Analysis of ICT work habits and support needs of students. Design of trainings for ICT skills development and PLE usage

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WP1 Report 3
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Report summary

The Report 1 was explaining the results of a definition and study phase, based on a literature analysis. The present report is much more based on fieldworks:

1 discussions and questionnaires with students;
2 work team to develop learning materials designed to introduce PLE to students.

The present report is then very pragmatic in order to present two types of results:

1 How students feel towards ICT usage in the framework of a course (formal context)? How they work with ICT tools to perform learning tasks (informal context)?
2 How the developed learning materials are structured? What perspectives for the development of further materials? (What materials? How to develop them?)

These results are presented successively in the different parts of the report. The first part (section 1.1) is an analysis of interviews of BA students about their habits with ICT and their support needs. The second part (section 1.2) is an analysis of a questionnaire proposed to BA students about the experience they made in a PLE pilot course. The reader then enters a third part of the report (section 2) where we explain about the developments we made for a training dedicated to ICT skills and PLE usage. We focus successively about the different components of such a training: its learning objectives, its global scenario, the learning resources already developed, the learning resources to be further developed, the diffusion of ICT-PLE learning resources in the Swiss HE community.

Acknowledgements
Thanks a lot to our colleagues from Universities of Fribourg and Geneva and from EPFL for the rich discussions and collaborative work and also for their reading of the preliminary version of this report: Omar Benkacem, Denis Gillet, Thomas Henkel, Laurent Moccozet et Bineta Ndiaye.

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1. Analysis of ICT work habits and support needs of students

Our aim is to develop a better understanding of the current practise and perception of students, mainly BA students, about the ICT tools they are using to perform the learning tasks that we identified as important in the students university curriculum (Platteaux, Foerster, Luethi, & Hoein, 2011). Also we want to know how such a population perceives PLE environment which could be implemented, complementary to LMS, in our universities. This analysis should in particular help us to determine what types of helps do the students need to further develop their ICT skills and their PLE.

Then we present here below two types of analysis which were conducted during the AAA PLE project. First we organised discussions with students to ask them what computer familiarity they have, how they approach different learning tasks that they consider important, what is their informal PLE. Second we proposed a questionnaire to students who just experienced a course where they had to work with a PLE environment, in addition with other ICT tools.

1.1 Interviews of BA students, ICT work habits and support needs

1.1.1 Methodological aspects

It seemed appropriate to realize some interviews (typically an interview was 1 to 1.5 hour long) to analyse the work habits of students and support needs. That's the reason why we elaborated a questionnaire (cf. Annexe 5.1) which was filled by the students in two times. For the first time, aimed at determining the global students familiarity with ICTs, the students interested by the research answered a questionnaire including their personal information and past computer experience. In this way, we could know if the students have one or more computers, how they use it/them, what are their formations and especially their formations concerning the technology. This questionnaire preceded the conversations aimed at a more thorough reflection on the use of ICTs. For the second time, we set an appointment up with the students to lead some interviews. The guidelines we used consist in four parts:

1 How do the students use the ICTs to do their tasks in university?;
2 What is their working environment?;
3 What about the changes of practice and the discovery of innovative tools?;
4 What about their need to be more efficient in the university's tasks and which type of supports will they have for mastering a ICT?

1.1.2 Global results of the questionnaire-interview

Students familiarity with computer

Our sample group consists of 20 students, divided into 3 different groups:

- Group 1: is made up with the 6 students from Fribourg University who answered our on-line questionnaire and took part in an individual interview; 4 of them are bachelor students, and 2 of them are Master students.
- Group 2: is made up with 8 students from Fribourg University who only answered our on-line questionnaire. They are all bachelor students.
- Group 3: is made up with 6 PhD students who took part in a group discussion (after the discussion their questionnaire was taken and treated individually).

Questions	Group 1	Group 2	Group 3
sexe	6 women	3 women and 5 men	3 women and 3 men
age	between 20 and 30 years old (average = 23.5 years old)	between 19 and 24 years old (average = 21.1 years old)	between 24 and 31 years old (average = 26.4 years old)
have a computer - laptop - desktop - tablet: iPad + others - smartphone	6 6 2 2 2	8 8 3 2 6	6 6 0 0 2
number of years of computer use	between 10 and 15 years (average 11.5 years)	between 4 and 12 years (average 9.8 years)	between 9 and 12 years (average 10.8 years)
proportion of their age	43% (minimum) to 59% (maximum)	21% (minimum) to 60% (maximum)	38% (minimum) to 48% (maximum)
computer use per week before university - when at university	between 1 to 49 hours (average 18.5 hours)	between 4 to 30 hours (average 15.0 hours)	between 0 to 30 hours (average 15.0 hours)
computer use per week at university	between 20 to 56 hours (average 35.0 hours)	between 3 to 35 hours (average 20.0 hours)	between 6 to 60 hours (average 31.0 hours)

In the three different groups, all the students have their own computer (a laptop). This gives them an easy access to ICT usage. Our population sample seems to have a regular contact with ICTs. This is true when looking at the number of years of computer use. This is true also when looking at the number of weekly hours of computer use at university. Let us see these results in more details.

We asked also these students about the number of years they use a computer. This factor influences for sure our data because, with experience, we develop some habits, reflexes and behaviours. We could therefore not analyse the same way all our population sample if some students would have, for example only a few months of experience and other ones about 10 years. Globally all the 20 students have quite a large number of years of experience with computer. This is very clear when looking at the proportion of their life spent with a computer use. For groups 1 and 3, it is already about 40% of their life that students have spent with a computer. For them, computer is part of their life. This is however less true for the group 2 where a very large dispersion is observed.

We also analysed the number of hours per week dedicated to the computer use, before (and after) the beginning of University. Besides available equipment and number of experience years, this complementary information helps to understand how regularly the students are exposed to ICT usage, furthermore in a Higher Education context. For all the groups, there is a significant increase of the average number of hours after entering university.

