

Educational Heritage 2.0: a Way to Enhance the PLE of University Teachers.

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Abstract

This paper is addressing the topic of PLEs in formal contexts (Schools, Vocational and Higher Education).

“Educational heritage 2.0: Personal learning networks of education heritage” is a national project financed by the Valencian Community in Spain in the call of projects I+D for emergent research groups. In the last years, the several initiatives and projects in the Spanish context around the educational heritage, makes necessary the creation of a virtual space in order to create a synergy among all of them. The main goal of this project is to create a virtual space (HistoEdu) in order to approach strategies of coordination of the existing knowledge and studies in this field. From a historic and pedagogic perspective, this project tries to improve the pedagogic use of resources already made in addition with the new resources created in the present research. The idea is to collect in the same place the work already done in order to offer a great space of research, innovation, learning and didactic ideas for teachers in the area of Theory and History of Education in the Spanish university.

In this paper we present the whole project paying special attention to the results of the detection of the analysis done in the scientific community. The main goal of this analysis was the approach of the needs detected in the lecturer and researchers in the Theory and History of Education field about tools, resources, networks and didactic materials.

Around 60 university teachers and researchers completed the questionnaire. The results obtained on this part have been the seed to create the virtual space “Education Heritage 2.0”.

Traditionally, digital tools, social networks and online community have never been an important part in the professional development of teachers in the Theory and History of Education. This project tries to fill the existing historical hole, providing a virtual space in order to enhance the PLE of the university teachers in this field.

Introduction

In the last few years, in the fields of education, history and the history of education, the educational heritage has started to be considered as a topic of interest, currently and with a growing interest in the research in Spain.

The idea of heritage has been expanded from the historic-cultural field towards others fields, even nowadays we have found the notion of immaterial cultural heritage to talk about the “ uses, representations, expressions, knowledge and techniques recognized by communities and groups of people

as a part inherent in their cultural heritage (UNESCO, 2003). At the same time, one of the topics with more relevance in the history of education has been the relation with the study of the culture and the study of the educative institutions, that is: historic-educative heritage. This is the result to try to deepen in the “black box” of the history of education (the things that are really happening in the school, daily work, the curriculum, etc.).

A good evidence of this is the increase of studies, line of research, initiatives and actions in Spain. Some examples are:

- Museums of education: With the intention to maintain books and materials of the educative past. These museums are also responsible in the construction of the history of the education. Nowadays, in Spain, there are more than twenty pedagogic public museums (create by the autonomic communities or universities) or private. Some examples are: Laboratory-museum Bartolomé Cossio (Madrid), Pedagogic Museum of Galicia, Museum of the History of Education (Murcia), Museum of the rural school (Asturias), Museum of education (Tenerife), and many more.
- Repercussions in the historic-educative research through the study of the educational heritage. For this reason a lot of history of the live and oral resources has been developed. The idea is to know the educative world thanks to the experience of the anonymous protagonist, implementing qualitative techniques of research. In this line we find some initiatives: the project “Fer present la memoria” (University Pompeu Fabra) or the project “Generational Educative Transmissions” (University of Granada and University of Malaga). Another line of research is the autobiographic reports of teachers; memories and autobiographies in strict sense; diaries and notebooks; mail and experiences in relation with the real educative life.
- The increasing number of meetings and scientific conferences in the last ten years: Iberian forum of the pedagogic museums (Santiago de Compostela); Meeting for museums and Historian of the Education (Palma de Mallorca); Scientifics working day about Educational Heritage (Burgos), and many more in the lasts years.
- The increasing number of publications about Educational Heritage. Different books: “ La cultura material de la escuela” (2007); “Museos pedagógicos: la memoria recuperada” (2008); “El patrimonio histórico educativo. Su conservación y estudio” (2010); “Los museos pedagógicos y su proyección cívica del patrimonio educativo” (2011). Also, different periodic publications in national and international journals in Spain.
- The repercussions and the impact caused in these studies have promoted the development of scientific societies. The finality of these societies is to promote the studies, to protect and publish several aspects of the educational heritage. In 2003 the Spanish Society for the Study of Educational Heritage (SEPHE, for the initials in Spanish), was funded. Then, in 2007, The Latin America Network for the Research and Publish in Educational Heritage (RIDPHE, for the initial in Spanish) was funded. Nowadays, both societies have a lot of activity, publications, projects and initiatives about educational heritage.

- The last examples about the relevance and importance of this field are the different declarations and recommendations about the protection, conservation and study of the educational heritage. These declarations had been done in different levels by the UNESCO; Spanish Government; Autonomic Communities;

Even though the history of education and the educational heritage have caused a growing interest in the research, both are fields of knowledge with a lack of relation with the technology and much more with web 2.0 tools. Also, in the context of teachers and researchers in this field, there is a hole of opportunities of learning through these kinds of tools. For this reason we try to progress towards the education heritage 2.0, according to the society, providing opportunities to use, edit and reuse resources and creating relations between researchers in the same field. Several groups compose the research community about education heritage: Spanish Society of History of Education, International Standing Conference for the History of Education (ISCHE), Spanish Society for the study of Historic-Education Heritage and Ibero-American Network or research of Historic-Education Heritage.

In addition to pedagogic and scientific sense, there is a huge interest in a civic participation because the virtual space made in this project is based on the main ideas of web 2.0: centered on the users, interactive and collaborative.

In order to achieve the goals purposed in the project, the space is based on these core ideas: academic rigor, open access, centralization of research resources and accessibility.

