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# The e-portfolio, record and evidence of the construction of a personal and professional project

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## ABSTRACT

Today, the volume of information received and collected in professional and personal domains requires reflection on interpretation, apprehension, and comprehension, as well as the storage and traceability of this information [1,2].

This presentation deals with the means to manage, organize, and archive information within the specific framework of the personal and professional projects of students (PPP). The objective of the PPP is to prepare, as well as accompany, its creator-user, the student, along his/her professional path.

Meant to be, first and foremost, an introspective and structuring process of one's thoughts, it is also a tool for capitalizing on and exploiting collected information by structuring it [3].

The e-portfolio uses electronic technologies, such as a container and allows you to store items in numerous media (text files, scanned documents, audio, video, and graphics).

One of the functions of the e-portfolio is, therefore, recording and traceability [4]. However, a framework of good practices must be put into place to forward its use [5,6,7,8].

**Keywords :** e-portfolio, information, structuring, reflexivity, traceability, personal and professional project

## INTRODUCTION

In this paper, we present the tool and the method that has been developed at Université de Bretagne Sud, in France, to define and manage the personal and professional projects of students (PPP). The basic tool is an e-portfolio which keeps in memory all the results of the different activities involved in the construction and evolution of a professional project.

The method is based on a set of related activities, designed on one hand to acquire a better knowledge of oneself and one's environment, and on the other hand, to acquire the skills and key competencies needed to succeed in a professional project.

The basic tool is the e-portfolio which is original in that:

- it is present on the virtual learning environment. This environment remains available to students after they leave the university, and allows them to continue to manage their project throughout their lives: their accounts will be maintained.
- the portfolio is managed by e-mail.

The first part is based on the concept of the Personal and professional project of students (PPP).

The second part deals with the basic structure of the e-portfolio. It is composed of 5 main folios, each of which is made up of a set of sub-sections named criteria. The e-portfolio is a structure designed to record information. Initially, the structure is the same for all students, however the information stored in the portfolio will depend on the choices of each individual user. The student can modify the eportfolio's structure by adding or deleting criteria but cannot change the basic structure. The students are free to create their e-portfolio as they wish within

the above-stated five folios.

They are then given full responsibility and autonomy to create sections in each folio to organize and personalize their e-portfolio throughout the elaboration of their PPP. This means that the description presented in this part is to be understood as a generic structure.

In the third part, the accompanying modules proposed to the students in the curriculum to build up their project are presented. Modules are developed to follow the project's design with a tempo of one module per semester, 10 modules for a 5-year degree course. The modules are designed to progressively build on the 5 basic folios of the e-portfolio.

In the fourth part, we explain how the e-portfolio is managed. It is based on the original use of e-mail allowing you to send information in a simple, fast way [9]. A first section shows how e-mails are used to manage the information in the portfolio while a second section explains how to organize this management.

At least, in the fifth part, we answer the issues of e-portfolio use: Is the e-portfolio seen as useful, easy to use, and as an introspective tool for oneself?

An experiment was carried out at Université de Bretagne Sud to answer these questions.

It is based on an experimental approach with first-year students within the teaching unit "Personal and Professional Project".

It is meant to assess the use and management of the e-portfolio designed here as a professional development e-portfolio, appropriation by the students, and its relevance in the construction of their project and the enhancement of their competence.

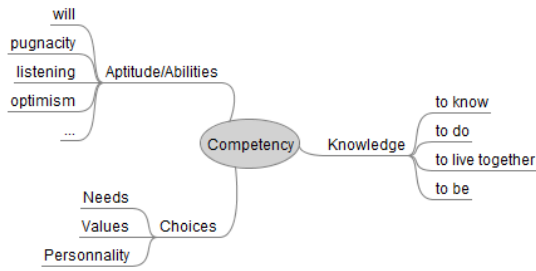
Finally some conclusions and perspectives will be given.

## 1 – PERSONAL AND PROFESSIONAL PROJECT OF STUDENTS (PPP)

Building a PPP is an essential part of student life. At that time he/she decides what he/she wants to become in the future and what place he/she wants to take in the society. To help himself/herself in this approach, the student must take information from his environment: on the economic situation, prospective situation, but he/she must also get introspection to know who he/she is. One of the underlying characteristics of introspection is understanding what competencies are.

One of the main objectives of the PPP is to characterise the competencies of the student.

We present in the following the retain definition of competencies.



In our definition, competencies are based on three notions: knowledge, abilities and choices. The organization of the e-portfolio is closely linked to this definition of competencies.