Number of cited tools and mastering

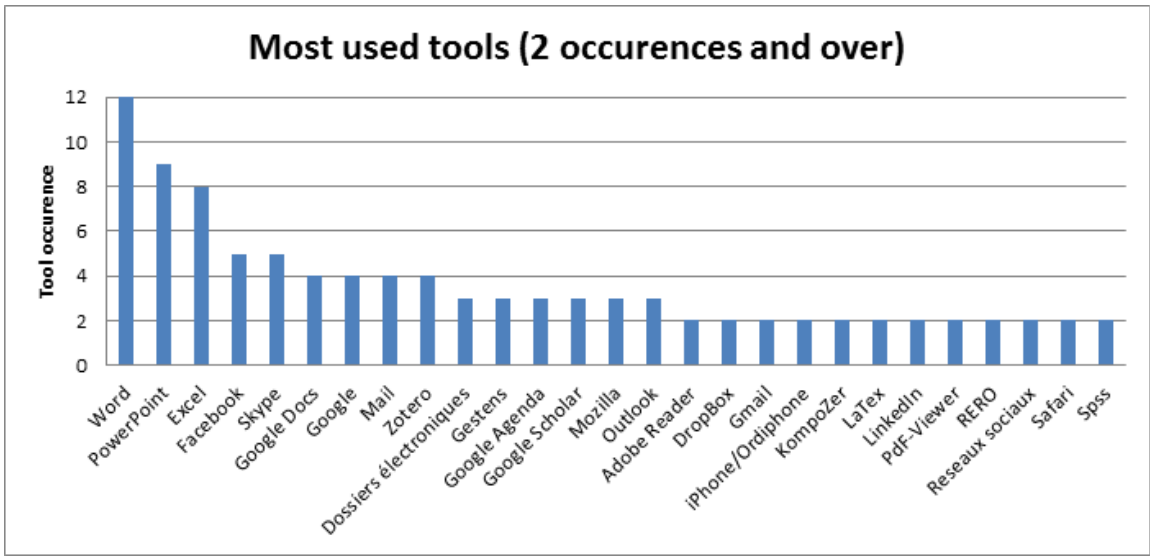

Figure A.1: Most often cited tools from different students (total number of students: 20)

The tools used by students give a first information over their work habits and skills with ICTs. Data from all three sample groups have been used for this analysis (a total of 20 students). It clearly appears that the Office Suite is very often quoted, followed by Facebook and Skype (see Figure A.1). Annexe 5.2 gives the complete list of tools that were cited by students. Would this tendency be confirmed if we have much more data? However, the amount of quoted tools is rather big, for only 20 students (90 quoted tools).

Let us remark that we focus on the tools that are associated, by the students, with the 10 learning tasks we defined earlier. However, some students spoke of other tasks that they are

doing and we added thus three corresponding categories of tools : «infrastructure», «programmation», «playing». Also, some cited tools were not considered during the data treatment because it was not possible to be sure of what they were with the word or expression given by the student. For example: "ID", "Internet", "Newspress", "electronic tool", "pdf", "web site", "VLC", and one unreadable written word.

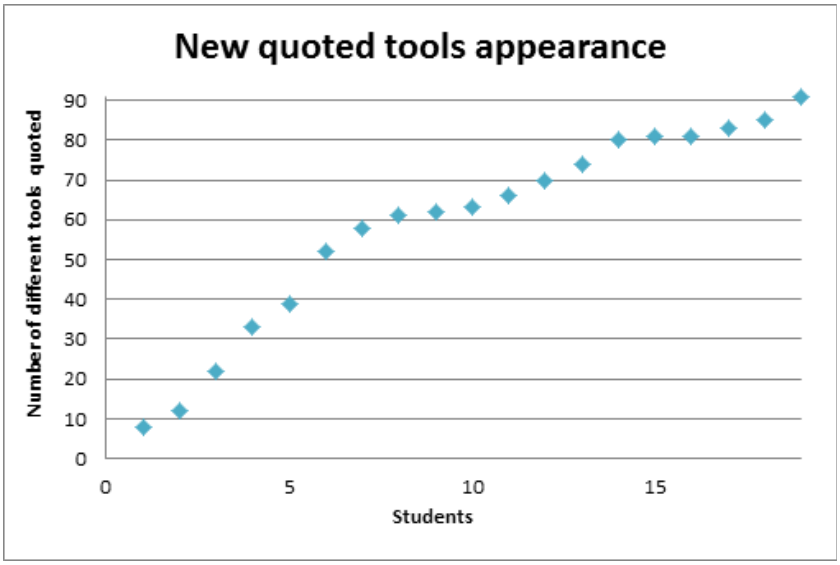

Figure A.2: Saturation curve for number of new tools when cited by students (total number of students: 20)

Figure A.2 presents a possible data treatment that could help understanding the total number of ICT tools used in a population of students. It is included in our analysis for two reasons. First, from a trainer point of view, we can make the hypothesis that the amount of helps and questions needed in a students population depends on the number of tools they use. Then, if the number of used tools is limited quickly after a relative small number of students, the task extension of the trainer has also a limite. On the contrary, the potential of new questions and help needs is high for each new individual student entering a group. To obtain the Figure A.2, we extracted by hazard a first student and counted the number of tools he is using. For the next students, only the cited tools (that were not cited by the first student) were counted and added to the previous total. And so on...

For our population sample, we did not reach any saturation. It means that if we had a 21st student in our sample, he would have cited other new used tools.

The second reason of this analysis deals with an other aspect of training: activities in groups. Figure A.2 shows there is a big probability that two individuals in a students population will have different PLEs, perhaps even very different ones. It means that groups activities should exploit these differences for making students learn each others how they perform a task and with what tool. Approach description and comparison could be interesting because of the characteristics found in the students population.

Let us remark that the Figure A.2 analysis only gives a snapshot. Figure A.2 does not allow a valid analysis for a big period of time. What if the same population has to answer to the same question in six months? If an evolution was observed, which causes would be involved? In case of an increase: a large number of tools could have appeared and were tested in the period by our students. In case of a diminution : students could have simplified their PLE after a period of tests.

