

ePortfolio & Identity Conference

9-10-11 JULY 2012 LONDON



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#### **Foreword**

ePIC 2012, the 10th International ePortfolio and Identity conference, was a very exciting event where we had the great pleasure of welcoming participants from 24 countries debating the state of the art of ePortfolio and identity construction practice.

While we are still far from the 2010 objective ("ePortfolio for all"), important progress has been made since 2003. More ePortfolio projects are coming to light, more countries are developing national and regional ePortfolio strategies, new technologies are emerging.

While you will find within the proceedings most of the resources that fuelled passionate discussions during the three days of the event, one key contributor to our reflection is not present: Open Badges. Our colleagues from the Mozilla Foundation delivered a series of highly attended workshops and a keynote address... What we have learned from them could well transform the ePortfolio and identity landscape in the near future.

Open Badges and the Open Badges Infrastructure (OBI) demonstrate the feasibility of building an open trust ecosystem for personal data which might enable the rise of distributed ePortfolios.

Badges are much more than nice graphics that one can display on a CV or a personal page, Open Badges are the representation of a relationship, a trust relationship, between someone issuing Open Badges and someone collecting badges. Open Badges are at the same time anonymous, yet fully trustworthy. Open Badges do something that no ePortfolio platform has yet fully developed, which is the systematic exploitation of metadata, making Open Badges meaningful to search engines, therefore discoverable by potential employers or, if one is self-employed, potential clients.

Furthermore, Open Badges could be extended to all types of personal metadata and be used as the blueprint for establishing the foundations of a trustworthy Internet. Something worth exploring at ePIC 2013!

In the meantime, if you are looking towards starting an ePortfolio project, improving an existing one, or need material to plan an identity strategy, reading the ePIC 2012 proceedings will provide you with an insight into many interesting projects. And if you want to know more, you are welcome to contact the authors and join us at ePIC 2013, 8-9-10 July 2013, London.

Serge Ravet













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## **Annexes**

# ePorfolio Implementations

## ePortfolio in the Context of Developing Learner Autonomy and Responsibility

# Prof. Olga Smolyaninova, Liudmila Smolianinova, Siberian Federal University, Russia Introduction

Autonomous learning and responsibility are the very characteristic features and resources of a personality which ensure lifelong success. Autonomy is the asked-for quality of an employee on the labor market. From the psychological point of view autonomy is a new formation characteristic of the students' age.

In this respect a problem of pedagogical technologies for developing autonomy and responsibility at all the levels of professional training (Bachelor/Master programs) gains special importance. We consider ePortfolio to be a unique modern technology for developing learners' *autonomous learning* and responsibility for the quality result of educational activity; it helps in formation of the educational need. Institute of Education, Psychology and Sociology at Siberian Federal University has been carrying out the experiment on implementing ePortfolio technology in the academic process of training Bachelors/Masters of Education and Psychology for five years (2009-2012). The article presents the first results of this research.

This study accounts for the way to use ePortfolio technology as the instrument helping to develop autonomous learning, educational initiative based on the student's personal responsibility.

The following objectives were defined to investigate the mentioned above problem.

- Define phenomenology of meaning of the terms "autonomy" and "responsibility" in the context of developmental pedagogy for professional education.
- Define the available resources of ePortfolio as an instrument of autonomous learning and responsibility development for the both levels of higher education (Bachelor and Master degree).
- Distinguish which artifacts prove the increased learner autonomy.
- Carry out a survey among students of Master and Bachelor degree programs (of different years of studying) to define the dynamics of the transition of the academic ePortfolio into career ePortfolio.

#### Approaching the terms 'autonomy' and 'responsibility'

In our research different interpretations of autonomy in Russian and foreign psychological science are considered. According to J. Golovin (1998) autonomy is a generalized characteristic of a personality realized in the initiative, critical thinking, adequate self-evaluation and responsibility for the person's activity and conduct. Autonomy is closely connected to the active thinking process, feelings and will. Autonomy according to the leading psychologists E. Ericson, D. Levinson is a significant new formation of a personality characteristic of the student's age. D. Baume (1994) specified that "learner autonomy is the one of the key goals of higher education".