**Knowledge**

Even if other classifications of knowledge can be found in the literature, we focus on four aspects: knowing, doing, living together and being.

*Knowing:* will allow the student to understand and predict his/her environment. This is roughly learned in school. The effect is to stimulate the discernment and increase curiosity.

*Doing:* will increase the quality and efficiency of the work. The side effect is that, in a team it will increase its the trust in people able to do efficiently.

*Living together:* is an introduction to human diversity. It shows similarities, interdependence, social and cultural diversity between people.

*Being:* this characterizes the way we are in society. Autonomous, communication, judgement, charisma are some of the master words of this.

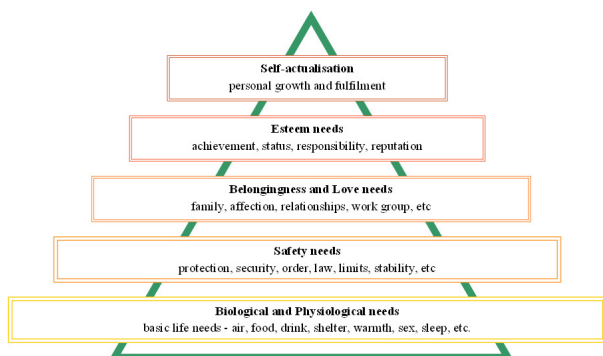
**Abilities**

Abilities are characterized by the execution of aptitudes. Aptitudes are the personal features that makes us different from one another. Abilities are the use of these aptitudes; if someone does not train his aptitudes they may be lost. For instance aptitudes are; will, pugnacity, listening, optimism, concentration, memory ...

**Choices**

Even if we have a wide range of knowledge and a lot of abilities, if we are not able to use them in front of a situation then it is waste. The choices are motivated by three notions: needs, values, personality.

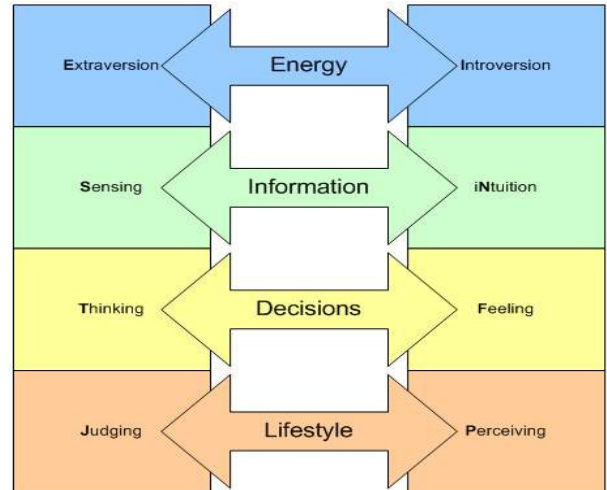
*Needs:* here we use the basic Maslow hierarchy of needs[10].



*Values:* are based on Schwartz's Value Inventory [11].

|                  |   |                           |                    |
|------------------|---|---------------------------|--------------------|
|                  | Conservation<br>Security, Tradition, Conformity |                           |                    |
| Self-enhancement | Achievement, Power, Hedonism                    | Universalism, benevolence | Self-transcendence |
|                  | Stimulation, Self-direction, Hedonism           |                           |                    |
|                  | Openness to change                              |                           |                    |

*Personality:* The underlying model is taken in Briggs-Meyer MBTI [12].



**2 – E-PORTFOLIO STRUCTURE**

To create and build a personal professional project, the e-portfolio has a basic structure of five folios: my uniqueness, my discoveries, my project, my competence, and my communication.

**Section 1: My uniqueness**

The goal of this folio is to identify and keep all of the student's basic information. It is divided into three different parts:

- Me: provides a global image of the person including his/her identity, acquired knowledge (with both "academic" and "informal" knowledge), as well as his/her personal preferences,

For example, being alone or in a group, being indoor or outdoor, or even how he/she searches for information.

- Experience: records all of the student's different work experiences.

**Section 2: my discoveries**

This folio stores the results of the different activities the student has done to discover the working world. It is divided into three different parts:

- Documentary research: gives a link to a general presentation of the working world. Jobs, sectors, etc. are defined.

- External view: reports on all the meetings, visits, conferences, forums, etc. in which the student participated.

- The student's personal network, which he/she will be able to

use for his/her future project.

- **Complementary education:** expresses the list of complementary skills or knowledge required to increase the potential of the student.