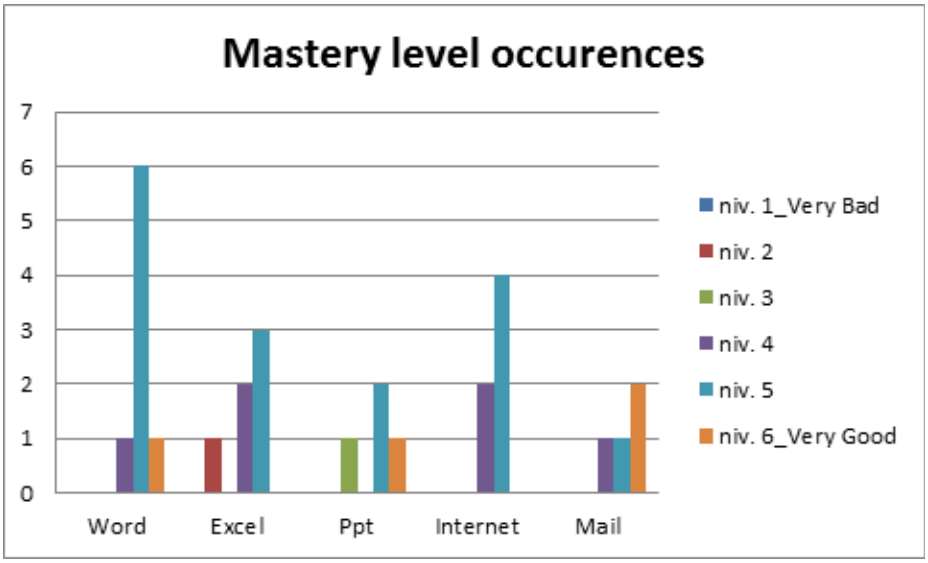

Figure A.3: Mastery level for the most cited tools (students from Groups 1 and 2)

Figure A.3 represents the level of mastering evaluated by the students by some of the most cited tools. As we can naturally think, email and internet tools are said well mastered, and Word also. Students use these tools regularly, since some years. They had therefore time to develop skills for their use. We can make a complementary coherent analysis when looking at the level said for Excel and Powerpoint. Excel is the only tool with a level 2 (bad mastering) and the university is the context where the use is this tool is much enhanced.

But we must keep prudent with this analysis. We should see if it is confirmed with more data. Also, for the most cited tools, there is a tendency (see Figure A.3) that they are also very well mastered tools. Would this tendency be statistically confirmed for a significant population sample? If yes, this could indicate that an analysis, like the one we do, is little biased. Some used tools are forgotten, intentionally or not, because not well mastered.

Tools and tasks

Let us now analyse the use of the tools made by students in connection with the learning tasks that were identified before as important in the university curriculum (Platteaux, Foerster, Luethi, & Hoein, 2011). Lets us remark in the Figure A.4 that one task is designated by "My ICTs" for reasons of place. In the questionnaire, the task was designated much more explicitly: "My ICTs: To choose, use and gather my ICT tools to learn".

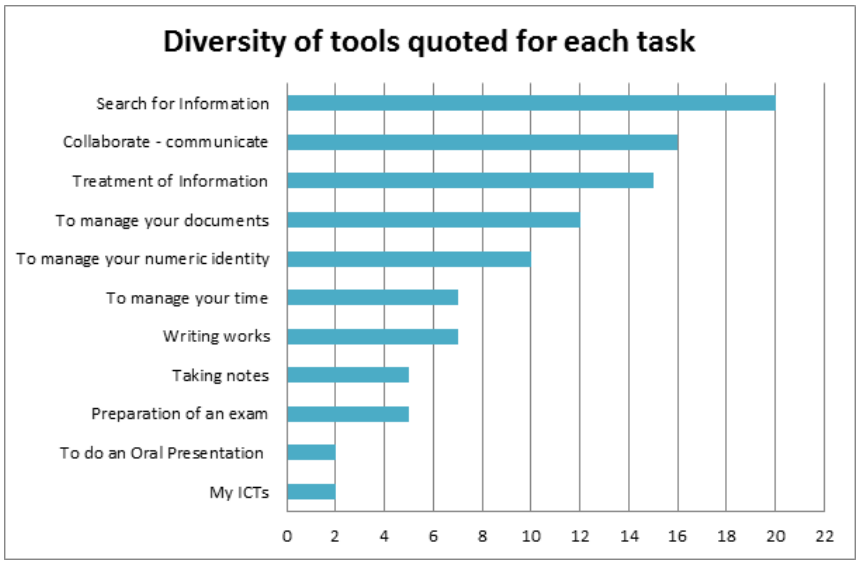

Figure A.4: Number of diverse cited tools for each learning task (students from Groups 1 and 3)

When counting the number of tools associated with a task (see Figure A.4), it clearly appears that some tasks involve many tools and other tasks only a few. This is for example the case for the task "research of information" where the students use a lot of tools, a total of 20 are cited! We give here the complete list of cited tools for this task: Internet, Google, Google scholar, Moodle, VPN, Macbook, Ipad, Portable, Mozilla, BD BCU, Zotero, Web of knowledge, Scopus, flux rss, blogs scientifiques, BD universitaires, twitter, RERO, NEBIS, Journaux en ligne. We now that the task "research of information" is complex. This interpretation is also true for the task "Collaborate - Communicate". Also there are a lot of different tools, for performing the task (from a global perspective) and for performing a part of the task. Then perhaps are the students looking for the tools they will adopt later, both for a global performance of the task and for more specific aspects of it.

On the contrary, the task "to do an oral presentation" where almost all students speak about powerpoint only. The task "Writing works" implies also only a few tools (7). This indicates perhaps that students consider "Word" as the unique tool they need for a task and do not speak anymore of other tools they are trying, in association with the task. This could indicate also that they could improve a part of the job where another tool is more efficient.