In this paper we present the first part of the project. Concretely we present the result of the detection of the analysis done in the scientific community. The main goal of this analysis was the approach of the needs detected in the lecturer and researchers in the theory and history of education field about tools, resources, networks and didactic materials. In order to do the analysis we create an online questionnaire with questions about: knowledge and use of networks and places to share resources, the kind of resources preferred and the possibilities of the web 2.0 in their teaching/research process. Also, we asked the opinion about what kind of tools, resources and communities their need to learn on the Internet and for their professional development.

The project “Educational Heritage 2.0: Personal learning networks of education heritage”

“Educational heritage 2.0: Personal learning networks of education heritage” is a national project financed by the Valencian Community in Spain in the call of projects I+D for emergent research groups. The main goal of the project is to improve the Personal Learning Environment of the teachers and professionals in the educational heritage field through the development of one web application.

The main goal is structured around five specific goals:

- Providing a tool of scientific and pedagogic research: open, professional and rigorous, as an alternative of the other more

generalist social networks whose intention is not the scientific divulgation.

- Opening an innovative space on the web for promoting the participation and the collaborative work of different professionals in the educational heritage field.
- Centralizing and unifying the access of the different resources and basic tools or the research in the 2.0 Educational Heritage.
- Guaranteeing the accessibility of the platform paying attention to the 3WC protocol and having in mind people with disabilities.

But, Which is the relation between our project and the improvement of the PLE of university teachers on Theory and History of the Education? For this project, we decided to follow the line of research proposed by some authors (Attwell & Costa, 2009; Couros, 2010, Torres-Kompen, Edirisingha & Mobbs, 2009). Concretely we follow the definition proposed for Castañeda & Adell (2010) understanding PLE as "a set of tools, data sources, connections and activities (experiences) that each person uses "habitually to learn". Continuing with the same authors, we find PLE's structure organized in three main parts (Castañeda & Adell, 2013):

- Tools and strategies used for reading: sources used for getting information.
- Tools and strategies for reflecting: in order to help us to transform the information (tools for writing, commenting, analysing, publishing) and reflecting about it.
- Tools and strategies to make relations with others: also known as the Personal Learning Network, those that allow us to learn with others by interchanging, discussing or collaborating.

As the name indicates, PLE is something personal and individual. Following the authors mentioned before, our intention is to offer in a common space: sources for getting information, tools for transforming the information individually or with others and also, tools for making relations with others. In order to achieve the goals proposed, we structured the project around seven main tasks to be developed in two years.

Task 1: Detection of needs perceived in the scientific community. The intention in this task is to know the needs perceived by the scientific community in order to have more information about what the potential users of the platform are expecting. Also we wanted to know how they understand the potential uses of the Internet in order to learn and make connections and finally: How they can improve their PLE in the platform developed?

Task 2: Analysis of the open source platforms that already exists. Study of the open source modulates platforms with options to deploy social networks.

Task 3: Design of the platform. According with the needs detected and the study of the open source platforms done, we will design the first specifications of the platform.

Task 4: Development of the beta platform with the pre-requirements decided. Even though the implementation of the platform will be always in continuous evolution for the feedback of the participants and researchers.

Task 5: Piloting of the platform developed. Analysis of usability, accessibility and suitability of the platform based on the feebleness and fortitudes detected.

Task 6: Start-up of the first public beta. After the piloting, the first public beta will start up. The meaning of this task is to obtain more information about the uses and good practices of the users (teachers and researchers) in order to propose ideas for improving the final user experience.

Task 7: Dissemination and users training. Invitation of the scientific community for promoting the use of the platform and the publication of information.

Furthermore, the platform developed has to be based on the following principles and lines: academic and scientific rigor, open access, centralization of the resources for researching and accessibility. We consider that these are the basic fundamentals needed for the achievement of the project's goals. In the following we explain the fundament of these principles:

- Academic and scientific rigor: The 2.0 web and ICT offer a huge range of tools with a lot of potential and uses for the research in the educational heritage. The potential of these tools are not sufficiently resourceful and appreciative for the scientific historic-pedagogic community. For this reason, the inclusion of these tools in the educational and researcher work is needed. This inclusion starts by defining specific criteria of analysis and selection of the information, suppressed of the academic and scientific rigor.
- Open access: The meaning of this principle is to encourage the participation and interaction among all researchers in the educational heritage field. Nowadays, to opt for open platforms developed and implemented with free software, guaranteeing the rights of researchers and teachers about the intellectual property is required. In the same way, to keep the content and the information available on the space developed free of lucrative purposes in order to be a community property for all people interested in teaching and researching in the educational heritage field is needed.
- Centralization of the resources for researching: This is one of the main intentions with this project. The possibility to have a common space where researchers and teachers have the possibility to obtain a lot of resources of interest in their professional field. This is not only a platform of resources, the idea is to implement specific tools for facilitating the access into specialized information: database, journals, and searchers. Also, the introduction of group work tools and the tools for developing projects is needed.
- Accessibility: We understand that the web accessibility for people with disabilities is an element needed and essential. From the origin of the web, the World Wide Web Consortium (W3C) has paid special

attention to the adaptation and accessibility for people with disabilities. The accessibility is not only for accessing the information, accessibility is also about the interaction with the platform and tools. In this sense our responsibility is to introduce these elements in the platform developed in our project. For this we have planned an agreement of collaboration for the specialist advice of CDS (Company for Software Development), <http://csd.com.es/>. CDS is a Valencian company leader in the development of solutions of accessibility.

