



FROM PERSONAL LEARNING ENVIRONMENT BUILDING TO PROFESSIONAL LEARNING NETWORK FORMING

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Abstract: *The building of Personal Learning Environment (PLE) that supports learner to set learning goals and to manage learning is related to creative and innovative activities. But more challenging is the forming of Professional Learning Network (PfLN) that can be used for facilitation of knowledge absorption, assimilation and dissemination not only in formal and informal learning process, but also in one long-term learning plan when students transform in life-long learners. In this paper an experience of Personal Learning Environments building using platforms of start pages is presented. The personal competence development of students participated in the course of Internet Technologies is analyzed. The process of personal learning space transformation to professional network forming is examined and discussed.*

Keywords: *PLE, PfLN, life-long learning, start page, personal competence development.*

I. INTRODUCTION

Social-oriented applications and professional networks provide innovative spaces and new opportunities for learners and experts to interact and share personal and professional information and experiences [1], [2], [3]. The growing importance of social and professional networks for business and education is explored and promoted by W3C "Social Networks Interoperability Roadmap" Incubator Group (XG) that is responsible for the creation of interoperable standards for data portability, policy expression and accountability, and network migration [4]. Also, social networks, like FaceBook and Ning, professional networks, like LinkedIn and Plaxo and special-formed learning networks for life-long learners are in focus of many researchers and educators because of their possibilities for data, information and "knowledge fusion", enhancing accessibility and productivity, research tools providing, forming groups of personal and professional interests [5], [6]. "Knowledge fusion", described as a social process of new knowledge creation through the combination, adaptation, and additional development of separate knowledge assets from diverse contexts often is a prerequisite for innovation occurring [7]. In order to be successful at knowledge fusion learners need to develop networks of inter-personal and inter-group interactions which increase the likelihood that novel ideas can emerge within and across domains [8].

In this paper, an experience of PLE building using platforms of start pages is presented. PLE development is used as a dispatch point for realizing and expanding PLN and PfLN. The personal competence development of students participated in the course Internet Technologies and using social-oriented applications is analyzed. The process of personal learning space transformation to professional network forming that can be used not only in formal and informal learning process, but also in one long-term learning plan when students transform in life-long learners is examined and discussed.

II. BUILDING PLE ON START PAGES

PLEs building laid the foundations of some main ideas: learning is an ongoing process and tools to support this learning are needed; the role of the individual in self-organizing learning is important; learning can take place in different contexts and situations and cannot be provided by a single learning provider [9]. According to Wikipedia: PLEs are systems that help learners take control of and manage their own learning. This includes providing support for learners to set their own learning goals, manage their learning; managing both content and process; communicate with others in the process of learning and thereby achieve learning goals [10].

A wide range of tools and applications are involved in PLE building, but at the present the usage of Web 2.0 software is aroused [11]. Web 2.0 applications are utilized for the reason that they are service-oriented and allow creating, publishing, storing, sharing and remixing of data and information via blogs, wikis, audio/video recordings (podcasts/vidcasts), RSS syndication, social bookmarking systems, and social networks. Learners are greatly facilitated by providing easy to use interfaces and mashup services that propose possibilities for capturing and grabbing content from different sources, and they can also involve learners to be active co-developers of web services [12].

The Web 2.0 applications called “start pages” are designed to provide a personalized place on the internet where users can mashup data, information and knowledge available anywhere, anytime, including mobile logging [13]. Start pages like iGoogle, Netvibes and Pageflakes are from more popular among my students for PLE development, because of their reach functionalities and friendly user interface. The students’ roles, activities, used tools/services and occurring processes in PLE building are summarized via a model in Figure 1. The model is built during the participation of students in the course Internet Technologies and it is refined after course ending.

