa.eu/eures/home.jsp?lang=de
- ISCO-88 (International Standard Classification of Occupation)
- ISCED 1997 (International Standard Classification of Education)
- NACE Rev. 1.1 (Statistical Classification of Economic Activities in the European Community) [2]

Using DISCO to describe learning outcomes will be one important focus of the DISCO II follow-up project. DISCO II started in November 2010 and will last until October 2012. DISCO II is funded by the European Commission (Education and Culture, Leonardo da Vinci) and the Austrian Ministry for Education, Arts and Culture. The extension of the vocabulary as regards phraseological competence description as well as the offering of additional language versions (Italian, Slovakian, Spanish) will be part of the DISCO II project. It is foreseen to enlarge the DISCO thesaurus and to provide phraseological competence descriptions in addition to the existing noun compositions in order to enable the description of learning outcomes in the fields of the booming branches health and social work, environmental protection and information technology. DISCO's services will now be transferred to new usage contexts: the phraseologically formulated learning outcomes descriptions in Certificate Supplements and learning agreements.

Job descriptions, CVs, Certificate Supplements as well as other competence based learning outcomes descriptions use similar terms to describe competences in the area of labour market or education and VET: In this context the least common denominator is a single competence term; the greatest common denominator is a phraseological competence description. These terms and phrases will be collected and analysed in the DISCO II project and commonly used skills and competence terms and phrases will be implemented into the DISCO thesaurus. Based on the extended DISCO thesaurus users may describe skills and competences acquired in education based on a common terminology that can be easily understood by other educational institutions (commonly used terminology) and also in the labour market (standardized terminology) all over Europe (multilingual).

Until now DISCO is already used to describe learning outcomes at a university level by a research project in Portugal, and it is discussed in the context of several projects to use DISCO terms for tagging skills and competences in the context of educational opportunities and personal qualification descriptions.

3 Using DISCO in different contexts

There are different possibilities how to use DISCO. In general DISCO offers the same usage scenarios as other multilingual taxonomies:

- terminological user guidance in applications (e.g. selection lists, auto-complete function based on taxonomy terms)
- clarification and definition of a thematic field (e.g. terms included in the field "health" define its scope and provide a reference point for a common understanding)
- definition of semantic relations between terms (e.g. broader terms and narrower terms usually indicate the relation "being part of"; this semantic relation can be used for narrowing/widening e.g. matching results or the comparison of skills profiles)
- taxonomy driven support for online applications (e.g. tagging based on taxonomy terms allows to analyse the relevance of the content of a document in a special field)
- reliable transferability into other languages (multilingual)

Furthermore, DISCO provides, based on its focus on skills and competences, special support regarding the creation of skills profiles, job or qualification requirements in job placement, human resource development and education.

Unlike other 'regular' dictionaries DISCO contributes to the comparability and transferability of competence terms within Europe by providing a peer-reviewed common vocabulary that is based on expert input from all over Europe. Furthermore, DISCO translations are dealing with equivalent preferred terms of national languages and do not use simple 1:1 translations. The thesaurus structure provides a transparent understanding of a domain (DISCO domains widely correspond to ISCED subject fields).

Therefore DISCO's controlled vocabulary can be used to describe learning outcomes e.g. in curricula and qualification descriptions and in documents used to exchange information on learning results in the world of education (e.g. Diploma or Certificate Supplements, Mobility Passes, Memoranda of Understanding in ECVET context etc.). The identification of competence gaps and appropriate vocational training measures can be facilitated by using the same vocabulary for the description of learning outcomes as well as for personal skill profiles and job advertisements. At present, even though curricula and other relevant documents have not been created based on a standardised terminology the DISCO thesaurus can be used to tag curricula and qualification descriptions in order to receive an overview on the skills and competences covered by an educational opportunity.

Figure 1: DISCO CV profiling tool for Europass-CV

Source: http://www.disco-tools.eu/profiler.php (2011-04-01)

Another application of the DISCO thesaurus is creating and translating competence profiles or CVs: The DISCO website offers a service called CV profiler [3] where the thesaurus is used for creating and translating Europass CVs, unformatted competence lists and Mobility Passes. Users can switch the language of a CV and the thesaurus just by clicking a flag on top of the page. When users have added the terms selected from the thesaurus to all sections of the Europass CV, they can translate the chosen terms and the Europass CV into several languages with a mouse click. The different language versions of the CV can be saved in several formats such as word, pdf, html, xml etc. on the user's computer. Personal and other data as well as changes or additions to data selected from DISCO can then be made anytime. Thus DISCO supports easy translations of CVs into several languages.

DISCO can also be used to improve user guidance in online applications: In general the user is guided by the thesaurus structure and learns from it. From a learner's point of view DISCO provides at one hand orientation in different fields of expertise by offering a structured terminology that covers important skill and competence terms and thus supports the creation of personal skill and competence profiles by referring to other skills and competences that might as well be relevant for the user. Therefore, career guidance is a main application scenario for DISCO. On the other hand DISCO supports language learning in the field of professional and personal skills and competences by offering a translation function and listing all available synonyms for a term. Thus, language teaching in vocational education and training is another field of DISCO applications.

In the context of Europass CV creation DISCO supports the understanding of the Europass CV subtitles by offering similar non-domain specific skills and competences and by subsequently displaying only the terms relevant for a selected Europass CV category. This special guidance for Europass CVs is one of the reasons that many Europass centres are interested in DISCO: For example the Austrian Europass Centre refers to the DISCO online portal as a helpful online tool for filling in the Europass CV, and the Hungarian Europass Centre offers DISCO as an integrated online glossary of its Europass CV wizard [4].

Matching profiles by using competence taxonomies is another possible DISCO application: Based on the use of the same competence catalogue for the creation of CVs and job advertisements, supply and demand in job placement can be matched. Competence catalogues are already used in the context of automated job placement in order to provide semantic components for matching. The

hierarchical structuring of the skills and competences in a thesaurus structure like DISCO supports the systematic enlargement or narrowing of a searched competence area. Since DISCO also links corresponding terms of different language versions, matching could as well be done across language versions. Implemented in an appropriate technical solution it could be even possible to match a competence profile against several job advertisements written in different languages. The automatic matching could use one or several language versions of the matched competence profile.

Last but not least the influence of DISCO on the creation of ESCO – the European Skills/Competences, qualifications and Occupations taxonomy – has to be mentioned: DISCO will be a crucial input for updating and enriching the skills and competences part of ESCO with additional competences and semantic relations. ESCO aims to provide a European standard terminology for skills and competences as well as qualifications and occupations to allow users all over Europe to compare their qualifications, personal skill profiles, job descriptions, gaps of qualifications etc. DISCO can be seen as a first step in this direction since its focus on skills and competences supports profiling and the creation of job description as well as the learning outcome oriented description of curricula, educational opportunities and qualifications.

Altogether DISCO provides a perspective to bridging the gap between the world of labour market and the world of education and training by providing a structured vocabulary that can be used to describe competence profiles independently of the context in which they are used. Thus and by offering translations of terms into several European languages DISCO supports the comparability of skills and competences within Europe.

References

[1] Markowitsch, Jörg/Müller-Riedlhuber, Heidemarie (eds.): Dictionary on skills and competences, Vienna 2008
[2] For more information on international standard classifications see: Markowitsch, Jörg/Plaimauer, Claudia: Descriptors for competence: towards an international standard classification for skills and competences, 2008
[3] See at http://www.disco-tools.eu/profiler.php (2011-03-30)
[4] See also http://www.europass.hu/EPdokumentumok/oneletrajz/cv_uj (2011-01-28)