

EPOS – AN ePORTFOLIO FOR LANGUAGE LEARNING

Rüdiger Fehse¹, Jürgen Friedrich², Bärbel Kühn¹

¹ Foreign Language Centre Bremen, ² Center for Computing Technologies, University of Bremen
(Germany)

[fehse](mailto:fehse@uni-bremen.de) | [friedrich](mailto:friedrich@uni-bremen.de) | bkuehn@uni-bremen.de

Abstract

Language learning is one of the educational fields where the portfolio approach is well established. Collecting documents written in a foreign or second language, recording the learner's experiences and progress in language learning and documenting the learner's achievements reflects the fact that language learning is an ongoing process of personal development and cultural growth. Linguistic diversity, plurilingualism and language learning throughout life are promoted on various political levels. To support language learning on an operational level several standards and tools have been developed. Particularly, the European Language Portfolio (ELP), based on the Common European Framework of Reference for Languages (CEFR), is implemented for different target groups, on different educational levels and in various use contexts. Until now, most of the implementations have been published as paper versions. Only few are implemented using ICT, i.e. as an ePortfolio. One of the major developments in this area takes place in the epos project in Bremen (Germany). The presentation will describe the results of our analysis of existing ePortfolio systems for language learning in Europe. The development of epos is going to extend the common container-oriented approach by a process-oriented perspective, focussing on learning activities and language competences as result: writing, recording oral conversations, cooperating with peers, reflecting on one's own learning progress. The technical and functional aspects of the system will be presented: challenges of adapting the open source ePortfolio (Mahara), questions of multi descriptor grid technology, integration of other subjects' competence grids, multi-client capability as well as and privacy aspects. The description of innovative components like "digital pronunciation feedback" and "embedded social networks" will indicate the next developmental steps of epos.

1. Pedagogical Aspects of Language Learning

1.1 Tradition and Progress

There is a long history in discussing the question how to teach and learn foreign languages most effectively and efficiently. For a long time, language learning was dominated by structuralist linguistics. The structure of languages, the pattern of sentences or a list of words had been taken as a starting point for language teaching; grammar and vocabulary were more important than "language in use". As Richards and Rodgers noticed "Language was viewed as a system of structurally related elements for the encoding of meaning, the elements being phonemes, morphemes, words, structures and sentence types." [1, p. 55]. Linguists on university level took their discipline as the unique basis for the didactics of language learning.

Since at least one decade, the paradigm of language learning is shifting. The focus is set to a competence oriented approach. The use of language in a social context appears to be more important and a better starting point for language learning than the grammatically correct but often passive knowledge of language structures. To achieve the goal of a *communicative competence* we need new didactical methods and tools. Linguistics itself tried to extend their view, transcending their pure syntactical level

and proceeding to the pragmatic aspect of language, already in the 1970ies and 1980ies. One example is the application of speech act theory (Austin, Searle) in advanced language learning processes [2]. But beyond linguistics there appeared a new pedagogical approach providing a holistic view on learning in general and particularly on language learning, i.e. the action-oriented, *constructionist* type of learning. That means e. g.:

- Learning as an activity not only to construct knowledge but also to create competences.
- Emphasis on learning and the learner; teaching as advice giving.
- Focus on processes instead of products; solving tasks instead of exercises.
- Reflection of learners on learning rather than fixation on grades.

Acquiring language competency has to reflect the situational, event-driven and action-oriented character of "language use in context". In the case of foreign or second language acquisition this context is constituted by the cultural environment in which communication takes place. Therefore, the ultimate goal of language learning is to gain *intercultural communicative competence*.

1.2 The European Language Portfolio

On a political level, this competence-based, constructionist view of language learning has been supported by the Council of Europe (CoE) since about two decades and supported by the European Union in its various language learning programmes. The general idea behind this language learning policy is to support mobility of European citizens by improving their language skills and to enhance a mutual understanding of the variety of European cultures.

Starting in 1991 (Rüschlikon Symposium, Switzerland [3]), some national agencies as well as the Council of Europe promoted the development of a common framework for language learning across Europe. The result was the "Common European Framework of Reference for Languages" (CEFR), finally published in 2001 [4], and the further operationalised "European Language Portfolio" (ELP) [5]. The framework describes a competence-oriented method of language learning at different competence levels. The ELP consists of three parts: language passport, language biography, and dossier. It goes beyond the functionality of traditional portfolios – collecting learning outcomes – by adding the perspective of the learning process itself. This approach is based on the following five principles: reflective learning, self-assessment, learner autonomy, plurilingualism, and intercultural learning [6].

