



OPEN LEARNING TO SIGN LANGUAGE
Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

OPEN Language Learning Platform

**WP 2 – Language learning Programme for Deaf
people - Didactical Methodology**

Final version – February 2015



OPEN LEARNING TO SIGN LANGUAGE
Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

Index:

Introduction	4
Skill levels according to the CEFR framework.....	5
On International Sign	7
Didactical methodology behind the design of the Learning Objects	8
Units and topics addressed by the learning objects.....	10
Video outline: framing and interface	11
Video progression.....	13



OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

Introduction

The OPEN Multi-language platform is an educational tool for learning the English language in combination with 6 different international sign languages or systems. The OPEN Multi-language platform, designed and implemented by sign language and language education experts, will provide European signers with a new tool with video courses in:

- English
- International Sign (IS)
- Italian Sign Language (LSI)
- Poland Sign Language (PSL)
- Greek Sign Language (GSL)
- Sweden Sign Language (SwSL)
- Spanish Sign Language (SpSL)

Videos will be subtitled and structures in units where different life situations will be reproduced in in order to have access to the most useful words and expressions. All units will be divided in level of proficiency according to the CEFR which has been recently adopted by most of EU sign languages as well.

This is the updated version of the preliminary draft of the “OPEN Language Learning Platform – Teaching Methodology” presented during the 2nd project meeting in Poland, 4th and 5th November 2014.

Discussion among didactical and sign language experts from all partners took place during the above mentioned meeting in Poland, the 3 skype meetings and an extensive exchange of email and materials. Matter of discussion was the establishment of the didactical scopes and learning objects, qualitative/quantitative indicators of the didactic material, how the work will proceed in terms of general framework construction, etc.

The present document is part of the two main outputs of WP2, i.e. Didactical methodology of the learning platform and macro-design of the tool and Video script of the dialogues designed according to CEFR levels (from A1 to C2) for English and IS revised by all partners. Furthermore, it takes into account the twofold didactical scope of the platform, i.e. **National English** and **International Sign** taking into account the linguistic peculiarities of the latter and in correlation with the excel file *Video Script*.



OPEN LEARNING TO SIGN LANGUAGE Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

Skill levels according to the CEFR framework

didactical videos which are part of the learning path shall include 6 different linguistic systems in combination with 5 different international sign languages¹.

- English
- Italian Sign Language (LSI)
- Poland Sign Language (PSL)
- Greek Sign Language (GSL)
- Sweden Sign Language (SwSL)
- Spanish Sign Language (SpSL)
- International sign

In accordance to what stated in the application form, the Language Education Tool shall take into account the 6 CEFR skill levels (A1, A2, B1, B2, C1 and C2).² CEFR self assessment matrixes has been applied according to the extensive material available in this matter:

- http://www.ehlsprogram.org/wp-content/uploads/2012/01/Lg_SelfAssessment_Matrix_CEFR.pdf

Indeed, the CEFR skill levels take into account the 4 linguistic abilities: comprehension (written and oral) and production (written and oral).

Quite evidently, the CEFR matrix has been developed for spoken languages and its application on to Sign Language Education is not common. Taking receptive and productive skills as an example, it becomes clear that in the context of Sign Languages's, writing skills and orthography can be eliminated.

However, there are few studies and projects (mostly carried out at EU level) on its scientific application in the domain of SL Education.

See for example:

- <http://www.cefr4sl.eu/>
- http://www.academia.edu/1514338/Preliminary_Collaborative_Steps_in_Establishing_CEFR_Sign_Language_Levels. In D. Tsagari and I. Csepes eds. *Collaboration in language*

¹ The definition of International Sign as a Linguistic System is rather controversial given its volatile nature: hence, the use of the term IS instead of ISL.

² General information on CEFR applications and self-assessment matrixes are widely known in literature and can be found for instance here: <https://europass.cedefop.europa.eu/en/resources/european-language-levels-cefr>



OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

[testing and assessment. Language Testing and Evaluation Series Grotjahn R. and G. Sigott general eds . Frankfurt Peter Lang](#)

- http://www.hfh.ch/fileadmin/files/documents/Dokumente_FE/D.21_Haug_Keller_2012_10_112_Report.pdf
- <http://signlef.aau.at/it>

The material developed so far in the script (see the excel document) is partially based on the results of the above mentioned material and particularly on project **Sign Lef**.

As far as the National Sign Languages/English section regards the acquisition of English as L2, limitations of the application of the CEFR are certainly less. However, it must be mentioned that to some deaf learners, especially those who are have been deaf since birth or soon after, any oral language, being unheard, is very difficult to acquire. Some become very proficient, but for others, acquiring competence in oral languages will remain problematical:



OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

On International Sign

Since International Sign does not have its own grammar (it is not a fixed linguistic system but rather a set of communication strategies engaged by signers in international contexts), syntactic structure will not be explicitly taught. The emphasis will be on how to make a phrase understandable and clear at the relevant levels.