Up until now, the two first tasks proposed in the project had been done. In this paper, we are going to present the principal results obtained in the detection of needs perceived in the scientific community and the first proposed of the platform.

Needs detected by the History of Education Community for improving their PLE

The first part of the project already done has been the detection of the needs perceived by the researchers, teachers and professionals in the history of education field in order to be a part of the scientific and specific social network. The needs detected helps us to know how we can offer a platform useful for helping these professionals to improve their PLE.

In the questionnaire implemented there are different questions about:

- The knowledge and use of several social network tools.
- The importance of ICT for the teaching and learning process.
- Different factors to introduce ICT in the classroom.
- Importance of different formats for using resources in the teaching and learning process.
- Possibilities of ICT for the professional development.
- Tools to be included in the platform: communication tools and spaces for sharing resources.
- Preferences about the users of the platform.

The questionnaire was design by the research team of the project and validated by the International Panel of Expert in Educational Technology (<http://gte2.uib.es/panel/>). After the validation process the questionnaire was developed using Google Drive. In order to collect the answers we sent the questionnaire of the principals of SHEPE and RIDPHE, also it was sent to the different universities in Spain (especially to the Faculties of Education).

After two weeks, we collected 58 responses of teachers and researchers in different universities in Spain. Below, we present the main results obtained to try to know how we can help professionals in the educational heritage field to improve their PLE.

The knowledge perceived about different social networks is very low. The social network more known between professionals in the History of Education is Facebook with 53% of responses around the answers “very much” and “much”. Other social networks like Twitter, Linkedin, ResearchGate, AcademiaEdu and Google+, have a low level of knowledge by these professionals, the most unknown social network being ResearchGate, with a

7% of responses accumulated between the options “very much” and “much” and with the most of the answers around the option “nothing” (67%).

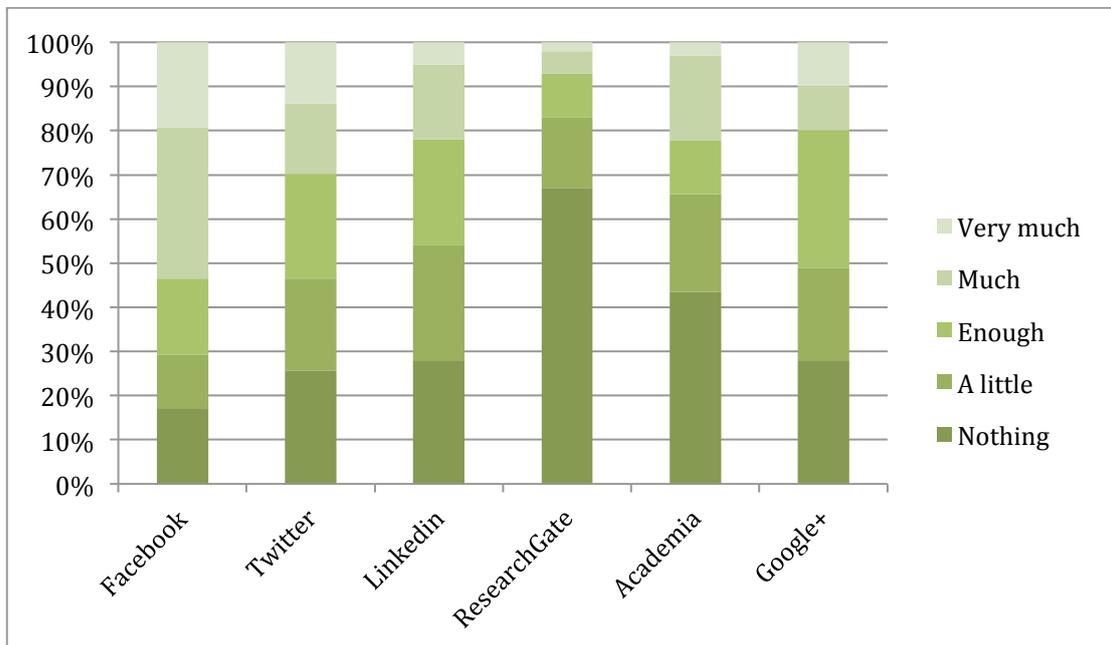


Figure 1. Level of knowledge of different social networks

In the same way, the level of use in the different social networks is really low. The most used social network is Facebook, but the average of teachers that use this tool “very much” and “much” is only 34%. The second most used social network is Google+, finding the 12% of the answers accumulated in the options “very much” and “much”.