2. ePortfolios for Language Learning

2.1 ePortfolios

ICT support for language learning until now mainly means the use of learning management systems (e-learning) in classes and beyond. The combination of personal advice by teachers and self-directed learning (blended learning) can provide an excellent approach of using the mutual strengths of human empathy and digital "intelligence". But e-learning often has been reduced to offering a collection of digital documents, supporting passive skills like hearing and reading competence. In advanced cases e-learning actively supports the learning process in the tradition of action-oriented learning, addressing e. g. speaking and writing. But what is missing is the documentation of learning results and their relations to the learning process: This kind of process-related learning outcomes can be documented in a portfolio. ICT may be an appropriate tool for organising such collections in databases, enabling document search, material updates and various presentation modes. ePortfolios emerged.

There are lots of diverse definitions of the term ePortfolio. The one we are using is guided not only by the traditional product view of portfolios (collecting and presenting) but also by a process view (learning and reflecting). From that perspective, a definition can be formulated as follows:

An ePortfolio is a cohesive and well-structured *collection* of a learner's authentic documents – texts, audio files, video samples etc. – that demonstrate a person's competences, skills, educational achievements, and professional development.

An ePortfolio should support *learning processes* on an individual as well as a group level. For this purpose it offers appropriate facilities for *interaction, communication* and *cooperation* among peers as well as with teachers.

An ePortfolio at the same time provides means to document a person's *learning history*. By this, it opens up chances for *reflection* about learning aims, processes, and outcomes.

An ePortfolio is assembled, managed and *owned by the learner* himself (learner-centeredness).

Actually, existing ePortfolios always focus on special aspects, e. g. more on the container function or more on process support etc. In the case of language learning we want to emphasise the importance of dynamic elements of learning compared to the static elements, i. e. its outcomes. To quote Helen Barrett, a famous ePortfolio specialist: An ePortfolio is a way for people to tell stories about their life [7].

2.2 ePortfolios in Language Learning: Existing approaches and systems

Compared to the huge number of accredited paper-based language portfolios there are rather few electronic portfolios for language learning until now. Some of the quite well-known projects and systems are shortly described in the following as examples for the state of the art.

Diagnostic online system for languages – DIALANG [8] [9]

One of the predecessors of ePortfolios in language learning is DIALANG. Since 1996, the system had been developed by about 25 European universities and other educational institutions in a Socrates/ Lingua 2 project. It provides objective test facilities as well as self-assessment tools for 14 languages and five skills (reading, writing, listening, grammar, and vocabulary). The multilingual web-based system uses the CEFR as a foundation for developing its own test sets, but does not consider oral communication and deals only partly with writing skills. DIALANG is not an ePortfolio in a strict sense. The testing is focused more on single skills than on a holistic use of language in context. But anyway, its main purpose is to provide learners with feedback considering their single language skills.

EAQUALS-ALTE electronic European Language Portfolio – e ELP [10]

Two organisations in the field of language quality assurance, EAQUALS and ALTE jointly developed a digital version of the ELP in an EU funded Socrates/ Minerva project. The e-ELP has been delivered in 2005. Its concept includes the idea of reflecting the learners' educational process and supporting learners' autonomy. The system can be installed on a local PC and does not offer communication facilities for group work of learners or feedback from teachers. It is specifically connected to the products of the coordinating organisations (EAQUALS / ALTE courses and certificates).

Language On Line Portfolio Project – LOLIPOP [11]

Twelve organisations in the field of Higher Education around Europe, most of them universities, jointly developed the LOLIPOP system. Two things are quite interesting. First, pedagogically: The project team designed can-do-statements *for intercultural competences*; and second, technically: The ePortfolio is developed as an integrated component of the well-known LMS Moodle, so learning and (self-) assessment can be done in a seamless way.