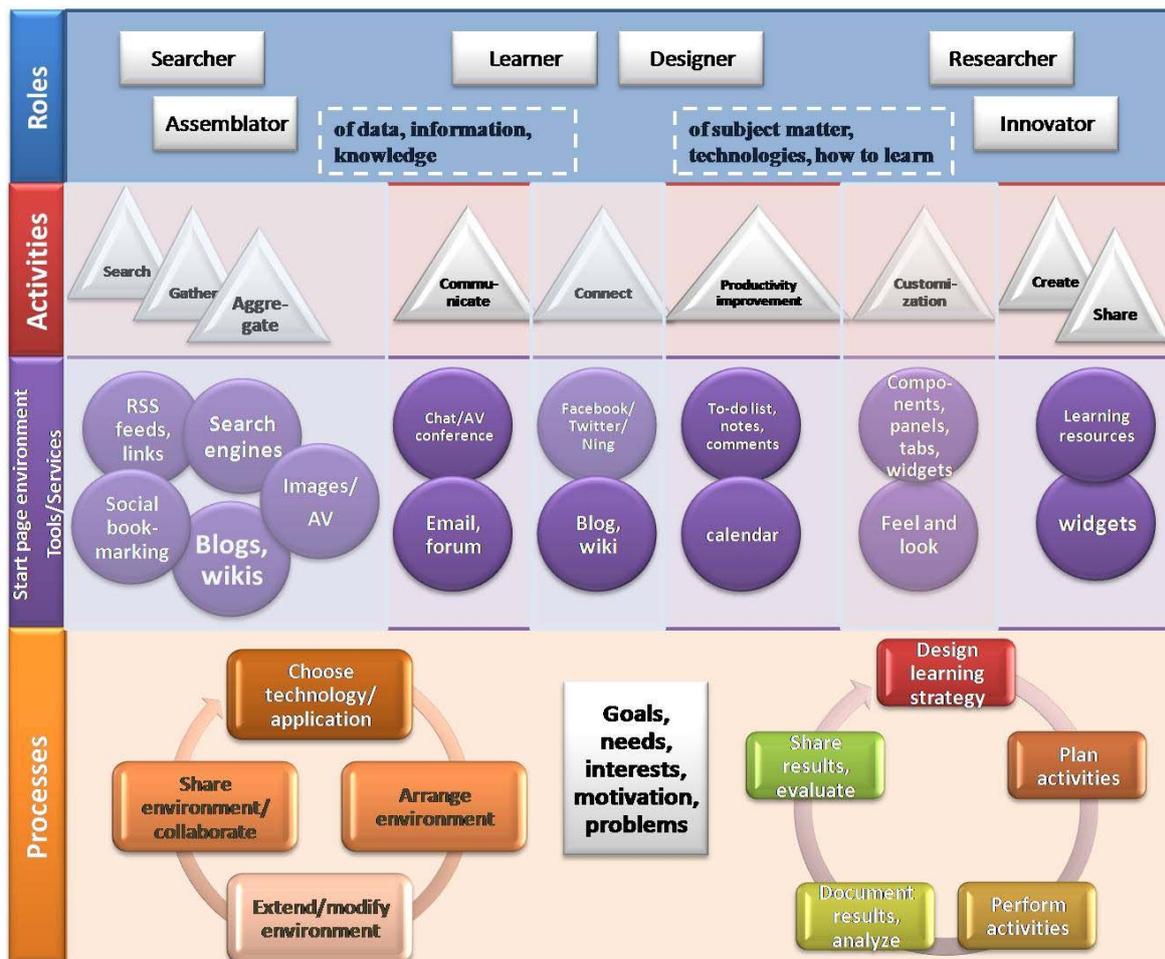


Figure 1. Model of PLE Building

According to this model (from student perspective), the main roles are: searcher, assembler, learner and designer of data, information and knowledge from one hand and from another students play role of learner, designer, researcher and innovator of subject matter, technologies and how to learn. The underlying activities are related with searching, gathering, aggregating data, communication and connection among peers, educators, family and friends, improving productivity and customization, content and knowledge creating and sharing. Such activities require suitable environmental tools and services to be turned to profit and to be arranged. The students are actively involved in two main processes: (1) the study of technology and functionality of start pages which is a prerequisite for choosing of a PLE environment and its arrangement and (2) planning learning according needs, motivation, goals, interests and problems.

III. PERSONAL COMPETENCE DEVELOPMENT

The course Internet Technologies is constructed as a blended learning course, combining face-to-face lectures and laboratory practices, online learning and content management via Edu2.0 learning system, learning ePortfolio deployment in social network Ning, self-organizing learning through building PLE on a start page [14], [15]. The course is strongly connected with the Web 2.0 platform that empowers for enhancement the learning and competence promotion.