Professor Boris Elkonin (2012) says that autonomy is connected with constructing activity supports, while initiative is connected with challenge and overcoming barriers of the personal area of activity, with risking the supports. It should be investigated what may perform the role of the supports in the students' age from the point of view of higher professional education. For elementary school level B.D. Elkonin defined (2011) the condition of developing learner autonomy and initiative as "transition of control and assessment functions from an adult to a child" despite of their contradictory nature. Unfortunately most first year university students do not use this function instrumentally as they failed to develop it at school.

D. Baume (1994) relates the learner autonomy to self-efficacy, metacognition, self-regulation and proactive attitude. Thus according to unanimous opinion of Russian and foreign scientists, a self-dependent student decides himself what to study, managers his educational process and takes responsibility for the educational result. It is necessary to consider what the term 'learning outcome' means relating to higher education. How is learning outcome connected with the ability of a student to assess his resources and deficiency studying at different educational programmes?

The view presented in this research is based on the Vigotsky's methodology accepted in the developmental psychology by L.Vigotsky and V.Davidov and the necessity to develop the skills in "assessment for learning" and not only the necessity to get good examination marks.

We claim that the focus on leaning outcomes via adopting the new system of assessment connected with the formation of individual educational needs enables to develop learner autonomy and responsibility which are the necessary characteristics for the competitive labor market. We encourage a student to define educational needs by means of developing the students' authentic assessment skills, and motivating the student to perform activity (Figure 1). The reflexive analysis of the students' practical work launches the process of career development. Therefore learning outcomes are transformed into professional needs, the basic competences are supplemented with the professional and the student gets personally significant learning outcomes. B.D. Elkonin (2011) says that "the first and the fundamental result of any educational activity is not what the students does, but what he asks from the teacher. It is his sensible and voluntary initiative ... It is the educational need which appears". Student's ePortfolio makes the results of educational activity visible by means of the presented artifacts and reflexive materials, extends the university academic environment and constructs the assessment system significant for the student; ePortfolio serves to define educational need.

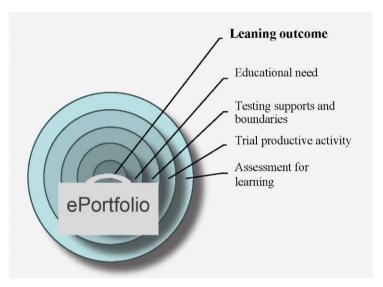


Figure 1. Learning outcome formation in the process of learner autonomy development

Traditional assessment system always tries to measure learning outcomes in grades. Isaak Froumin (2009) claimed that the dominating principle in education today is "the principle of similar action" when the teacher performs an action and the students follow the requirements or the sample and this what is considered to be the outcome, the result. The remote outcome is more important which is difficult to measure due to the insufficiently developed methodology of the research. ePortfolio technology allows to implement longitude measurements of leaning outcomes and present information to different subjects of assessment.

Summing up the mentioned above statements we get the following:

- The result of the higher educational system is an independent, reliable professional training aimed at satisfying the definite professional needs.
- Developing of the professional need is related to developing an educational need in specific professional competences.
- Developing educational need requires conscious assessment skills allowing a student to interpret his results, compare the results with the initial idea and plan further individual progress.
- Developing conscious assessment skills requires an experimental field, instruments for constructing activity supports, the methods to analyze and plan educational activity.

Students' ePortfolio may become a universal instrument for defining an educational need and developing assessment skills.

#### ePortfolio in the context of developing autonomy

There are different approaches towards the typology of autonomy in Russian and foreign psychological science. P. Hughes (2003) distinguishes the three main dimensions of educational autonomy: personal, rational (critical) and relational (social).

Russian psychological science (L.V. Vygotsky, A.N. Leontyev) distinguishes the three stages of autonomy a person undergoes in the process of developing any activity: reproduction, searching and creation. K.E. Bezukladnikov (2008) stated the importance of developing all the stages of autonomy in professional education starting with the reproductive one as it is the basis of developing the quality of activity. N. Currant, P. Hughes, P. Rodway (2010) following K. Bezukladnikov (2008) and E. Polat (2007) admit that

ePortfolio technology enables effective development of all the dimensions of the students' autonomy (personal, rational and relational) and all the stage types (reproduction, searching and creation).