The videos shall be available in both the local sign language and in IS. The goal of including the local sign language videos is to provide a bridge between some aspects of IS that is not immediately understandable. Subtitles can also be made available in the local language and in English.

Nevertheless, it is not possible to provide a clear link between IS and CEFR levels: not being a fixed linguistic system, it is not possible to assign a specific CEFR level of complexity/proficiency and the experts suggested to adopt a more simple tripartite Beginner/intermediate/expert taxonomy. Ideally the structure of the subtitles would also match the levels (B1 or A2), however some features of sign languages (visual-spatial languages) allow more complex concepts to be conveyed at a much lower level of ability.

The vocabulary section of the unit would be the availability of a visual glossary (images and corresponding International Sign(s)). It is highly recommended to include the words in the local language and in English. Activities in this section would reinforce memory of vocabulary, and ability to match visualized concepts.

Signers involved in the production of the IS learning Objects could be the ones who participated in the design of the National Sign Languages of OPEN, if they can prove their proficiency in IS well: indeed IS requires specific competencies that need to be proven by the signers working in this section.

Relevant similar projects that have been analysed are the following:

<http://www.acm5.com/signon3/Netscape/index.html>

a Socrates project, funded by the EU. The aim of the project is to enable deaf sign language users to use written English for international communication via the Internet.

Adam

www.adam-europe.eu

Deaf People Education: crossing linguistic borders through e-learning

<http://www.adam-europe.eu/prj/6853/prj/4.%20ISSR%20-%20La%20Valletta.pdf>

Other similar projects/source of materials that have been taken into account:

<http://www.youtube.com/watch?v=XF-QWo5Pi8Q>

<http://www.sematos.eu/isl.html>



OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

Didactical methodology behind the design of the Learning Objects

The design of the learning activities presented in this pilot was based on the scales of the Common European Framework of Reference for Languages, focusing on a progression of skills from the A1 level of English competency to the C2 level of English competency through the use of videos of meaningful communication situations that Deaf people will often find themselves in when traveling abroad. The subsequent activities were designed based on the content of the videos to reinforce comprehension of key grammatical and vocabulary concepts. Basic grammar concepts are presented in simple graphical format that allows for “teachable moments” using the videos, that is, teaching grammar as it is presented in a natural communication situation.

Vocabulary words for each module are linked to an online application that shows the vocabulary in different languages (written and signed). In this way, the learner is encouraged to use other resources than the ones developed for the particular learning unit, teaching independent learning skills. The aim is also to encourage the learner to develop new vocabulary by taking advantage of other resources.

The activities were designed following the concept of Vygotsky’s Zone of Proximal Development (ZPD) Theory (circa 1932), in which content is presented on a scale, moving from the comfort zone of the learner, what the learner can do independently, and adjusting the difficulty of each subsequent activity slightly to encourage the learner to push his/her capabilities. In this way, the pilot program, which is designed to be used without the presence of an instructor, aims to guide the learner in the development of his/her skills in English at that particular level.

Bloom’s taxonomy (Bloom et al, 1956), a classification system of educational objectives based on the complexity of cognitive, affective and psychomotor skills in the duration of the learning process, served as a guide in the application of Vygotsky’s ZPD theory through the progression of increasingly difficult activities. In particular, the progression of cognitive skills from knowledge and comprehension of the learned material to the application of the materials to new situations and synthesis of new content utilizing the learned skills.

For example, at the knowledge and comprehension levels, the activities ask the learner questions regarding the people and content of the videos. At the A1 level, the learner could be asked to match the phrase “He is Alex.” or “She is Kim.” with the appropriate image of the signer from the video. At the application level, the correct present simple form of the “to be” verb needs to be inserted in a given sentence, from statement to question and negation. At the synthesis level, the learner is given



OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

an image still from the video with cues of what the signers are talking about, and the learner needs to formulate the correct statement. For example, at the A1 level, an image of a signer pointing at another signer with the word “Deaf?” under the first signer, the learner needs to type correctly the statement, “Are you Deaf?” The goal of the progression of activities in such a way is to provide support for the learner at the beginning of the series of activities to successfully do the activities independently, and as the activities progress, certain aspects are “removed” and thus the learner needs to apply what he/she has learned to provide the correct answer, ending with the complete development of phrases independently without a teacher-type assistance. However, if the learner were to start with the synthesis activity before the knowledge/comprehension activity, there’s a risk that the lack of scaffolding for the learner would render the activity extremely difficult.