Europees Taalportfolio (European Language Portfolio) – ETP [12] [13]

In the Netherlands there is a very active ePortfolio community, particularly in Higher Education [14]. The ETP is a web application based on a sound pedagogical concept and developed since 2003. Besides the traditional parts of an ELP (dossier, biography, passport) it offers a fourth component: "language progress". This part supports the student's aims to improve his language competence. The ETP is going to be developed further. There are interesting ideas for improving the dissemination of the system in schools and universities, e. g. by intensive cooperation with educational publishers. There are plans to further develop the system by considering authentic language use, e. g. by connecting the ePortfolio to social networks, integrating a new form of user-created content.

An incomplete list of some other initiatives from various countries will be given here, showing the wide range of types, functions and application areas of ePortfolios in language learning:

- *ePortfolio Européen des Langues – e-Pel*. (Université Montesquieu-Bordeaux IV, France) [15] [16]
- *Study of the electronic European Language Portfolio – ELP*. (A consortium of six European universities and a software house; coordinator: Università degli Studi di Milano) [17]
- *Demonstrate*. Upload of language documents: text, rich media. (Michigan State University) [18]
- *European Language Portfolio for professional purposes – Prof-ELP*. One of rather a few language ePortfolios for employees. (EU project, coordinator: Employment Service of Navarre, Spain) [19]
- *European Language Portfolio for the Deaf and Hearing-Impaired – Deaf Port*. (Twelve European partners: NGOs, academia) [20]

3. Epos – the Bremen ePortfolio System for Language Learning

3.1 Basic Approach

As a seaport and trading city, Bremen is an open community with a plurilingual and multicultural environment. Therefore, language learning plays a superior role there. Besides an active inter-university *Foreign Language Centre*, Bremen is hosting three cultural institutes, the French *Institut Français*, the Spanish *Instituto Cervantes* and the German *Goethe-Institut*. These institutions strongly cooperate in the field of language education and promoted the development and use of a language learning portfolio. Since 2003, a special ELP for schools (13-16) had been elaborated on the basis of the CoE recommendations. It provided the fundament for developing an electronic, web-based portfolio version which became operational in 2007. The pedagogical principles were clear from the beginning: Instructionist methods in (language) learning had to be overcome by a constructionist, action- or task-based learning approach, where learners become autonomous subjects. But how could – in such a holistic view – computer technology with its paradigm of deconstruction of context help realise this pedagogical vision? The solution of this contradiction consists in a paradigm shift in ICT itself: The *computer as a tool* (manipulating numbers) was shifted to the *computer as a medium* (connecting people). The result was the emergence of *digital media* as means for communication and cooperation between humans, between learners, and with teachers, who themselves will get mediators.

3.2 Epos – From interaction to interconnection

Interaction

The first version of epos [21] – as most of the other analysed systems – did not have the technology ready to support this vision. But epos 1 already realised several important features:

- The CEFR requirement "The portfolio belongs to the learner" has been realised by implementing a special rights management. This creates *trust* and takes care about *privacy* issues
- Beyond storage and presentation of documents (dossier, passport) epos allows *interaction*: a) with the computer (e. g. self-assessment) and b) with the tutor (e. g. feedback, advice).
- To extend output oriented learning (dossier, biography, passport), a component had been built into epos supporting *reflection* of learners on their learning process: the *learning diary*. The learner in this diary notices his learning history, efforts, successes, and challenges.
- Epos extends self-directed learning to (guided) *group learning*. Artefacts can be shared by peers or inspected by tutors if agreed upon by the learner. Group learning was still quite.
- Epos follows a comprehensive approach of language learning in school, higher education, vocational training and further education – *lifelong*. Local representatives from these areas constitute the Bremen Language Council (Sprachenrat Bremen) which is going to promote language learning by the use of epos continuously.

What in addition would have been nice is a higher degree of configurability of the system's functional components, improvements in usability, and enhancement of the performance of the system. Epos 1 had been programmed in a proprietary way (Python, Soap, Plone technology), leading to some bottlenecks in interaction speed when pupils use the system in a rather synchronous way, being guided by the teacher step by step in a classroom mode.

Interconnection

Epos 2, the version which is under development since the beginning of 2011, is built upon a totally different technical platform: We are now using the open source ePortfolio system *Mahara* as basis for our own programming. Mahara, originated in New Zealand, already offers a quite elaborated set of functions, has a strongly modularised structure, allowing others to easily extend the system to their purposes. Hundreds of system developers around the world are actively improving and extending the system continuously. In addition, there already exists an interface between Mahara and LMS, e. g. the widespread and pedagogically sound learning platform Moodle. Single sign on, exchange of documents, multi-capability features etc. become feasible in this open source environment. Including web resources and seamlessly integrating Web 2.0 functionality like wikis or blogs becomes more and more important and is supported in epos.