It should be singled out that this article describes a pilot research project which should be further followed by a more extended and prolonged sampling.

ePortfolio method has been used at the Institute of education, Psychology and Sociology of the Siberian Federal University for five years at different educational levels:

- Bachelor programs: teacher training programs for developmental education (Elkonin-Davidiv method) (14);
- Master programs: educational manager and researcher;
- Professional development programs post-graduate students (students specializing in different areas and acquiring additional qualification Teacher)

In the study the quantitative and qualitative research methods were used such as a survey among students and teachers, interviews with students and teachers, analysis of the students' portfolios.

#### Basic ideas and results of the investigation

At the beginning of our experiment we described the goal as implementing an integrated authentic assessment system for a block of IT disciplines: the students' knowledge and competences were presented in the ePortfolio in the form of the authentic products. We also faced the urgent problem of motivating the students and increasing their interest in the result of education. Among the objectives of the experiment there were the development of self-evaluation skills and the skills to deal with the external assessment, independent assessment by means of ePortfolio technology and the skills of assessing the co-students' works.

Within our project work at launching the mechanism of reflexion we worked out the organizational activity with the students of the 1st year. The students learn to analyze their educational resources and deficiency. The results of the activity are presented by the students in the form of essays in their ePortfolios: their reflexion on the pedagogical profession and pedagogical career, their plans for the future. The students also include in their ePortfolio the thesaurus – the basic terms of the Elkonoin-Davidov system: development, theoretical thinking, educational activity, educational cooperation, educational goal, modeling, etc.). This thesaurus (according to our vision) will be developed through all the years of study. Further on it will become the individual pedagogical instrument of a primary school teacher working in the system of developmental education. After completion of different disciplines of the curriculum the students accumulate the material in his ePortfolio: analysis of the basic theories laying the ground of the developmental education and the examples of practical work in Russian schools and the instruments used by teachers in their work.

It is important that ePortfolio allows a teacher to return the student's work as requiring improvement several times teaching a student to be responsible for the learning outcome. Every Bachelor program student within the four years of study collects his own pedagogical 'moneybox' he will take with him when he starts teaching at school.

On completion of the introductory practical training (after the second term) the students present in their ePortfolio the reflexive materials in the form of the observation diary. The students try to sort out and describe the main characteristics of the secondary school students' activity and its structure, consider learning outcomes, marks and effects of the developmental education. Students of the second year publish in their ePortfolios the reflexive reports on their pedagogical practical training, their thoughts of the developmental education, analysis of the mistakes made by the students during their first lessons as teachers.

ePortfolios Bachelor program students of the second year allow drawing conclusion on developing the three dimensions of autonomy. Concerning personal autonomy, more than the half of the students show high level of motivation, high level of self-evaluative, reflective and action planning skills. Among the Master program students and post graduate students the number of those who prove a developed level of personal autonomy is 70-80% (within their first year of study). This was the result we expected as the latter group consists of adult students who already got their first university degree.

ePortfolio for Master and post-graduate program students

ePortfolio is a modern pedagogical technology that promotes the students' autonomous activity, both in the educational process and in constructing further career. Selection of the ePortfolio artifacts, reflection of the

educational and professional practical work develops the student's ability to perform reasonable activity, improve his results and overcome barriers. ePortfolio encourages the development of reflexion and the thinking processes. Going back to the psychological grounds we regard autonomy from the point of view of S.L. Rubinstein (1946) as "a developed within the ontogenesis actual, subjective experience". ePortfolio as a pedagogical technology promotes development of professional experience and provides the mechanisms of its visualization in the virtual environment. Most often higher education tendency to be too 'theoretic' does not allow enough place for practical experience. ePortfolio technology allows creating 'trial projects' in the secure virtual environment. It is the virtual environment where Master program students get the opportunity to model trial forms of activities referred to real practice, artifacts presented in the ePortfolio testify to the level of the developed rational autonomy (analytical, critical, metacognitive, formulating own problem).

ePortfolio visualizes the formation of the educational need by means of constructing the action plan and the attitude toward the achieved result, planning practical work and evaluation of the available resources. Extending the boarders of the educational environment is a significant factor in the professional self-determination. Analysis of the Master program students' ePortfolios allow concluding on the developed medium and high levels relational autonomy, which can be traced in the presented social achievements, in overcoming social and interdisciplinary contexts (Figure 2).