Here we identify questions to be further investigated. We can wonder if the diversity of tools is linked with the task complexity? Then also to the need of helps for students? Does a small number of quoted tools reflect a lack of knowledge of the tools variety? Or is it due to the fact that one tool is well dedicated? Another hypothesis is the context where the different students make the task. Do they have all the same constraints, rules and/or requirements? Are the task approach and the tool(s) imposed or free? When imposed this decreases the number of tools because it is useless to explore and discover new ones.

On the other way, these results confirm us the need for a good basic document that describes the task and its specific aspects or steps. This document can help to understand if the students perform well the task and/or its different steps.

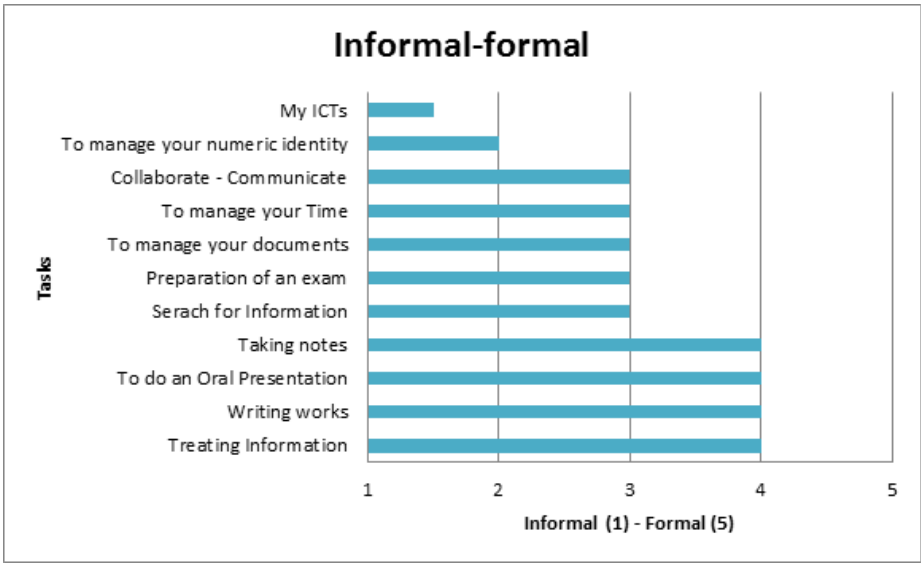

Figure A.5: How much informal-formal are learning tasks for students? (Groups 1 and 3)

Figure A.5 was produced in particular to answer the previous question: More the task is informal, more we can find a big number of cited tools? To produce Figure A.5, we computed a median from the answers given by the students (their evaluation of the formal aspect of the tasks: level 1 = informal, …, level 5 = formal). Unfortunately, Figure A.5 does not present any significant result. However, if we look closer to each task, we can see some tendencies for a few tasks (for example "Writing works", see Figure A.6), with a more formal or informal perception. Other tasks show a very individual perception of their informal-formal aspect, like "To manage your documents" (see Figure A.7).

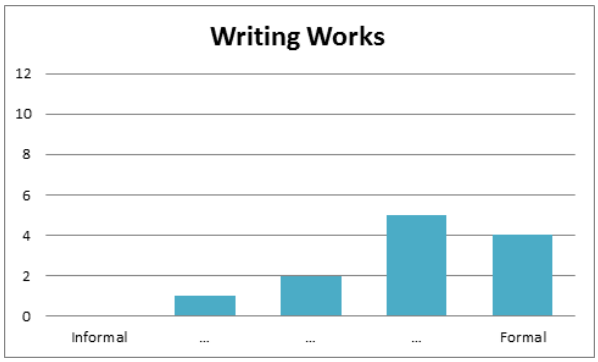

Figure A.6: Informal-formal level for task "Writing works"

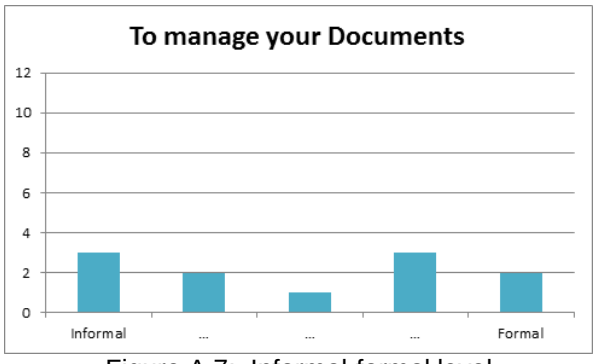

Figure A.7: Informal-formal level for task "Manage your documents"

		STUDENTS																			
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
TOOLS	Word	1	1		1				1		1		1	1	1	1	1	1		1
	PowerPoint	1	1		1			1			1					1		1	1	1
	Excel	1	1		1				1		1		1			1		1		
	Facebook		1			1	1									1				1
	Skype						1			1		1				1	1			
	Google Docs					1				1						1	1			
	Google	1	1														1			1
	Mail		1				1			1					1					
	Zotero				1	1										1			1	
	Electronic files	1				1													1	
	Gestens	1	1				1													
	Google Agenda	1														1	1			
	Google Scholar	1														1		1		
	Mozilla				1				1		1									
	Outlook					1												1		1

Figure A.8: An individual or common PLE for students? (Groups 1 to 3)

Knowing if students have a common PLE could help planning adapted activities for them. For example, they could be divided into groups, according to their needs ; some could discover unknown tools and others could extend their use of a tool. Therefore, we produced the Figure A.8 in order to determine if students have a common PLE (we complete here the analysis done with Figure A.2). Figure A.8 was produced by placing on the vertical axis all the tools that were cited 3 times or more (15 tools in total). Our 20 students are placed on the horizontal axis and are "named" a to s. For the column of one student, the Figure shows violet filled cells (also with 1 inside) for the tools that this students cited. The more the Figure is violet, the more there is a common PLE. Figure A.8 remains quite empty and shows that, except for the Office Suite, it is not possible to determine a common PLE for our sample population. How would this table evolve if datas from 200 students were added? As we noticed already by commenting Figure A.2, a large diversity could however be pedagogically exploited in workgroups where students compare their different approaches and tools uses.