### ***Section 3: My project***

This third part defines all the criteria used to identify and manage a project. This section should be completed only after the previous two, as it is strongly connected to them both.

In the criteria formalization students can describe the main project with all the skills needed, the steps to be done, and the knowledge required.

Some possible alternative projects are also defined as acceptable solutions.

### ***Section 4: My competencies***

It is focused on the skill of the person. His/her competencies are first identified, their capacity to be used in other contexts is then studied, after which promotion and updating are defined, and finally, consideration of their evolution (past and future) is engaged. See [13] on this subject.

- **Personality:** gives the results of the MBTI personality test for those students who take it, development which reflects the choices the person had to make in life and how he/she was helped in those choices, motivation which is based on the Maslow hierarchy here, and values based on the S.Schwartz theory.

### ***Section 5: My communication***

In this part, we store all the information the student wants to use to share information with the business environment. It is organised in two parts:

**Preparation:** This first step is the preparation to external communication. It is done in the modules described in this paper. We want to be compatible with the requirement of Knowledge Tree [14] and Europass [15].

**Production:** This second step is the part in the portfolio which is public. It includes the CV, the cover letter for a particular sector, and finally, a blog for personal expression.

## **3 - MODULES CONNECTED TO THE EPORTFOLIO**

The modules are teaching activities included in the student's curriculum. Because the French degree course is organized in 3 or 5 year cycles, the modules are constructed on the same schedule. The first 3 years are used to define and build the personal project, while the last two years are for acquiring skills and perfecting the project.

All the modules contribute to filling up the e-portfolio.

Each module is around 20 hours long and corresponds to one semester with roughly 2 hours per week. We developed 6 modules to cover the first three years of the university degree.

The modules are chaired either by a teacher, a professional from

a company or a specialist in career counsellor (such as an education psychologist). Some activities are performed through online tests developed at the university.

The modules are organized as follows:

**S1: Self-knowledge, guided tour.** This entry point will include a presentation of the different services, inside or outside the university, which the student will use to construct his/her project, and an initial search into his/her past and reasons for being there.

**S2: Notion of competency.** This presents what is innate and not acquired through the education system. What is reviewed here is not only formal knowledge, but personal skills, as well as how to live in a group and interact with people.

**S3: Job discovery.** To formalize the student's future job, this module encourages the student to study the job and to meet a professional holding this position to learn more. During the meeting, the student fills in a report which is recorded in the e-portfolio.

**S4: Job and competency link.** This section helps inform students of the competencies required for various jobs. These competencies are listed in terms of knowledge, skills, abilities, competencies. A part of the module is used to determine if the projected training is in correlation with the goal, and if the student needs to train his/her personal skills for increased capabilities. At this point, the student writes his/her first CV.

**S5: Finalize the project.** In the third year it is time to prepare the student to begin his/her career. The student can search for a company that could provide the opportunity of acquiring the targeted profession. Methods to research companies, understand their activities and focus on the jobs can all be found here

**S6: Setting up a strategy.** The finalized CV, targeting the job has to be written, with a cover letter.

Interview simulations are offered to train the student. An assessment is done on his/her career project, to see how it has evolved over the 3 years of studies, and an evaluation of competencies is performed.

During the following 2 years, modules are used to improve the project and acquire the skills needed at the engineer level.

**S7: The project's strong and weak points.** A comparison is made between the project and the student's situation. This step aims at giving the student an outsider's point of view, as well as good judgement, on his/her project.

**S8: Work market.** A national and international survey of the economic and political situation is performed. Information is given on how to create a company and a simulation is made.

**S9: Professional insertion.** At this level, the student will often have to act as the manager of a team. He/she is thus trained in conflict detection and conflict avoidance. The issue of work organisation is also dealt with. Special interest is given to the importance of networks: private, business and administrative. How to build up a network, keep it alive, and activate it to prepare for professional insertion.

**S10: Internship.** For most of the students, the last part of the curriculum is internship. It is prepared to discuss the expectations and the target. At the end, a presentation is given to describe the time passed in the company.