ePortfolios of that group of students often contain professional achievements proved by the presented certificates, awards, other documents proving the competences – they contain these documents two or three times more often that the students of the first group. Master program students and post-graduate students proposed including the section "Publications" into the ePortfolio to present scientific articles, thesis, patents, projects, etc. While interviewing this target group we found out that in the assessment procedures they underline such characteristics as openness, significance for future professional activity, clearness of the assessment criteria, accessibility of the results, integrated character of the work and the opportunity to improve the work. Post-graduate students stated that the assessment carried out by means of ePortfolio technology is the most important for professional growth and career development within and outside the university. We think this opinion proves the developed rational and relational autonomy of these respondents.

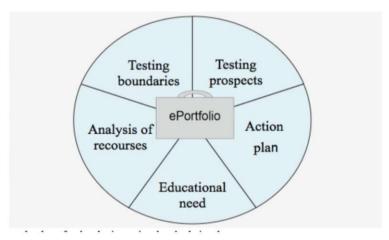


Figure 2. ePortfolio technology for developing rational and relational autonomy

ePortfolio is a modern technology for authentic assessment of educational and professional activity. It is an individual personally selected set of documents which on the one part presents learning outcomes in the form of a product, and on the other part contains information which characterizes the means of analysis and planning of the students' educational activity (H. Barret, 2007). According to E.S. Polat (2007) ePortfolio is an instrument for self-evaluating the student's cognitive creative activity, a documented result of the reflexive work.

#### The autonomy types

We may judge on the autonomy level analyzing the reflexive materials presented in the students' ePortfolios (the judgment is based on the expert assessment). In our investigation we considered students of different areas of specialization and years of study. The table below presents the examples of the artifacts which according to the expert opinion were classified as indicators testifying to the type of the autonomy (personal, rational, relational).

We use the following abbreviations to define the target audience:

- HST Higher School teacher
- MES Master Program in Education students,
- BES1 Bachelor program in Education student of the 1st year
- BEP2 Bachelor program in Education students of the 2<sup>nd</sup> year (area of specialization: primary school teacher in the constructive learning paradigm)

Autonomy type	Indicator
Personal	"My plans for the nearest future: first, present myself at the university as a hard-working, creative and active person; second, I want to take an additional course in English to study abroad as an exchange student; third, I am a very communicative person and I want to get to know more people in the university" – BES1.
Personal	"After graduating the university (Bachelor program in Education) I will go to work. Then I plan to enroll a Master program for professional development. My plan for future is to become a school head-master. I have to work hard, practical work is very important. It is very difficult to work with children having no experience" – BES1
Personal	"What do I expect from the university? Minimum – a Master degree. It will help me in my career. It will help me on the labor market and flatter me. I think the content of education will help me to develop professional and basic competencies and my personality. I will make another step in the sphere of education" – MES
Personal	"For me as a pedagogue reflexion is an important part of professional activity and life in general. Without it one cannot evaluate his/her activity and plan further professional and personal development" – BES2
Personal	"In my pedagogical activity I feel constant necessity to develop professional competences to make my work more productive and successful. To do so I take part in trainings, professional development courses – in the field of general pedagogy and in the field of my specialization. It helps me to plan and analyze my pedagogical activity" – MES
Personal	"During my study at the university I want to meet new friends, get new knowledge, become independent, realize my own educational ambitions, learn to implement the obtained knowledge in practical work" – BES2
Rational Autonomy	"I assess my resources as follows: I plan to participate in the organizational activity games, trainings, additional courses for broadening the mind, deepen the knowledge in my professional sphere; extending the number of useful and interesting acquaintances. Useful and necessary information one may obtain from different sources, meet clever people, read various literature, articles, Internet editions" – BES2
Rational	"ePortfolio is where subjective meanings of autonomy appear" - MES
Rational	"ePortfolio allows planning career development, this is the place where all kinds of activity are welcome» MES
Rational	"ePortfolio is the field of intentions (goals, plans, purposes)" BES2
Rational	"Senior students often study a lot of compulsory courses. Why English and Physical training are compulsory? I am not against English; I think a student should choose a foreign language considering his/her professional and personal interests. It is necessary to study what you are interested in. Then you will never forget it! It is necessary to provoke a student to be proactive. Now the students are megapassive. One of the basic principles of my future pedagogical career is "Do not impose" – HST
Rational	"I am an active person. But my interests are not often taken into consideration within the Bachelor program". More often the knowledge is presented in the ready-made form. I think it is bad for both mastering the knowledge and developing the thinking processes. The students work little to obtain new knowledge" – HST