Practices evolution and needed help

The first thing that comes out when we asked students about the amount of change they carried out concerning their practices, is the big practice changes that seem to have occurred (see Figure A.9). We can also observe a tendency for "younger" students, compared with the PhD students, to claim more changes in their way of fulfilling tasks. For sure that PhD students have now well established approaches of tasks. This might also be explained with the fact that Bachelor and Master students can remember better the big changes they carried out to their practices because it is more recent. As training designers, we can see from this result that our public is more the BA-MA students because they are in a change process. However, it is quite sure important to let a training about ICT skills development open to PhD students. We saw during the "Soft skills seminars" (organised with CUSO for PhD students - WP2) that this

population is interested for trainings about this topic and that they are still making changes in their ICT practices.

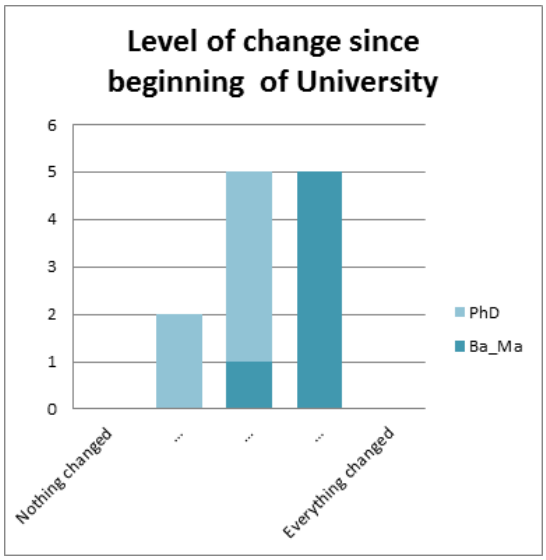

Figure A.9: Did students changed their practices since beginning of University? (Groups 1 and 3)

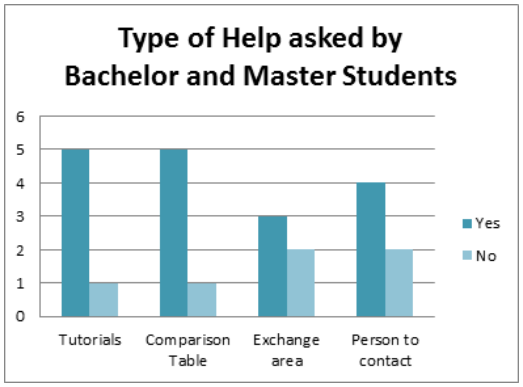

Figure A.10 : Help asked by Bachelor and Master Students. (Group 1)

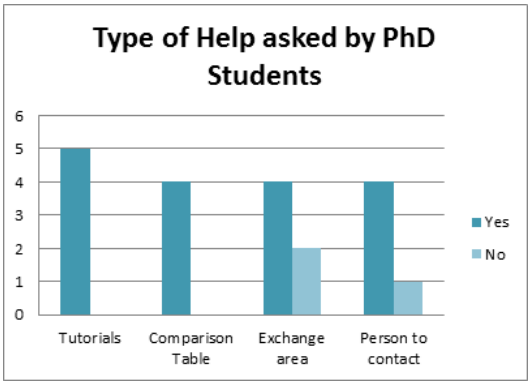

Figure A.11 : Help asked by PhD Students (Group 3)

We also asked students from groups 1 and 3 if they needed help to carry out their learning tasks and/or their change process. A lot of them answered positively. Moreover, the type of help they would be in favour of is visibly mixed, for both Bachelor-Master students and PhD students (see Figures A.10 and A.11) with a big ask for "tutorials", then guided approaches. There is perhaps a trend for PhD students to ask more for an exchange area and for BA-MA students more for tools comparison tables.

In order to get a better understanding of the different modalities of needed help, we asked more questions, especially about the learning mode (see Figure A.12) and the aim of the assistance (see Figure A.13). It is to be noted that 7 students want face to face learning sessions and 6 want to work in autonomy. This is quite sure a basic principle for a training to develop ICT skills:

to organise face to face workshops and to diffuse resources for autonomous learning. Figure A.12 gives also some information about the needed help. Some students express an interest for a discovery-exploration of tools. Other ones want to learn the use of the tools.

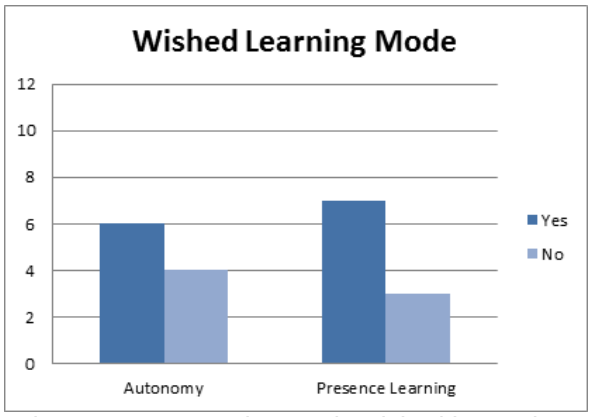

Figure A.12 : Learning mode wished by students (Groups 1 and 3)

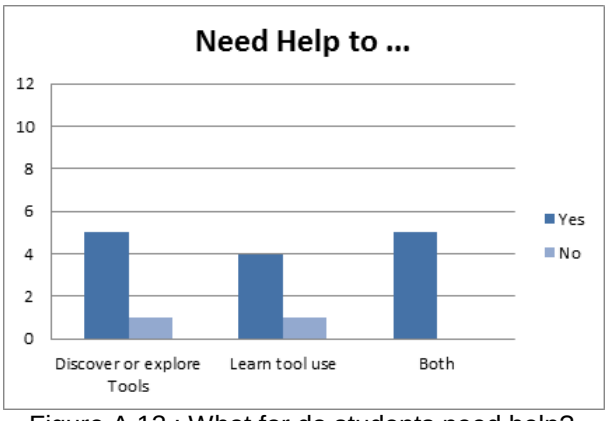

Figure A.13 : What for do students need help? (Groups 1 and 3)