Since this is a pilot program that aims to focus on the presentation of natural communication situations without the presence of a teacher to provide educational support, the level of language presented in the activities match the level of the learner. A1 activities, for example, utilize a lot of graphics to allow the learner to focus on the response to the prompts rather than focusing on comprehension of the instructions. It is for this same reason that only two grammar topics were chosen per module to focus on the proper development of the skills using the ZPD theory following the Bloom’s taxonomy model of developing activities of increasing cognitive focus. The focus of the pilot activities is to stimulate the motivation and interest on the part of the learner to learn English independently without needing the constant support and presence of a teacher.



OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

Units and topics addressed by the learning objects

The transcription of the linguistic material included in the didactical videos (i.e. the “Script”) cover themes regarding mobility and travelling in other countries, i.e. helping learners developing communication skills which are relevant to OPEN general objectives:

- Eliminate communication barriers and foster the learning of foreign language for deaf people.
- Make available to learn other languages and cultural diversity for the deaf through ICT, the methodology of e-learning.
- Ensuring equal opportunities for deaf people for the participation in training activities of this kind.

Didactical videos will be dedicated to phrases, and not single items (words, grammar units). This is due to the fact that the project should also capitalize on spreadthesign where an extensive lexicon multi-language dictionary is already available (and its enlargement it’s currently ongoing).

Each unit covers 2 of the 6 CEFR levels:

Unit 0: Introduction and basics

Unit 1. Travels and getting around

Unit 2. Culture (sport, education, history)

At the end of each unit a longer video (approx. 1 min) to wrap up what learnt so far.

English via National Sign Languages		A1	A2	B1	B2	C1	C2
Unit 0	Introduction, greetings and basic expressions	x	x				
Unit 1	Travels and getting around			x	x		
Unit 2	Culture (sport, education, history)					x	x



OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

Video outline: framing and interface

Sign language didactical videos currently available on the web rely on a twofold input source:

- Sign language performance
- Written subtitles (in the target language)

<https://www.youtube.com/watch?v=c8Wlr61r1Do>

Interactive videos with two or more signers, usually offer the possibility to represent realistic situations of dialogue, even at very introductory levels:

<https://www.youtube.com/watch?v=ianCxd71xlo>

Our proposal is to include the sign language performance (which can be selected by a switch menu in any of the sign language included in the project OPEN) with written subtitles.

Signers will be framed in a medium close-up, i.e. a person's head and chest would fill most of the screen.

An additional window shall display an English actor in close up or extreme close up of the face pronouncing the script while the sign language is performed.

This will allow the learner to understand how a word or a sentence is pronounced (i.e. performed by the mouth movements of the speaker) and stimulate the learner lip-reading capacities in English³:

First statical representation of the Video outline:

³ The development of lip-reading capacities goes beyond the scope of this project, since it would require face-to-face sessions with a trained speech language therapist

OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234



The above displayed proposal has been further developed by the partnership experts (see below): but it provided the general idea of the items that the learner should have had in front of them.

The experts targeted the specific need to provide a realistic representation of everyday situations, providing a “situational” context of the videos: therefore, the use of 2 signers per language displayed in a contextualized environment (with other spatial elements) has been suggested.

Project partners explored the possibility to implement a more complex realization and took a final decision: signers should be filmed in a $\frac{3}{4}$ position in the video, to favour the learner point of view.





OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

Video progression

In order to enhance comprehension, partners have established to introduce a specific progression among the video shown in the platform

for **English**, a 3 steps progression will be applied, i.e.:

- A: Lip performance close up (plus English subtitles, plus little frame with national sign language)
- B: National sign language, normal speed (plus English subtitles, plus little frame with lip performance)
- C: National sign language, slow speed (plus English subtitles, plus little frame with lip performance)

Alternatively, partners could put C in front and so to have C-A-B progression.

With the menu at the right side, the learner could switch to any of the national sign languages available (so access to other sign languages and possibly mutual learning is possible)

For **International Sign** the lip performance is indeed irrelevant. It is still possible to have the subtitles in English (as a stimulus for learners to learn English as well and not only IS) or to have the national language translation subtitled (so, Swedish, Spanish, Italian, and so on)
the video progression will be the following:

- A: IS normal speed (plus English subtitles, plus little frame with National sign language translation)





OPEN LEARNING TO SIGN LANGUAGE

Leonardo da Vinci – Transfer of Innovation

OPEN-2013-ES-1-LEO-66234

B: IS, slow speed (plus English subtitles, plus little frame with National sign language translation)

The two signers will be alternatively blurred and focused with postproduction work, providing the learner with the indication on the communication flow (speaker/listener= signer/receiver).