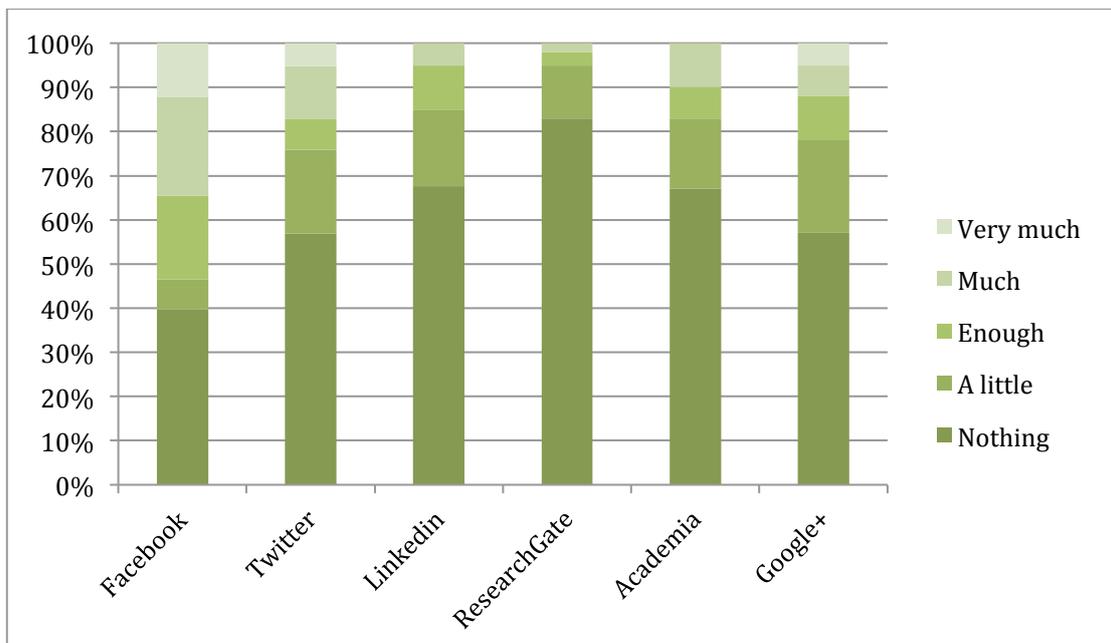


Figure 2. Level of use of different social networks

We asked about the knowledge and use of different social media for sharing resources. These spaces are more known between the participants. The most known social media are the spaces to share videos (Youtube, Vimeo...) with the 67% of responses accumulated between “very much”, “much” and “enough”. The spaces for sharing pictures (Flickr, Picasa...) are known by the 49% of participants (responses accumulated between the options “very much”, “much” and “enough”). Regarding the spaces for sharing documents and presentations (Slideshare, Scribb, Isuu...), we find the 41% of responses accumulated in the options “much” and “enough”, but nobody indicated the option “very much”. Less known are the spaces for bookmarking like Diigo, Delicious and MR Wong. Concretely we find that 98% of the answers are accumulated between the options “a little” and “nothing”.

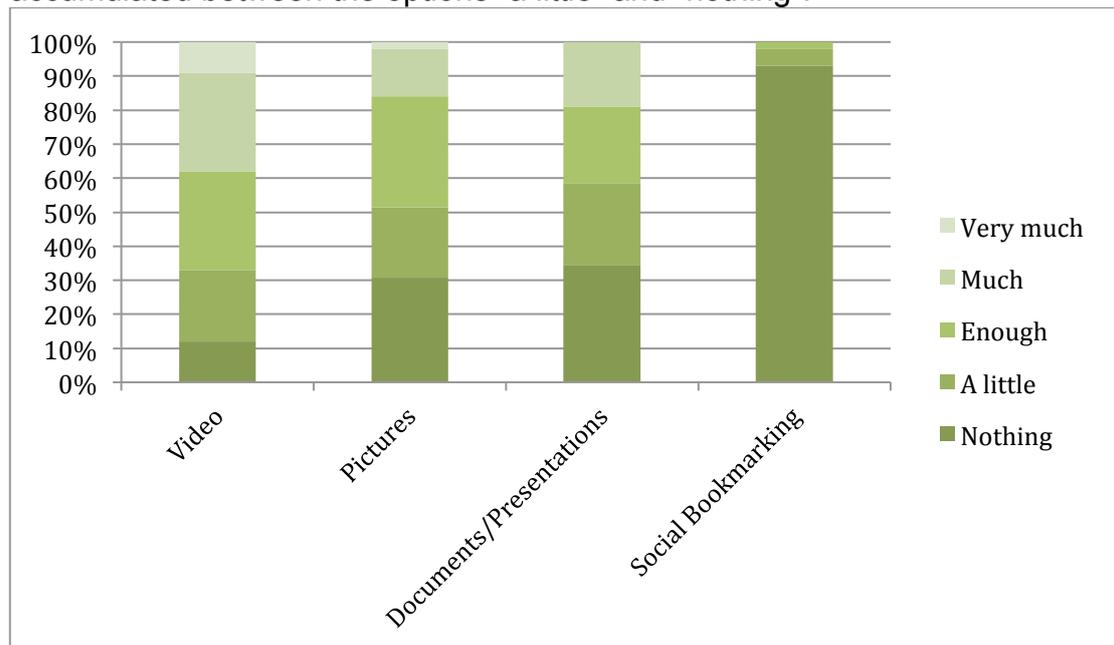


Figure 3. Level of knowledge about different Social Media for sharing resources

Even though these tools are more known by participants, the level of use indicated is lower. The most part of participants do not use social media for sharing videos, concretely we found the 82% of the answers accumulated in the options “nothing”, “a little”, “enough”. The use of social media for sharing pictures is using only for 21% of participants (7% “much” and 14% “enough”). The same happens with the spaces for sharing documents and presentations, this is only used by the 21% of participants (5% “much” and 16% “enough”). In relation to use of social media for sharing bookmarks, we found the 100% of responses accumulated between “nothing” (97%) and “a little” (3%).