Then, it would be worthy to reconsider the Figure A.13, even though it is very interesting. Indeed, the classification is not precise enough, with only two categories. We should distinguish 4 learning levels: "awareness", "information", "familiarisation" and "in-depth use" (see section 2.1). Our first current category ("Discover or explore tools"), mixes "information" and "familiarisation" levels. The other one, ("Learn Tool use"), combines "familiarisation" and "in-depth use" levels. The demand for help is thus very diversified and the panel of provided help should consequently be very wide. Moreover, it would be good to determine if the learning goal is more focused on the tool and its use or on the process to fulfill a task.

1.1.3 Results about the task approach descriptions

In the current section, we analyse the interviews of the 6 BA-MA students from Group 1. By hearing many times the part "approach" of our interviews, many informative elements emerged. We are going to go back on this elements and give a double interpretation:

- from the point of view of the learning resource designer
  - to spot moments in the expressed approach where ICT usage is easy-difficult, interesting because it could be where screen copies should be made to constitute further learning resources;
  - to track the chronological order in the different approach components because this order reflects the logic of the student for the creation of meaning during the task development (the same order could then be used to write down an explanation of the task for other students)
- from the point of view of the trainer
  - to track the chronological order of because (hypothesis) it reflects the places where a student has more or less competences

We see four categories in the data :

- Task or tool? (the main logic described)
- Any Problem? Where in the approach? (limits of knowledge)
- Sensibilisation (awareness towards ICT skills)
- Which grade of student's implication in the task?

Task or tool?

We observed that students describe their approach of tasks according to two logics. Either they take a tool point of view. Then they describe the ways they are using the tool functions, for example the generator of Table of Contents in Word. Either they take a task point of view. Here they describe the steps they are following to achieve the aimed production. The two points of view are not exclusive. Some students, in our population, used both of them when they were describing the way they are doing a work.

One can make the hypothesis that the way a person explains indicates the way this person would like to have an explanation. Then, some people would like to have a task approach explanation centred on tools. Other ones would prefer a focus on the task. If this hypothesis is true, this is an important profile parameter for a trainer and also for a learning material designer. In order to motivate and satisfy the two kinds of learners, the two explanation ways must be present in a course and/or in a learning material series.

Any Problem? Where in the approach? (ie: limites de connaissance de l'étudiant)

We noticed that some students have problems when elaborating the task, that they consider as important but where they do not feel like mastering it. We regrouped these problems according to the following criteria:

- Usability aspects of the tool: a tool can require an adaptation time and/or a specific effort before to be well used. Then some recommendations, explanations and tricks must be given to students to facilitate this period.
- Quality level of student: Some students impose themselves a very high quality level in their work in order to achieve "their" perfection. This degree of perfection can sometimes be very high and difficult to reach, making work difficult to accomplish. These students must be aware they can lower this personal level.
- Work quantity after the tool discovery: Even if a tool is easy to manipulate, it can be discovered two or three years after entering university. Then, sometimes it is necessary to transfer much information in the tool before it becomes really useful. Students can be demotivated for doing this thankless task or even never do it. For example, Zotero is a tool that students like to know very early.
- Prior experience or not: Some tasks require a deep personal involvement of the students. For example, oral presentations need a lot of preparation and generate

a lot of stress when facing the public. Then students can dislike such works and/or associated tools.

- The time, or the step, of the problem: The task approach description can allow the identification of moments-steps where the students are facing a problem when performing the task. This identification can help the teacher and the learning material designer in order to determine where to focus explanations and advices associated to a given task.

Sensitization - Attitude

Through the interviews, a large variety of sensitivity towards ICT appeared among the students. With sensitivity we mean the way students deal with ICT and the level of their awareness for the choices they make when using ICT and for the skills they have or they miss in the usage of ICT. Indeed some students reveal high ICT skill levels and high awareness levels also. On the contrary some other students seem to master the use of ICT but are not able to have a critical attitude on their usage. Also other students are not mastering ICT use but prefer to continue work habits they have, even if complex or time consuming.

As a trainer, it is crucial to take into account these different attitudes and awareness levels in order to adapt training sessions. A person who is not aware of ICT utility and feeling secure, and efficient, with his current approach has quite sure no desire of change. The trainer can in this case work with the person by proposing a discovery workshop where the person can try new ICT tools to develop a conscient concrete idea of what they allow. Also, the trainer should interview the students (or send them a questionnaire), at the beginning of a course, to know about their sensitization level and to know if a learning activity must be dedicated to ICT sensitization with the course population. Possible questions could be: "Are you using a smartphone? an iPad? Zotero?" and possible answer items could be: "yes", "yes and I like it much", "yes but it is not for me", "no", "no but I tried", "no but I do not have time to learn about it", "no but I tried and I did not like it", "no but I heard about it", "no and I never heard about it".

Which level of student's implication in the task?

In the discourse of one student, there was a distance expressed between her engagement and the activity realisation. She gave us the impression she was not implied in the task, despite she was doing it herself. Indeed she was always saying "One makes...", etc. She kept also very neutral in her task description and did not inserted any judgement over her performance. On the contrary, the other students were saying "I have the ..." when telling about the person who is doing the task. Also they were giving appreciations about themselves: "I have not yet succeeded...", "I still have a little more trouble...", "not good", "this is lame...".

What possible conclusion? Given the fact that this students is mastering quite well ICT use, we make two hypothesis. First, its is possible that she is mastering the tools but not the task. Then a training session should focus, in this case, on exercises applying the tools in the task, thus linking them very concretely. The second hypothesis concerns a possible difficulty to describe a task approach, it means she is not aware of her implication level, aware that she is the active decider and actor of the performance task. We then join the sensitization-attitude case.