Autonomy type	Indicator
Relational	"When I was a student of the 3 <sup>rd</sup> and 4 <sup>th</sup> year I understood I needed some adjustment of the educational trajectory. I was specializing in Translating but I have always been interested in Education. I have been teaching a language in private schools for several years and I like this job. There is where I get space for creative activity, for thinking out something new. That is why I chose Master program in Education. Then I decided to specialize in Educational Management as it offers new opportunities. Then the career prospects become more of administrative level as we will know how to manage an educational institution and have the right to work with the staff" – MES
Relational	"Studying at the university is an important step in my personal development. Though the employers yet do not quite understand the difference between Bachelor and Master degree I do not regret the time I spent at the university. First, I learned to work with texts better and it is easier for me now to understand and analyze scientific articles in the field of humanitarian branch of study. Second, I developed an active position. Third, the organizational activity games I took part in as a student of the first and the third year influenced me a lot. My scientific advisor played an important role in my professional development" – BES2
Relational	I decided to enter a Master degree program in Higher Education and defined my goals as further career development - I want to teach at a pedagogical college. My goals as a Master degree student are:
	Mastering technologies and methods useful in teaching students;
	<ul> <li>Searching the ways of self-realization in the new professional activity;</li> </ul>
	<ul> <li>Searching the opportunities of the Elkonin-Davidiv system of developmental learning for realizing the project "Applied Bachelor degree for training primary school teachers to work in the constructive learning paradigm" – MES</li> </ul>

Table 1. The artifacts testifying to the different types of Autonomy presented in the students' ePortfolios, Institute of Education, Psychology and Sociology

As we see from the above table personal autonomy is characteristic of the students of the first level of training (Bachelor program). The focus is on formation of the universal self-educating instruments which allow defining the students' personal educational goals. ePortfolio technology helps Bachelor program students to visualize their picture of themselves in the virtual university environment, define educational principles, expectations, assessing the existing deficits (after completion of the practical work). Bachelor program students of the second year demonstrate rational autonomy, and participation in the organizational activity games, analyses of the available resources - constructing individual learning educational paradigms and activating professional interests play an important role in it.

The examples of rational autonomy are more often presented in the ePortfolios of the students getting additional specialization "Teacher" and "Higher School Teacher". These students are usually older than average and have a certain life and work experience - they are able to carry out critical analyses of the academic disciplines and reflect on the practical and theoretical aspects of the educational practical work. Rational autonomy is more often characteristic of the Master program students: their ePortfolios include more artifacts aimed at demonstration of the professional competences and the quotations on the metacognitive styles of education, self-control and self-management.

In the ePortfolios of the Master program students of the second year we could find a few artifacts testifying to the relational autonomy. While interviewing the group mentioned above we found out that the students enrolled in the Master program have already had working experience and a definite educational need aimed at career development. That is why for this category of students it was easier to present a ePortfolio - they are aware of the university learning context and profession. The level of relational autonomy of the representatives of the younger students to our opinion may be connected with their individual social proactive position and high professional motivation (in our investigation these were the students coming from teacher dynasties).

On completion of the term we carried out the questionnaire poll among Master program graduates specializing in Education. The results of this work are presented in Fig 3. As we may conclude from these data all the students admit the development of all the autonomy types by means of ePortfolio technology. Master program students pay attention to the important role of the ePortfolio technology in launching the

reflexive processes on the basis of the students' practical work and academic study, the process of constructing individual educational paradigm and individual progress assessment. To our opinion it proves to the fact that the graduates develop professional needs, are able to coordinate academic contexts and their future professional practice, are aware of the available personal resources and existing barriers. Practically a senior student' ePortfolio is gradually transformed into a professional (career) ePortfolio.