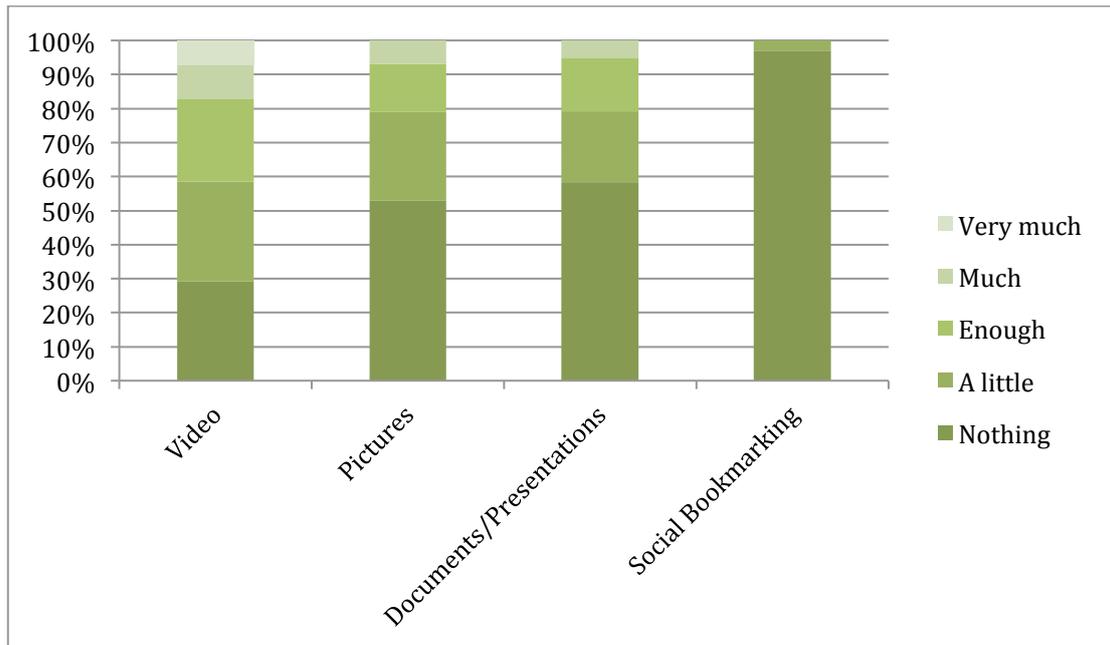


Figure 4. Level of use about different Social Media for sharing resources

The opinion of the participants about the possibilities of ICT in the teaching and learning process are very positive. The most part of participants (90% of responses accumulated in the option between 3 and 5) considers that the ICT are important for be a part in the teaching and learning process.

The motivation for introducing ICT in the teaching and learning process is around different factors. The reasons most highlighted by participants in the moment to decide introduce ICT are: the knowledge about the tools (92% of responses accumulated between “much” and “very much”; the facility of use of the tools; the possibility to cover needs of learning and the motivation of the students (the three reasons with the 86% of responses accumulated in the options “much” and “very much”). The innovation is another reason to consider by participants, paying more attention on the didactic innovation (with the 71% of responses accumulated in the options “much” and “very much”) than the technologic innovation (finding the 45% of responses accumulated in the options “much” and “very much”). Another reason highlighted in the recommendations by others, finding the 50% of participants indicating the options “much” and “very much”.

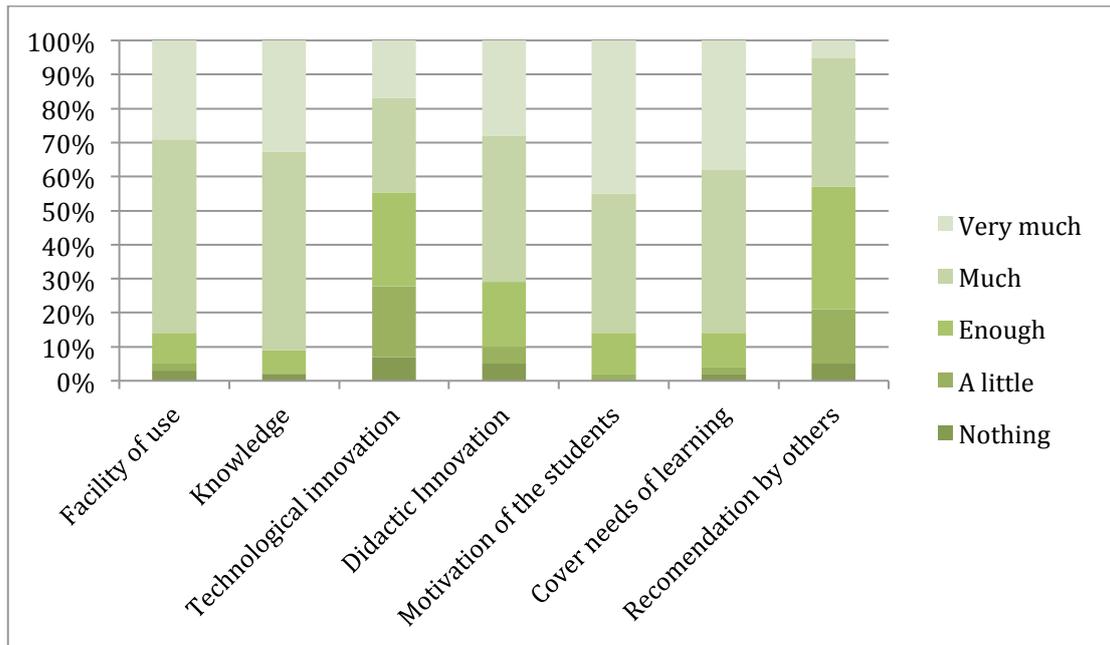


Figure 5. Reasons to decide to introduce ICT in teaching and learning process

With respect to the format of the information preferred in the History of Education, the pictures and text accumulate the most level of importance with the 91% of responses between options “very much” and “much”. The video is another kind of format appreciated very much by participants with the 84% of answers accumulated in the options “very much” and “much”. The importance given of the audio format accumulates the 63% of responses around “very much” and “much”, and in the case of visual presentations the average in the same options is 46%.