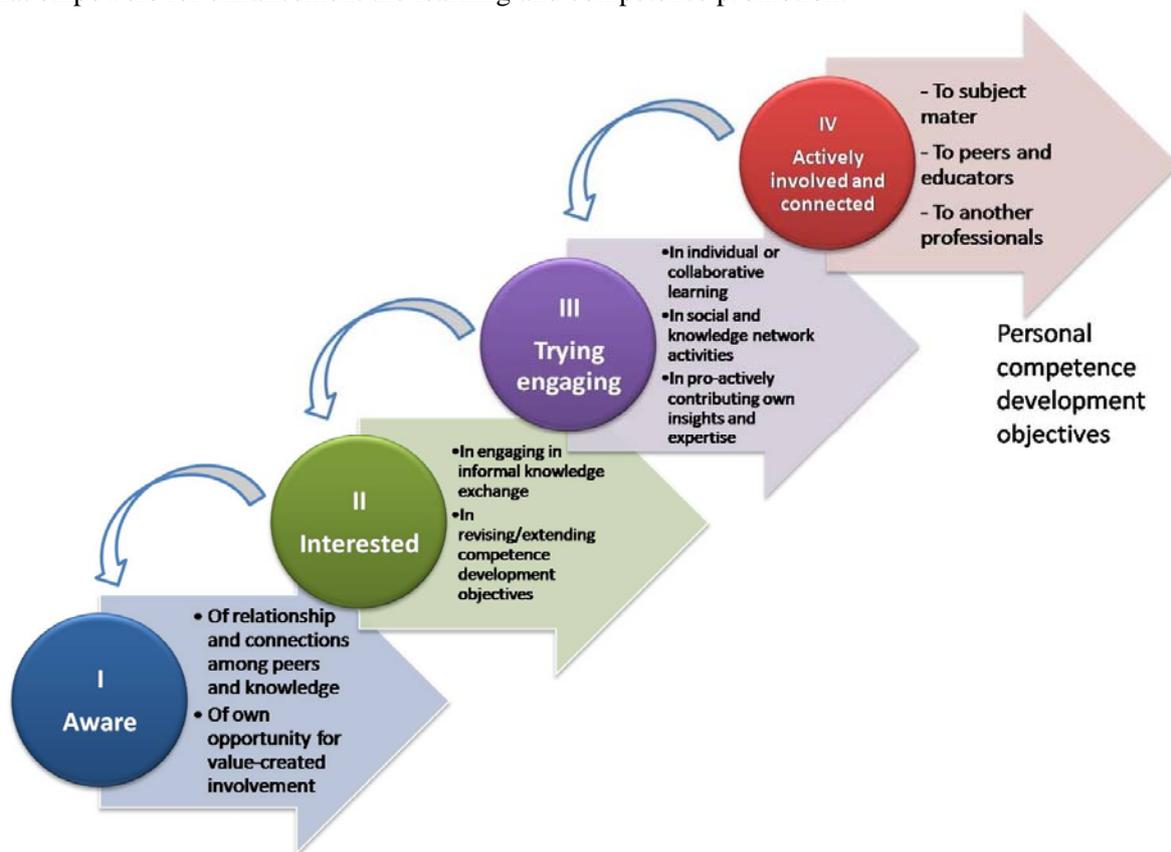


Figure 2. Competence development lifecycle in a learning network (according Rogers)

During the course a learning network is forming that is a complex step, since a network's capabilities are not just the sum of learning resources and learners' competencies. Available competencies can strategically manage and combine to achieve overall personal and network goals. For supporting the competence progress of each student, participant in the course Internet Technologies and to analyse it, the modified Rogers' model for competence development lifecycle in a learning network [16] is applied (Figure 2).

The main challenges in forming this learning network are to (1) provide sustainable value to students, not only during the course, but also after its finishing, and at the same time (2) stimulate them to contribute their knowledge, insights and experiences on a continuous basis. I supposed that students are motivated to learn and seek competence development support. So, according to Rogers' model they have to pass four phases: aware, interested, trying engaging, and actively involved and connected. In the first phase, students are supported to become increasingly aware of and familiar with what is going on in the course and the learning network, including encouragement to explore the technological functionality and learning resources in Edu2.0 system, Ning and start page, to see how it could effectively support them in identifying relevant competence development experiences and opportunities. In the second phase, students' interest in the offered online learning platform with its functional and learning value is increased. The students are more actively engaged and motivated to spend their time in such platform, not only working with course content, but also forming groups and participating in communities. This is the phase when students give a new meaning to their passive content consumption and passive observation of the other participants' behaviour. They extend their user profiles, add new information sources, and work with widgets. In the third phase, students are actively involved by contributing their own experiences and artefacts, engaging in exchanges and gradually establishing relationships with other peers and educators. The experience shows that not all students use effectively the advantages of the learning network in the last phase, when they can to see a significant support for their competence development process using online learning platform and networking. Only, enough motivated students with developed knowledge and skills (and finally competence) to become active and self-organized members of the network, engaging in a mutually productive and sustainable knowledge exchange with the platform and the students' community are empowered of this final phase. One small part of the advanced students go beyond the final phase, they put their-self into perspective of professionals and life-long learners, and try continuously managing and optimizing their social and professional network life. It is more interesting that some students that do not prepared to reach the advantages of the final step during the course, very often pushed from social or economical conditions, back after this and consciously and motivated complete it.