1.1.4 Results Synthesis

Questionnaires and interviews gave results informing a lot the design of ICT skills trainings. First of all, students are in a process of change with these skills. In our sample, this is totally true for all the BA-MA students. But many PhD students say that they are still changing with their ICTs. The high level of changes expressed by the students in their ICT practices shows that they are ready to change if they need to. We can however ask ourselves if this reflects a change in their old habits (for practices and tools used) or the development of new practices?

The second important result for us, as trainers and training designers, is the fact that they ask for help. This help appears immediately as having many facets. Different modalities are asked, in particular learning resources to work autonomously and face to face "course" sessions. Different learning materials and activities are also needed, for example tutorials and exploration of tools.

The third main result concerns the tools used by our students. Our population sample seems to use a large number of different tools. We saw that each student cites tools that were not cited before by other students. And we saw also that a common PLE, even for a small number of tools, does not appear within a population of 20 students. Therefore, we can wonder if a common PLE does exist or not in the students population? The question sounds strange. In fact the obtained result, which shows many differences in the students PLEs, just reveals the "personal" aspect of PLE, it means its individuality.

The question should be asked differently. Is there a common learning ICT culture that is emerging through the use of all these individual PLEs? If not, this would make the process of designing an "introductory course to ICTs" more difficult. However we saw scenario possibilities based on the idea of exploiting the individual differences in groups. Also, it would perhaps be better to focus some learning resources on tools families and on common criteria that help to choose and evaluate individual tools. This could be a good way to introduce explanations about the tools and their use, as asked by about 50% of our students. Anyway an "introduction to ICT" training must be open to preserve individuals in the whole population.

We have a fourth result concerning how the students approach the tasks. First this approach is made in two ways. Either students adopt a "tools point of view". Either they are more in a "task

point of view". These two ways could be also learning scenarios principles. In fact, the exercise "Describe the way you do this task", that is a part of the interviews we have made, could be a learning exercise to be included into one of our trainings. Indeed it brings a lot of information. It reveals problems of a student: usability aspects, quality level of students, work quantity to master the tool, prior experience or not, particular steps of the task. It helps also to understand the attitude and implication of student. Indeed some students reveal high ICT skill levels and high awareness levels also. On the contrary some other students seem to master the use of ICT but are not able to have a critical attitude on their usage.

Finally, our analysis must go deeper. We saw in the analysis that some questions must be refined and that some trends must be confirmed with more data. However, the exploratory analysis we just presented is a good basis, regarding its results. And we feel that the continuation of our analysis will bring interesting further results if considering different learning contexts and enhancing individuals practices of tasks.

1.2. Questionnaire with BA students about a PLE pilot course

1.2.1 Methodological aspects

This research was made with BA students from the University of Geneva. This population sample was accessible thanks to Prof. Laurent Moccozet who was using many ICT tools during one of his courses (Services & Technologies Multimédia, SP 2012, BA course, 1st year), lasting one semester. The course was ideal, for our aim of analysis, because of two main reasons:

1. A lot of ICT tools (eg. Graasp, Drupal Gardens and Dokeos) were used in all the pedagogical activities organised as the constituents of this course (two seminars and different lectures).
2. Among these tools, there was the Graasp platform, deeply linked to a PLE concept.

The questionnaire which was used to gather the data needed for our analysis is built up in four parts:

1. **Student's profile**: questions to define the characteristics of the population sample and other questions to know about their familiarity with ICT tools.
2. **Seminar activity 1**: Evaluation of acceptance, utilisability and utility (see explanation just below) of the tools used during the activity 1 of the seminar.
3. **Seminar activity 2**: same work for the tools used during the second seminar activity.
4. **Graasp**: We collected the opinions of students at the end of the course about this platform, linked to the PLE concept. We focused on the five functions of the platform: to open personal work spaces, to invite other students into these spaces, to find and to link to resources from work spaces opened by other persons, to list Internet sites and documents considered as useful. We also give the possibility to students to express about other functions of Graasp.

We have chosen to make an analysis focused on the three variables acceptance, usability and utility on the basis of two models. First, Tricot and his colleagues (2003) showed that the evaluation of the global perception that the students have of a learning environment, experienced and used during an hybrid course, can be achieved through the evaluation of the usage quantity of the environment tools (acceptance), related to the ease of use of the tools (usability) and to the effectiveness of the tools (utility) for performing the activities of the course. The learning scenario of a course implies a logic level of use of the different tools in the learning environment. Then, when the acceptance of the different tools is high, it reflects this logic. On the contrary, when it is low, there is a misunderstanding in the course logic. In addition, usability and utility of the tools give indications of the reasons of this logic, or lack of logic. It is logic to use a tool when its usability is high. It is also logic to use a tool, even if not so easy to manipulate, when this use leads to a good performance of the learning task. In order to understand better the perception of the tools' utility, we refered on the model of Lebrun (2004) where the utility of tools is evaluated relative to five different functions they can have in the course: to motivate, to inform, to activate, to interact and to produce.

The aim of our questionnaire (cf. Annexe 5.3) was then to evaluate the acceptance, usability and utility of the different ICT tools used during the different learning activities of the course scenario and, in particular to determine the role that a "PLE platform", like Graasp, was playing during the course. Here we are mainly interested by the results about the PLE platform, the focus of our AAA PLE project. But, on one side, it is very interesting to evaluate a tool like Graasp as a part of a learning environment being used in a real case study (and not a laboratory experiment). On the other side, the answers on the other different ICT tools used in the learning environment will help us to evaluate Graasp. If these answers are coherent for the other tools, reflecting the course scenario logic, we know that the students answered seriously and their answers about Graasp can also be considered as valid.

To transmit the questionnaire to the students, in order to maximize the answer ratio, we went to Geneva during one of the last seminar session of the semester. The students had about thirty minutes to answer the questions. Two persons of our team were present to solve possible comprehension problems of the students. Seventy one questionnaires have been returned. Then we elaborated an Excel spreadsheet to code the answers and to analyse the data. You are now reading the synthesis of this analysis.