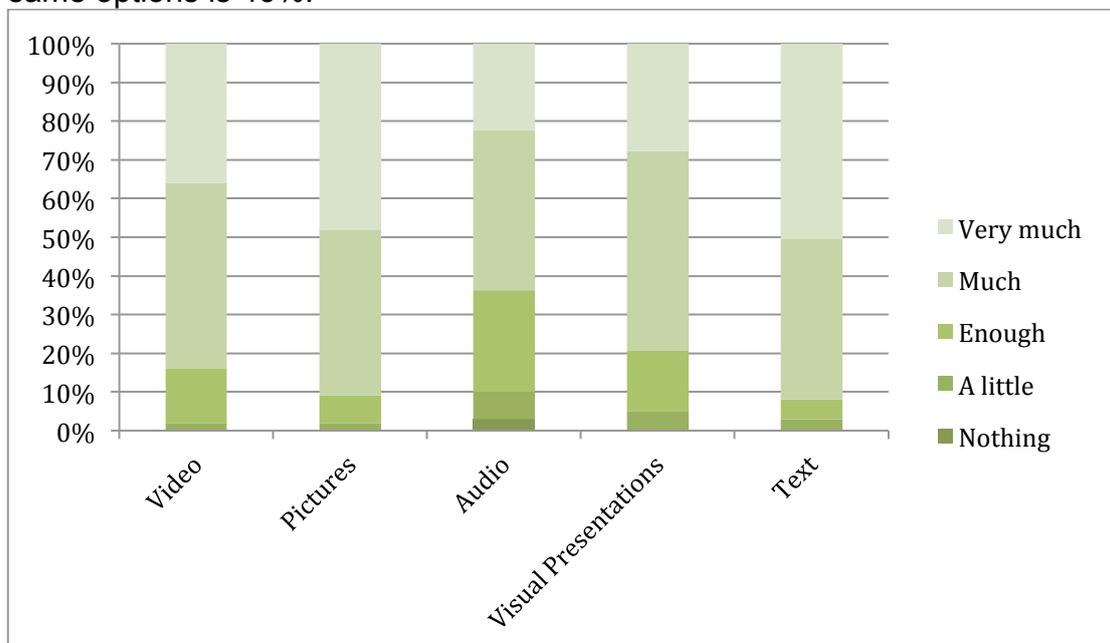


Figure 6. Format of information preferred for teaching in the History of Education

One of the most important parts in the questionnaire was the question about the perception of the possibilities of ICT in order to help participant in their professional development. Two possibilities are the most highlighted by

participants: the possibility to stay in touch with others and learn through the relations (PLN) accumulated the 92% of the responses (options “much” and “very much”). The other possibility highlighted by participants for their professional development is the access of resources for teaching and researching in the educational heritage field, finding the 89% of the responses accumulated in the options “much” and “very much”. Participants also note different possibilities about publication. The possibility to spread information of interest in the educational heritage field accumulates the 81% of responses between options “much” and “very much”. Also, to make it more visible the scientific productions is noted by the 75% of participants, in the same way that to publish information using open formats (63% of responses in the options “much” and “very much”).

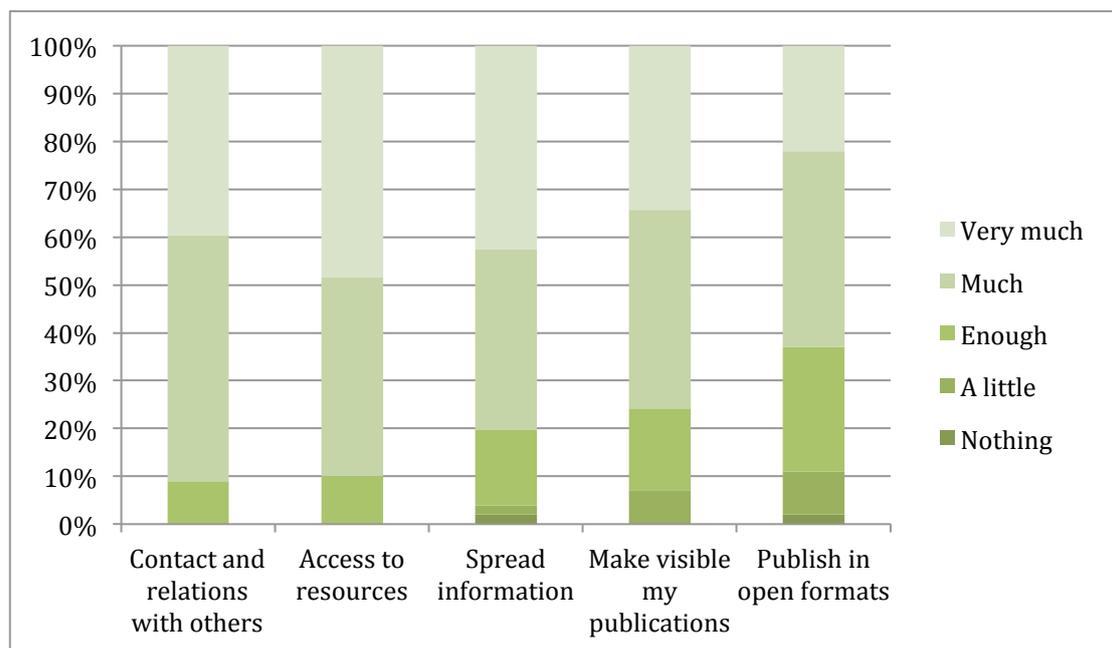


Figure 7. Possibilities of ICT for the professional development noted by participants

To finish the questionnaire we introduced two specific questions about what participants would like to find in the platform developed in the project. There are a lot of tools and possibilities that participants would like to find in a platform about educational heritage. Paying attention in the options accumulate around “much” and “very much”, in the following chart we present the opinion of participants about possibilities and tools wished.

