

# TeLeMaCo—A tool for the dissemination of teaching and learning materials

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For some tools, e.g., EXMARaLDA (Schmidt and Wörner, 2009), there is already a comprehensive coverage of the available materials.

## 1. Introduction

For language resources and tools, there is a growing number of repositories, and there are platforms to search the metadata of many collections at once, like the Virtual Language Observatory (VLO) (Van Uytvanck et al., 2012). There are also web services and chaining tools like Web-Licht (Hinrichs et al., 2010) that provide facilities for text and speech processing and support processing pipelines for a wide variety of scientific tasks.

On the other hand, the documentation and teaching materials remain scattered over many places, including institutional web pages, YouTube channels, or software repositories like sourceforge<sup>1</sup>. A common interface to access and search those teaching and learning materials was lacking. We developed the *Teaching and Learning Material Collection* (TeLeMaCo<sup>2</sup>) to overcome this situation. Our approach is community driven as we collect descriptions of relevant materials contributed from all over the world in our service.

## 2. The service

TeLeMaCo offers search and access to a wide range of teaching and learning materials, including the following

- technical documentation (e.g., quick starts, tutorials, or full manuals)
- learning material for self study (e.g., YouTube videos and screen casts)
- short teaching modules (2–4 hours) that can be integrated in existing courses
- full courses covering a broader spectrum of language resources and tools or focusing on specific topics of application of language resources and tools
- reference materials (e.g., specialised dictionaries)

It brings together materials stored at different institutions and locations through a unified interface. It provides access to materials published in different languages (currently mostly German and English, but also French).

## 3. Easy to use

TeLeMaCo is designed to be easy to use and to encourage collaboration.

It is easy to use for casual users looking for teaching and learning materials. Besides simple and advanced search we also provide a keyword browser and an author browser.

It is easy to add new teaching and learning materials to TeLeMaCo. It takes less than five minutes to do so, once registered. The annotation follows the model of Dublin Core with some additional metadata fields for pedagogically relevant features such as prerequisites, target audience, objectives, and level. The annotation fields are shown in Fig. 1. Almost all fields in the annotation are optional. Only those fields easy to fill need to be filled, the rest can be ignored.

## 4. Visibility

The contents of TeLeMaCo are crawled and indexed by the big search engines (Google, MSN, Yahoo, Yandex, Baidu). This will not only direct some users from a search engine via TeLeMaCo to a resource but also increases directly the page rank of the resource.

## 5. Weaving a web of resources

The keywords and authors in the display of a teaching and learning material are weblinks to other materials with the same authors or keywords. This allows the user to navigate to other materials for the same tool, the same task, or by the same author.

## 6. Sustainability

TeLeMaCo is implemented using a sustainable LAMP<sup>3</sup> software stack. All tasks are automated and almost no administrator time is needed.

It is possible to migrate it to another machine with only a few adjustments to some configuration files.

## 7. Integration into the CLARIN ecosystem

The descriptions of the materials in the TeLeMaCo are converted into metadata in Dublin Core<sup>4</sup> and CMDI (Broeder et al., 2011) format. We plan to make the metadata available

<sup>1</sup><http://sourceforge.net/>

<sup>2</sup><http://fedora.clarin-d.uni-saarland.de/hub/>

<sup>3</sup>Linux, Apache httpd, MySQL, Python with Django

<sup>4</sup><http://http://dublincore.org/>

Change material	
Title:	<input type="text" value="CQP Query Language Tutorial"/>
Institution:	<input type="text"/>
Pub year:	<input type="text"/>
Bibtex type:	<input type="text" value="-----"/>
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Type:	<input type="text" value="Manual"/>
Target audience:	<input type="text" value="Users"/>
Media:	<input type="text" value="PDF"/>
Url:	<input type="text" value="http://cwb.sourceforge.net/files/CQP_Tu"/>
Owner:	<input type="text" value="jmartinez"/>
Prerequisites:	<input type="text" value="Linguistics, command line use, regular e"/>
Level:	<input type="text" value="Beginners"/>
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Old description:	This tutorial is essential reading for all CWB users, and serves as a comprehensive user manual for the CQP query processor (as an interactive command-line program). In order to try the examples in the tutorial, either download the pre-encoded sample corpora or use the online CQP demos.
Description:	This tutorial is essential reading for all CWB users, and serves as a comprehensive user manual for the CQP query processor (as an interactive command-line program). In order to try the examples in the tutorial, either download the pre-encoded sample corpora or use the online CQP demos.

Figure 1: TeLeMaCo annotation

through and OAI-PMH endpoint for harvesting. This way they will be integrated into the Virtual Language Observatory.

## 8. Evaluation

TeLeMaCo went online in September 2013. Since then, more than 100 teaching and learning materials have been added. Most contributions are currently from the German CLARIN-D project, but we also see the first external additions.

From the web logs we can see that the browsing functionality is used to find relevant resources.

## 9. Conclusion

We have described a portal for teaching and learning materials for linguistic applications of language resources and language processing tools that is easy to use both for users looking for some educational material and for providers of such materials. We consider our system a complement to existing linguistic infrastructure components such as the VLO or WebLicht. Population of the system was done mainly by CLARIN-D members yet, we hope that the user base will become larger after this presentation.

## 10. Note added

On 1 July, DARIAH-DE<sup>5</sup> announced a service called *Schulungsmaterial-Sammlung*<sup>6</sup> on their blog.<sup>7</sup> This service concentrates on teaching materials created within the DARIAH-DE project but allows also external suggestions via email. The service is in German language and the materials are categorised by using up to three rather broad categories and a fixed vocabulary.

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<sup>5</sup><http://www.dariah-de.eu>

<sup>6</sup><https://de.dariah.eu/schulungsmaterial>

<sup>7</sup><http://dhd-blog.org/?p=3717>