In addition to the existing dossier and biography functions of Mahara, we developed a self-assessment module. The results of filled in assessments are transformed into a language passport. Again – as in epos 1 – the system includes a learning diary for reflection purposes.

In epos 2, special emphasis has been put on extending the existing cooperative learning approach:

- We extended the opportunity for students creating peer groups and using them for cooperative learning quite a lot.
- The group functionality of epos allows students to set up project work. Projects offer contextual situations for elaborating complex language skills. To give an example: Students can cooperatively work in a foreign language on creating a Wikipedia article, elaborating a lemma connected to their city or country. In this context we are discussing the possibility to further extend the approach by applying the concept of tagging and folksonomy as well as other methods of "human computing". The use of folksonomies e. g. needs a deeper understanding of the text under consideration. Tags can be discussed by peers according to their appropriateness.
- Students can create collections of works and allow peers to read them and comment on them. In the same way, learners can give permissions to their tutors to view their works, assessment

results or learning diary. The Bremen Foreign Language Centre runs a regular "Tutoring Programme" where the personal relation between a student and a tutor is crucial. Epos is integrated into this network of learning, providing space for discussions on individual learning agreements, advice giving considering learning methods, etc.

We are just starting the evaluation of the epos 2 prototype in some schools as well as some universities in Germany and abroad. At that point I want to mention that our dissemination strategy is not only to offer the system for language learning but at the same time introduce it to teachers from other subjects in schools to use synergy in the organisation's teachers training and ICT administration.

4. Future challenges

Going further on the road of integrating *rich media* into ePortfolios in language learning, we are considering the implementation of *learner-specific audio feedback* from teachers to improve the learner's pronunciation: A learner sends his spoken artefact, an audio file, e. g. of an oral seminar presentation, to his tutor. The tutor checks the pronunciation, stops the file at a given point of a faulty articulation and enters an oral feedback just into the original audio stream at the relevant place. He sends the commented file back and the learner is able to listen to the tutor's comments in the direct context of his own deficient articulation, maybe going back and forth comparing both pronunciations. Beyond the use of recorded audio or video files, audio can also be used as lifestreams, cf. the webCEF project [22], or even as online video streams. In general, we want to develop webware tools which facilitate the production, use, update and reconstruction of rich content/media in ePortfolios for language learning.

This leads us to our efforts of providing solutions for a *deep integration of social networks* into ePortfolios; not just presenting a link to Facebook or Twitter but including the social network content (in blogs or wikis) into the dossier and combining the above mentioned group structure in epos with group mechanisms in the wide-spread social networks.

There emerge questions about social side effects of ePortfolios: What about privacy? Is the continuous mantra "The portfolio data belongs to the student." sufficient to avoid misuse of personal data, e. g. in the job environment? But also in higher education we found examples where teachers had unlimited and not explicitly allowed access to students ePortfolio content. Which data security concepts are appropriate in the "age of digital transparency".

Finally, in its framework of reference the Council of Europe not only asks for language competence but also for language as a means of inter-cultural understanding. But how can the goal of inter-cultural communication been taken into account in the development of ePortfolios? There are only very few projects dealing with this question. Is there any kind of competence grid for cultural competence? The most interesting ones have been presented by the CEFcult project [23] and the "Intercultural Competence Assessment" (INCA) project [24]. The INCA project developed a competence grid with a similar structure like an ELP, but with seven competences (openness: respect for otherness, tolerance of ambiguity; knowledge: knowledge discovery, empathy; adaptability: behavioural flexibility, communicative awareness) on three levels.

This article mainly deals with a special kind of learning technology – ePortfolio for language learning – and the pedagogical foundation of this technical application. What has been left out here is the comprehension of this technology in the broader range of language learning as a whole, the teachers, the motivation of students, the organisational settings of the learning centres etc. This broader view is presented e. g. by Kühn/Langner [25] in their latest work about the future of language learning centres. Take it as a next starting point, a visionary view, if you think that technology is not the solution for everything.

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