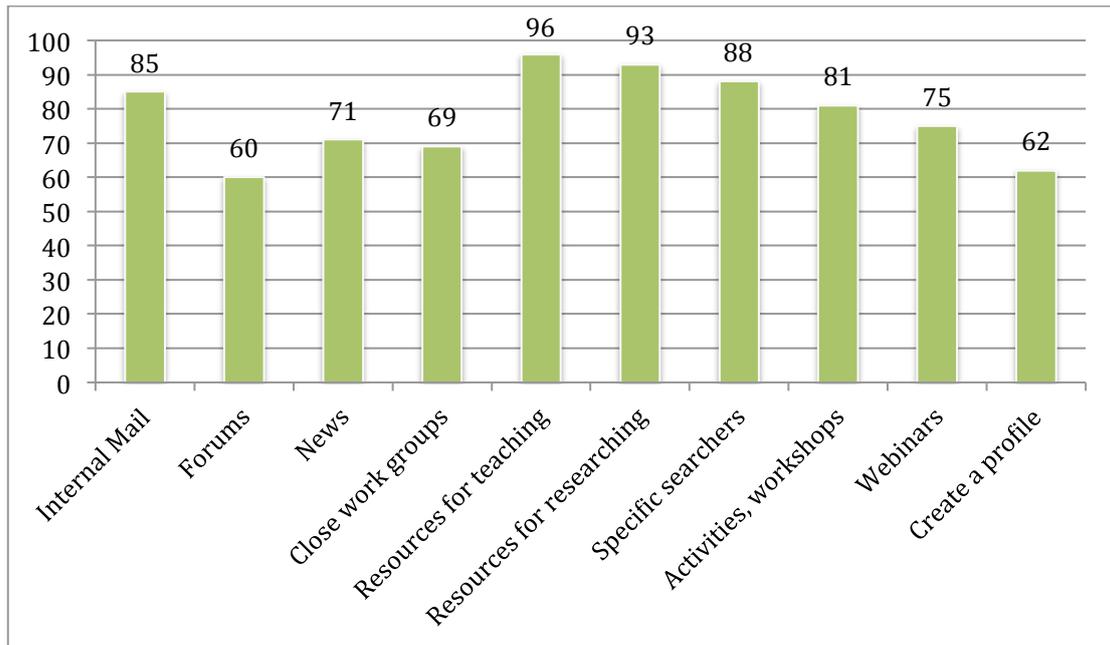


Figure 8. Average of answers about possibilities and tools wished in the platform

All possibilities and tools are really appreciated by participants, finding the possibility to have resources for teaching and researching and specific searchers, the high level of answers.

The other question about what participants would like to find in the platform developed in the project is with whom they like to share the spaces created specifically for the study of educational heritage. The answer is easy, the participants prefer to share the platform developed with people closer to their area of knowledge. When we asked about the different departments at the University in the faculties of education, the 100% of participants would like to share the platform with people of the department of Theory and History of Education, on the other hand we find other departments with participants who would like to share the spaces created: the department of History (90%) and the department of Didactic of Social Sciences (74%). The answers change when we asked about other departments not as close as the Department of Didactic and Scholar Organization, with whom the 62% of participants that would like to share the spaces and the Department of Methods of Research, finding the 48% of affirmative responses for sharing this space.

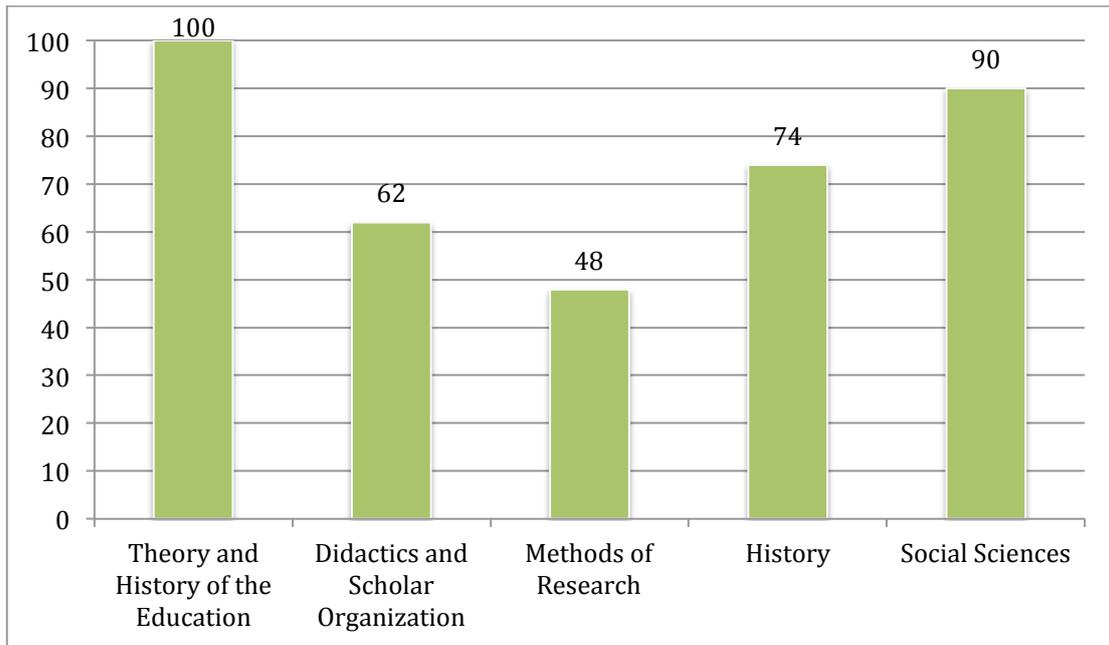


Figure 9. University departments with whom participants prefer to share the platform.

