Towards a TENCompetence ePortfolio

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Abstract
This article argues that the TENC ePortfolio definition should integrate rhetorical, pedagogical, social, and technical perspectives. The rhetorical perspective is needed to show the learner’s competences, achievements and history; the pedagogical perspective aims at supporting learner’s self-reflection, through the definition of competences mastered, review and creation of (new) CDPs, creation of showcases, and assessment of competences; the social perspective aims at fostering interaction and social help support, and the technical perspective objective is to support the other three perspectives. Guiding principles for the design of the TENC ePortfolio are provided, and the aforementioned perspectives detailed.

Keywords: Learning Networks, ePortfolio, social interactions, personal profile

1. Introduction

ePortfolios are commonly conceptualized as collections of learning evidences. Learners define these evidences through a self-reflection process through which they attribute their competences to learning products or outcomes, and reflect on how they acquired such competences. From the pedagogical point of view, this process helps learners better to understand themselves (knowledge-self) and become self-directed learners. Learners can use ePortfolios for multiple purposes such as: learning, professional development, assessment, job applications and promotions [1], showcasing, developing personal plans, accreditation, collaborative learning [2], and receiving feedback. Likewise, ePortfolios can be used for tracking learners’ development within a program and monitoring and evaluating their performance [3]. Not only because of their versatility, but also because they recognise learning as a continuing process where individuals are...
responsible for defining and organizing their own learning [4], ePortfolios for lifelong learning have been claimed as the “ideal state” of ePortfolio usage [5]. In areas such as teacher education and medical education, in which professionals are used to evidence their competences, show their work, and update their competences constantly, ePortfolios have been extensively studied and implemented. They are perceived as instruments that enhance learning [6] and support the development of competences [7].

Nevertheless, generally speaking, teachers and learners seldom consider ePortfolios for lifelong learning [8]. What is more, literature on the topic reports only a few recent studies. A literature search in the Education Resources Information Center (ERIC) and the Web of Science databases returned, respectively, 7 and 2 entries to a query that looked for journal articles published after 2000, and contained the terms “*portfolio*” and “lifelong learning”. Other terms instead of “lifelong learning”, such as “adult education”, “tertiary education”, and “further education”, were tried, but the results were practically the same.

In addition, ePortfolio implementations for lifelong learning represent, almost exclusively, their showcase purpose (see, for instance, http://www.efoliominnesota.com). From the technological point of view, at the same time, ePortfolio interoperability and exchangeability are perceived as an important research topic (see, for instance http://www.nottingham.ac.uk/epreferencemodel).

So, in spite of their promises, which has prompted much research into their technological aspects, ePortfolios are hardly used in lifelong learning and, if so, only in a limited sense. We surmise that a lack of attention for its integrative powers, may well lie at the root of this. Indeed, Cambridge [9] suggests ePortfolios should be integrative. They should bring together a rhetorical, a pedagogical and a technical perspective:

“Rhetorically, they provide an integrated representation of what a person knows, believes, values, and can accomplish. Pedagogically, they integrate diverse learning experiences and sources of evidence. Technically, supporting their development and use requires integrating numerous systems and applications” (pp. 235).

We hold that this idea should even be extended further by including the social interaction perspective. Thus ePortfolios acquire the potential to foster interaction [10], encourage participation and motivation [11], develop trust [12], and
promote visibility [13]. In our view, ePortfolios should be also seen as instruments that foster interaction and knowledge sharing.

To that end, ePortfolios should fulfill three conditions [14]: continuity, recognisability and history. Continuity means ensuring a permanent relation between participants that have already been in contact; recognisability means helping participants to identify each other by providing information about others in the community; and history means showing participants’ past behavior. The visualization of the participant’s profile and her contributions to the community is also important. It raises participant’s awareness of her own actions and those of others and, at the same time, demonstrates the consequences of their actions [15].

2. The TENC ePortfolio service

The TENCompetence software road map has already described that the project will increasingly focus on the ePortfolio perspective, which should include identity and personal profile. It has even been said that the PCM itself is an ePortfolio system because it has information on the participants, such as current competences, competence profiles mastered, learning evidences, etc., that could be used to create an ePortfolio for each member of the Learning Network. However, this is not evident for the learner or for the design or structure of the PCM.

As mentioned in [16], we believe that each learner in a Learning Network needs a desktop feature (e.g., a “MyDesktop”) that helps her to control her activities throughout the communities in which she is involved. This activity includes, for instance, her learning actions, communities, contacts, personal development plans, etc. Using this feature, participants will actually perceive the PCM as their personal point of development before they are aware of the rest of the Learning Network. It will be perceived as the starting point that connects the participant with the rest of the members of the community. The TENC ePortfolio objective then is two-fold: on the one hand, to allow participants to control their own activity, performance and social interaction, and, on the other hand, to provide information about them to the other members of the community, in such a way that the continuity, recognisability and history conditions are satisfied.