IV. PROFESSIONAL NETWORK FORMING

During the course Internet Technologies, each student has prepared own PLE space based on a start page, including suitable tools/services for reaching to data, information and knowledge according the personal interests and also for creation of artefacts. The participants in the course are registered users of Edu2.0 learning system and Ning social networks, where they have possibilities to make relationships and to connect with another students, educators, family members and friends. The students create artefacts and share their thoughts, ideas, experience, problems, resources and links. In this way they developed their personal learning networks based on inter-personal and inter-group interactions. More of the students who are deeply involved in the subject matter of the course and think in perspective are interested in more professional information and contacts to experts and specialists, so they joint to groups with special interests, professional networks like XING, LinkedIn and Plaxo, where they receive professional network service enables business professionals to network and collaborate by title, industry and business interests so that they can discuss interests, stay informed and share knowledge. After observations and analysis of students' behaviour the model of Figure 3 is created. PLE building, sharing the tabs and resources, communicating among peers, educators and friends is a start point for PLN organization and PflN forming.

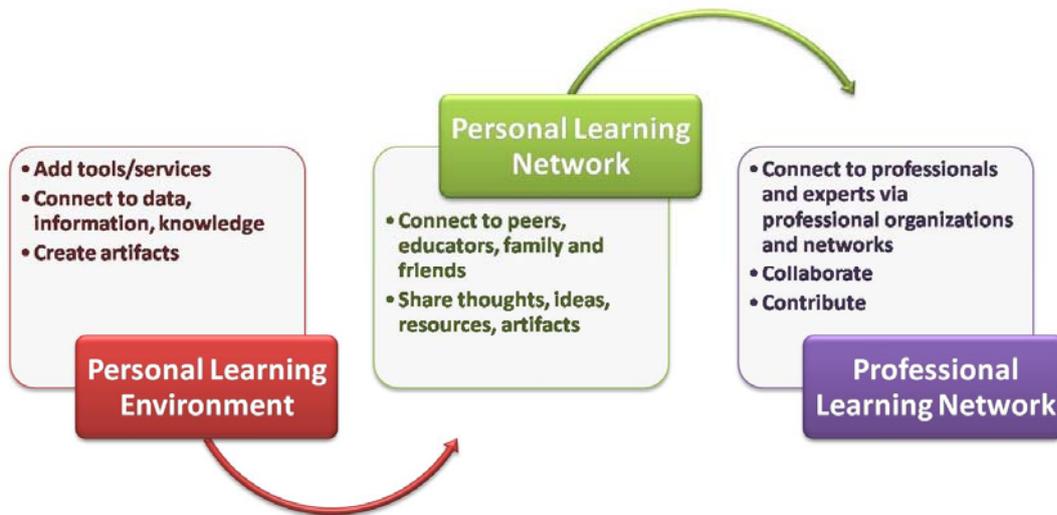


Figure 3. Development of Professional Learning Network

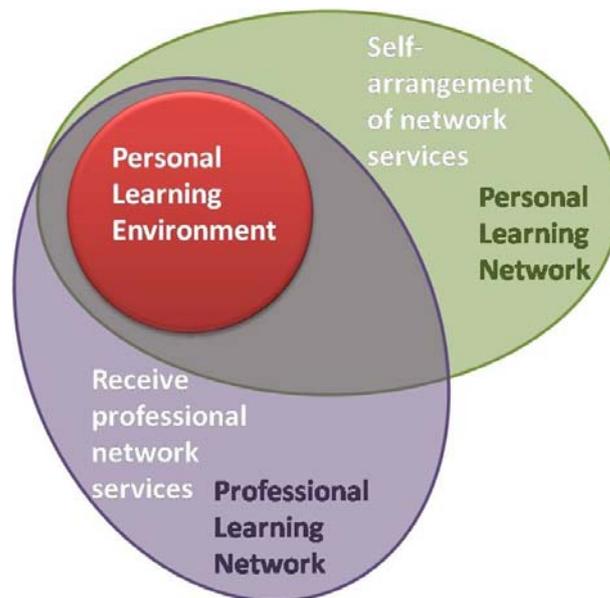


Figure 4. PLE as part of Personal Learning Network and Professional Learning Network

The transition from PLE to PFLN passing through a middle step of PLN set up. This process is dynamic and continuously adapted to the present students' interests. Some advanced students during the PLE building self-orient and arrange content, knowledge and contacts in two different networks: personal and professional (Figure 4). As it seems, the PLE building supports them in socialization and network processes set up. Also, PLE can be presented as a core for networks expanding. In some cases the borders between PLN and PFLN are blurred, because of coincidence of personal and professional interests.

V. CONCLUSION

Social networks contribute to the processes by which learners meet and communicate, and pool, share, learn about and reuse their resources, knowledge and competencies. In the paper a model for PLE building is proposed that is created on the basis of observation and analysis of students' participation in the course Internet Technologies. PLE building is found to be a core for PLN and PFLN deployment. The transition from PLE to PFLN is an important step that supports students to become self-organized and life-long learners. The modified Rogers' model for competence development lifecycle in a learning network is used in order to be examined the main phases in competence progress of each student.

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