## 4 - E-PORTFOLIO MANAGEMENT

### section 1 = The e-mail tool to manage the e-portfolio

This section describes the method used to manage the portfolio. The originality of our approach is that all the portfolio management is done by e-mail. For instance, if the owner, Joe Martin, wants to add information (for example, a text file) in the “my experiences” folio of the “uniqueness” criteria, he will send an e-mail as follows:

To: eportfolio.joe.martin@ubs.fr  
From: joe.martin@ubs.fr  
Subject: uniqueness  
Attach: PersonalFile.txt

Content: ADD my experiences

When the e-portfolio manager receives this mail it does the following:

- Checks if the sender (joe.martin@ubs.fr) is allowed to write something in the Joe.Martin portfolio.
- Checks the attached file (here a PersonalFile.txt)
- Interprets the contents of the e-mail. Here “ADD” is the instruction contained in the e-mail, meaning that the attached file “PersonalFile.txt” must be added in the folio “uniqueness” criteria “my experiences”.

The content of the e-mail gives the instruction to be executed in the portfolio. The attached file specifies what information must be treated. The subject defines the section in which the information must be placed. To keep the e-portfolio simple, the amount of instructions is limited.

### Section 2 = Levels of management of the e-portfolio

We can distinguish three kinds of portfolio management: information management, criteria management, authorized person management.

- **Information management** allows the user to add, move, delete information in the portfolio as described in the above example. There is also a set of specific instructions to organize the presentation of the information in the e-portfolio. For instance, it can be included in the text or linked to it.

- **Criteria management** gives a set of instructions to change the structure of each section of the portfolio. For instance, criteria can be added, removed, or put in a different place (see Figure 1). This is important if the portfolio is to be used in a lifelong project. We cannot determine what kind of criteria someone will need to add based on his/her professional and life consequently the list of criteria described in the above section is the standard one at the creation of the portfolio, but the student can quickly add or delete criteria experience to build up a personalized e-portfolio.

- **Authorized person management** is a list of people authorized to send information to the eportfolio. This list is managed by the portfolio’s owner, no one else can accept someone in the list and allow them to write in a specific section of the e-portfolio.

This protection is necessary to guarantee the protection of the data. People writing in the e-portfolio can be: a teacher during studies, an employer during working life, or the user him/herself, for online self-evaluation tests (see part IV).

## 5 – HOW THE E-PORTFOLIO IS USED?

The e-portfolio experiment was carried out with science and humanity majors to have an idea of how they will use it, how they will appropriate it, and to see how useful it is to build the PPP.

These are the results of this experiment on the use of an e-portfolio.

The impact measurement was based on the following questions:

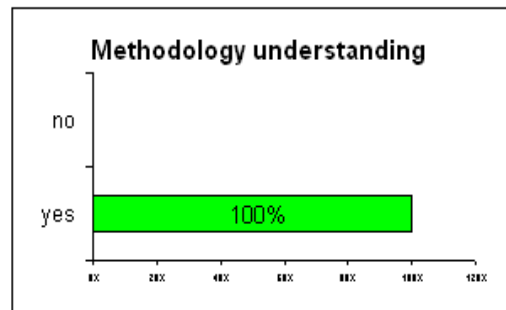
- Is it used?
- How is it used?
- Is it useful in the students’ reflection upon themselves and society?
- Is it adapted to how students work?
- Is it seen as useful for organizing the information the student would like to record and archive?
- Is it seen as useful in the construction of students’ personal and professional projects?
- Do they find a use for it?

See Annexe 1

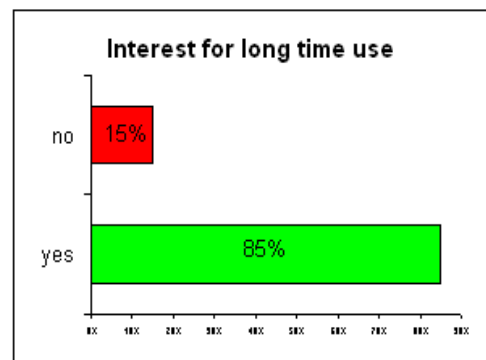
These are the main answers:

Overall, the students understood that it required introspection and the importance of self-knowledge.

Its use and the ease at which it can be used generally correspond to any type of use (interface mode or email mode). Among some of its most appreciated features is the freedom at which the information they add to it can be structured and organized.

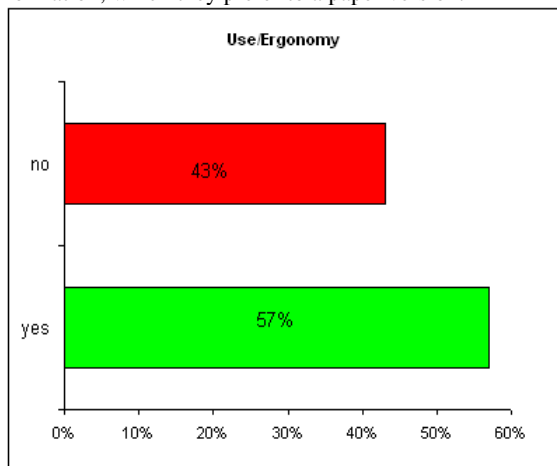


Its immediate short-term usefulness is not obvious, however they consider it rather interesting for a more long-term perspective.