Following recommendations from [2, 17], we believe that the TENC ePortfolio should not be disassociated from the didactic concept of a flexible, personalized, and social-interaction education instrument based on competence development; it
should be owned by the learner; it should use the technology the learner is already using, instead of replace it; and it should explore the possibilities of social web applications to link formal and informal learning.

This idea also considers learning evidences as any outcome or product that the learner wants to use to indicate a competence. This is to say, evidences located both inside and outside the PCM should be considered. In the PCM these evidences include, for instance, competence development plans (CDPs), units of learning, learning actions, resources, participation in learning networks and ad hoc transient communities [18]. Outside the PCM they include, for instance, links to learner’s school records, activity in (social) web applications, links to external web pages or to resources, and so on.

Furthermore, the TENC ePortfolio should be designed from an integrative notion, which, naturally, will unite the rhetorical, pedagogical, social interaction, and technical perspectives described before.

The rhetorical perspective is needed to provide a visual overview of the learner’s achievements, past behavior (history), current position in the Learning Network, and communities joined. This should include showing a learner’s:

- Competences and competence profiles mastered, linked to a list of their learning evidences.
- CDP, units of learning, learning actions and resources followed, as well as current position in the Learning Network. This information can be provided by the positioning service [19], which is currently under development in WP7.
- Past and current communities and ad hoc transient communities [10, 20] the learner has been involved in.

The pedagogical perspective is needed to support the learning process through self-reflection and assessment. Self-reflection requires collecting learning evidences, attributing them to competences, and writing reflections about the competences acquired. To this end, the pedagogical perspective should support different tasks:

- Definition/upgrade of competences mastered. If this has not been done automatically by the PCM, the learner needs to specify the competences he already has (by attributing them evidences), but also those that he wants to develop further.
- Review of CDP followed, the learner adds and removes competences acquired, writes a reflection about the learning process, and rates the CDP. This will allow her to understand her own learning development, to plan further the competences she wants to acquire [7], and to evaluate the CDP.
• Creation of new CDPs. If the learner has followed informal learning paths, discovering different paths to achieve a competence, he needs to reflect and describe what he did to acquire a competence by creating a new CDP. Likewise, if the learner has followed only certain parts of an existing CDP, this new path has to be defined as a new CDP. In both cases, the CDP should be described, preferably in line with an interoperable learning path specification [21].

• Creation of showcases, for different audiences and purposes. Showcases should be based on competences mastered. Learners need to be able to export their showcases into different output formats, such as XML, .pdf, IMS LIP, etc.

• Assessment of competences that could combine external assessment, mentoring, peer and self-assessment.

The social interaction perspective is needed to foster social interaction, to connect the learner with all the communities and ad hoc transient communities she belongs to. This connection can help learners to receive feedback from peers and tutors and collaborate with them, two functions that learners and teachers appreciate much [8]. This perspective should facilitate:

• Creation of the personal profiles. Different profiles for different audiences should be possible. For instance, a personal profile to share with friends is most likely to be different to one for potential employers. What information the profile should include is still work in progress. Up to now background information on personal identity is claimed to be important for effective knowledge communication and trust (Brouns et al., 2007). However, each learner should have the option to choose what information each personal profile should display.

• Social help support, by recommending peers to collaborate with, in terms of peer-support or peer-feedback. This is carried out in the context of WP8. See, for instance [20, 22].

• Get information about the past and current communities and ad hoc transient communities in which the learner has participated, including information about participants already contacted, and their past behavior. This will ensure compliance with the continuity and history conditions mentioned earlier in this paper.

• Creation and maintenance of contacts. To create a contact a learner can select or invite members of the Learning Network to be part of her contacts list. Contacts can include peers, teachers, tutors, institutions or even true friends.

Finally, the technological perspective is needed to support the other three perspectives. This perspective should:

• Automatically create an historical record of the actions of each learner; information that should help different TENC services to run properly (e.g.,
navigation, positioning, peer-support, and others).

- Integrate the different services (e.g. positioning, social help support, creation of showcases, etc.), defined in the other three integrative characteristics.

- Support exchangeability and interoperability of the TENC ePortfolio.

- Support privacy issues such as public and private ePortfolio views and configuration of information for public/private/reserved to specific audiences.

3. Conclusions and Future Work

In this article we collected several arguments, if only succinctly, that support the importance of ePortfolios for lifelong learning and their relevance for TENCompetence. Indeed, we argued in favor of a TENC ePortfolio designed and developed to follow an integrative approach. It should be noticed that such an approach is closely related to the one suggested by [8], which they claim to benefits learning most effectively.

The interface design of the TENC ePortfolio should present the integrative perspective by showing in a separate tab each one of the rhetorical, pedagogical and social interaction perspectives. Also, there are additional features that will be highly desirable to consider, such as: a) supporting the integration of different Web 2.0 technologies, b) integrating the software the learner already uses, c) customising of the interface, so that learners can include the services they want, and choosing different look and feel templates.

The next steps are to define the TENC ePortfolio usage profile and the information the TENC services will need from the TENC ePortfolio and vice versa; it will also be necessary to detail the information the ePortfolio needs from the services.

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References