Also, the people asked would like to share the space done with students, concretely in the 100% of responses do not have problems for sharing this space with students in the Faculty of Education and in the 95% of responses with students in other faculties. In relation to sharing the platform with other teachers, participants would also like it. Concretely we find 90% of responses declare that they would like to share with primary teachers, also with secondary teachers (93%) and with vocational educational training teachers (83%). Finally, we find that participants would like to share the space developed with professionals in the museums and cultural managers (87%).

With this analysis we complete one of the first tasks proposed in the project. The needs detections has been useful to:

- Confirm the state about the use of ICT (paying attention to the use of social networks) in the History and Theory of Education community of universities teachers. We can confirm the lack of opportunities in this community to take advantage of the possibilities of ICT and web 2.0 tools for their teaching and research process and for the opportunities to improve their PLE.
- Also, this analysis has been useful to know what kind of resources, tools and people (PLN) the university teachers in History and Theory of the Education demand for improving their PLE.
- Finally, we are be able to start to look for the most accurate platform to cover the needs detected.

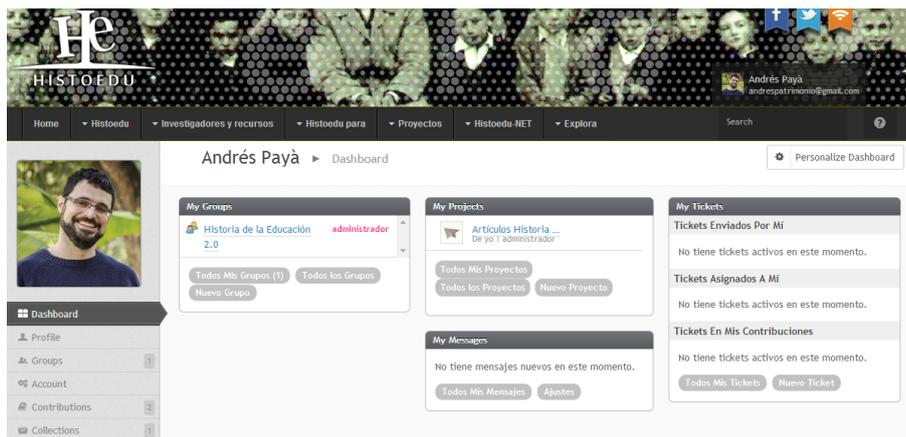
The platform developed: HistoEdu, based on Hubzero.

The name of the space for scientific collaboration developed is HistoEdu. For implementing the platform, having in mind the needs detected, we decided to use the platform Hubzero (McLennan & Kennell, 2010) as its technological tool, an open source software platform for creating dynamic web sites that

support scientific research and educational activities. An user community created by researchers at Purdue University (Carly et al., 2014) in conjunction with the NSF-sponsored Network for Computational Nanotechnology. The mentioned platform comes from EUA and is conceived initially for social and legal sciences, not for historical or educational. Therefore, it has been necessary to previously choose the necessary modules matching our needs. In the same way, the English-Spanish translation of the complete source code, has also been a huge task. Hubzero (McLennan et al., 2014) includes a powerful content management system built to support scientific activities. It enables users, among other options, to write blog entries and participate in discussion groups. It is also possible to work together in projects, publish datasets and computational tools with Digital Object Identifiers (DOIs). These publications can be made available for others to use as live, interactive digital resources (and not as simple downloads). With the only click of a button simulation/modeling tools published on a hub can be accessed by users. Following we present some pictures about the HistoEdu.



Picture 1. Main page of HistoEdu



Picture 2. Personal profile in HistoEdu



Picture 3. Creation of groups in HistoEdu



Picture 4. Journals, resources and information in HistoEdu

For technical problems in this moment the platform is not working, we are implementing a new version of this and we hope that the platform starts to work in the next months.

Conclusions

The needs analysis done in the project confirms the lack of use of technology by university teachers in the Theory and History of Education. For this reason there is a hole of opportunities for learning on the Internet and also for improving their PLE. The data analysis shows us that these teachers do not use technologies habitually, even though they are aware of the importance of these tools and these spaces for learning, researching and teaching. The teachers participants have declared what kind of tools they need and with whom they would like to make connections with and we are working to offer a space to encourage it.

It is very difficult to affirm that with this project the PLE of university teachers in Theory and History of the education are going to improve, because this is a decision that every teacher has to make, according to the PLE definition proposed by Castañeda & Adell (2010). Our intention has been to put in a common space all ingredients needed to enhance the PLE of teachers in this field because in this moment, there is a lack of these kind of spaces and

sometimes there is a lack of synergy among these teachers and technologies. Our intention has been to offer the conditions needed to change it and help teachers in this field to discover the possibilities for learning and for their professional development through the Internet.

In this moment we are designing the platform and at the end of the summer we are going to start with the implementation, the prediction is really good and every day, there are more people interested and waiting for starting to use HistoEdu.

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