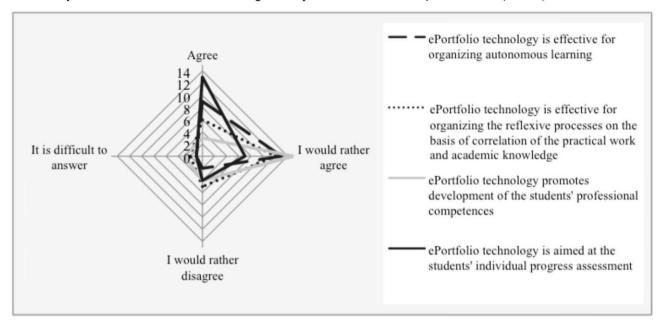


Figure 3. Results of the survey carried out among Master program graduates (area of specialization "Education") on the prospects and opportunities of the ePortfolio technology.

We studied the opinion of Master program and post-graduate students (52 respondents) of the ePortfolio technology and its prospects in the job placement process. 76% of the respondents consider ePortfolio useful in this context as it is described in Figure 4. From the above statement we may draw conclusion that these respondents have a developed professional need and career aspirations.

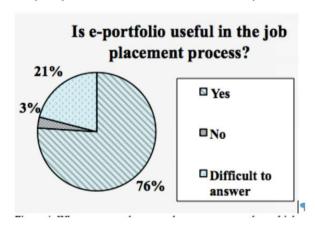


Figure 4. Master and post-graduate program students's opinions on using ePortfolio in the job placement process.

We asked the students what changes may be introduced in the educational ePortfolio structure and if the ePortfolios may be used by the prospective employers. We present the results of the questionnaire in the diagram below.

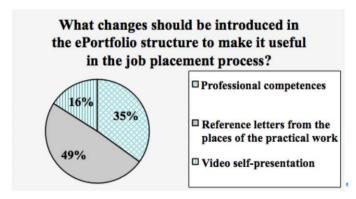


Figure 5. Master and post-graduate program students' opinions on career portfolio

16% of the respondents consider important including a video resume into ePortfolio, 49% mention references from the previous places of work and places where the students had practical training while studying at the university. 35% of the respondents state that artifacts proving professional competences should be included in the ePortfolio. The materials presented in the ePortfolio and the five years of the research work show that Master program and post-graduate students more often than the bachelor program students aspire to manage educational resources presented in the ePortfolio, both in the local university network and in the Internet. They test different perspectives, differentiating their aspects with the view of the further influence on the career prospects. The students begin constructing supports for their professional ePortfolio within the university environment taking up responsibility for their education.

B. Elkonin says that a portfolio allows a student "to construct trial productive forms of activity related to the subject", i.e. to their practical work and their deficiency revealed in real-life context. Thus we may speak about 'the students challenging their prospects' by means of ePortfolio instruments as it stores reflexive materials and the students' responds to the questions "Where do I go? Where have I arrived at? What resources do I lack? What do I need to improve?"

#### Conclusion

The five years of the experiment extended the goals including the following

It is necessary to work out a universal and flexible ePortfolio structure for every level of university education (Bachelor/Master programs, post graduate/professional development education) in accordance with the goals set by the subjects of education and the prospects of transforming an academic ePortfolio into professional ePortfolio.

In this respect it is necessary to train tutors - teachers helping to work with ePortfolio, the training may be carried out in the form of professional development courses. Thus we face a problem of working out methodology and the problem of validation the procedure and indicators used for assessing the students' academic and professional competencies by means of ePortfolio.

Nowadays a more extensive use of modern media and social contexts attractive for students, such as:

- integration of video resume into the students' ePortfolio for presenting oneself on the labor market;
- extending social contexts by means of including the resources available in the social networks in the students' ePortfolio;
- transition of the students' ePortfolio into career ePortfolio.

Currently there are problems still open for discussion. How to relate the ePortfolio artifacts to the specific types of educational and professional activity? Which productive prototypes of the professional activity retain the students' interests? How to encourage the students' initiative in developing ePortfolio for the job-placement process? How to tie together social and educational environment and educational practical work by means of individual ePortfolio? How to make the initiative to develop professional competences urgent and record this dynamics in the ePortfolio?

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