Generally speaking, they like the digital organization of their

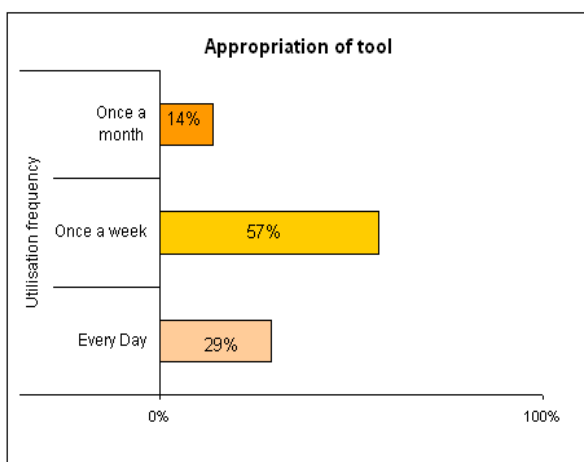
information, which they prefer a paper version.



This short-term evaluation has not had much impact on their habits for the moment; they do not see its usefulness in relation to the construction of their project yet. They are currently not convinced of the usefulness of this tool, and consider that a non e-portfolio organization of their information would be just as efficient.

However, the time period in which it takes to appreciate the tool seems quite short, judging by use frequency and use reflexes.

Definitive conclusions cannot be drawn today due to the low number of students who did respond.



## 6-CONCLUSION

This presentation has described how Université de Bretagne Sud prepares students to build individual professional projects, as well as to learn how to manage them throughout their lives, by providing the organizational tools and training necessary.

The key element is the e-portfolio, connected to a set of modules designed to initiate the definition of the project. This personal e-portfolio is maintained by the university for lifelong learning

The evaluation in progress will last the entire academic year to assess the long-term use of the e-portfolio.

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UBS Université Bretagne Sud - PortFolio 2009

Uniqueness Discovery Projects Competencies Communication Tools

Civil registry  
Qualification  
Who I am  
My itinerary  
My interest  
My expectation  
My experience  
My activity

**Civil registry**

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**Albert Einstein**

was born in Ulm  
in the German Empire on 14 March 1879  
Died 18 April 1955

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**Known for**

General relativity  
Special relativity  
Photoelectric effect  
Brownian motion  
Mass-energy equivalence  
Einstein field equations  
Unified Field Theory  
Bose-Einstein statistics

Hard copy of an example of the e portfolio

## Annexe 1 Questionnaire on the use of e-portfolio/UBS 2009

### **Part 1: methodology** 1.1. What is a PPP?

- 1.2. Did you understand what introspection was?  
1.3. What is an e-portfolio used for?

### **Part 2: Use / ergonomy**

- 2.1. Did you find it easy to use?  
2.2. Does the folio and section organization seem well adapted to the use of the tool?  
2.3. Were you satisfied with the "interface" mode?  
2.4. Were you satisfied with the "e-mail" mode?  
2.5. Did you like the possibility of being able to structure and organize your input information?

### **Part 3: Usefulness / use**

- 3.1. Does it seem useful to you?  
3.2. Does it make organizing and structuring your information easier?  
3.3. Did you like being able to structure your information they way you wanted to?  
3.4. Is it comparable to a paper version? A file?  
3.5. Would you have preferred to use a paper version?  
3.6. Do you understand the titles of the folios? Do you have any remarks to make?  
3.7. Does it change the way you deal with your information?  
3.8. Does it seem useful in the construction of your PPP?  
3.9. Does its use have meaning for you?  
3.10. Do you see an immediate use?

### **Part 4: Appropriation of tool**

- 4.1. How do you structure your information? Your sections? Please explain your organization by sections.  
4.2. Do you have the reflex of immediately posting your information?  
4.3. What often do you use the tool?

### **Part 5: what functions should be added?**

- 5.1. What functions would you like to see added to the tool?

### **Part 6: other**

- 6.1. Would you accept to show your e-portfolio to a career counsellor?  
6.2. Who would you authorize to add information? Qui allez-vous autoriser à y mettre de l'information ?

Would you accept to give us your name?