We analysed the usage of all the tools used during the course of the Geneva students. There are the Dokeos platform, concept map tools, the photo library from the University of Geneva, two powerpoint presentations (called PPCM1 and PPCM2), a photographic camera and the PLE Graasp platform. As already said, this analysis is made through an evaluation of the tools' acceptance from the students, their perception of the tools' usability and utility.

Let's remind the global role of the different tools in the course scenario. First the students have to think about how an online photo library is working and how it is organised (activity 1 of seminar). Then the students develop a basic online photo library (activity 2 of seminar). The Dokeos platform is the online space where all the course information is assembled and, also,

the links towards the different tools to be used. Students begin with the exploration of the online photo library from the University of Geneva in order to observe the way it works. Then they take a photograph and, with a concept mapping tool, think about the keywords which could be used for describing the image. The two powerpoint presentations can be accessed and used anytime when the students needs to check again about their task (PPCM1 informs more about the process of the project and PPCM2 about its content). Then the students had to browse the photo library of the University of Geneva to observe how such a service is done.

In order to interpret the results, we made first hypothesis and discussed them, during a Skype session, with the professor responsible for the course. This way, the interpretation, which is presented in these pages, was built by persons who lived the course working together with other persons who did not live this learning situation. We think it allows this way both a deeper understanding and objectivity.

1.2.2 Profile of the students (University of Geneva)

The students who answered are composed of 44 men and 25 women. Also two more students chose not to answer this question. Among these 71 students, 69 are HEC students and 2 are University of Geneva students (following the "Information System" Curriculum). One of the 69 HEC students a also chosen a secondary field of study, International Management. The average age of the students in our sample is 21.3 years. The youngest ones are 18 years old and the oldest one is 32. Then some of these students are older but but on average our sample is still quite young.

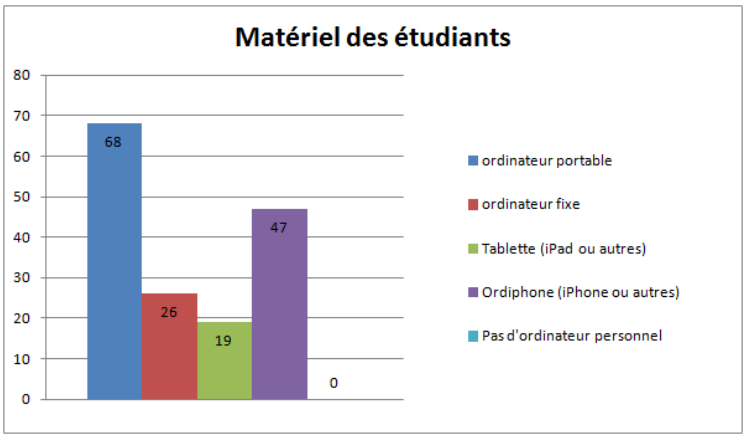

Figure B.1: Equipment available to students

Figure B.1 indicates the equipment available to students: 68 persons use a laptop, 26 a desktop, 19 a tablet (iPad or other types). All the students have a personal computer. It means that our population sample has for sure a regular contact with ICTs.The access to a computer equipment is an important variable in our research because the behaviour of students - having an easy access or not to a laptop, a tablet or a smartphone - will be different. We suppose they use often a computer during their courses. Therefore they all bought a laptop. Furthermore, the students show an interest for new technologies (more than the half of them have a smartphone).

On the contrary, tablets are not very present in this population. Perhaps the students do not perceive much added-value with this equipment when already having a laptop?

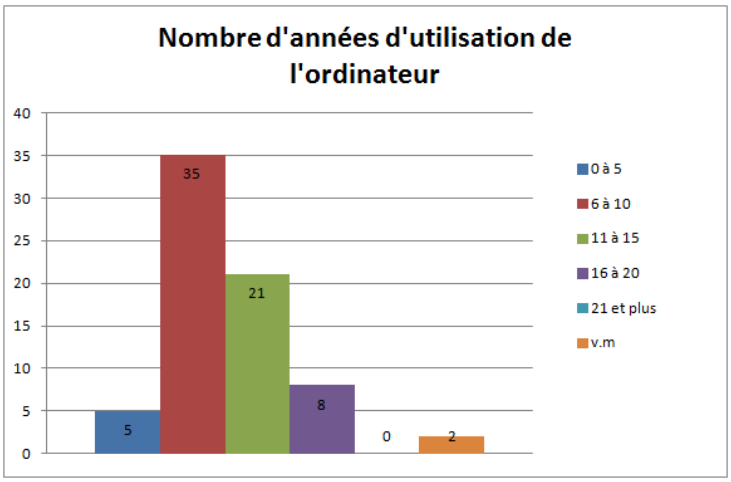

Figure B.2: Number of years of computer use

We asked about the number of years of computer use which can be a factor influencing our data. With experience, we develop some habits, reflexes and behaviours. Then, a person with short computer (and ICT tools) experience will not react the same way that a person with long experience, when considering the ICT tools proposed in a course.

We obtained a large variety of answers and organised them into five categories: use for 0 to 5 years, 6 to 10 years, 11 to 15 years, 16 to 20 years, 21 years and more. Figure B.2 shows that, in our population, 5 students (7% of our population) used a computer for 0 to 5 years, 35 students (49%) for 6 to 10 years, 21 students (29%) for 11 to 15 years and 8 students (11%) for 16 to 20 years. Then only a very small ratio of our population (5 students) is using a computer since a relative short time (less than 5 years). Our raw data indicate that 3 of these students use a computer since one year only. On the contrary, a very large majority of our sample (89%) used a computer for at least a third of their life. Our sample must then have a minimum knowledge about ICT usage.

We also analysed the number of hours per week dedicated to the computer use, before (and after) the beginning of University. Besides available equipment and number of experience years, this complementary information helps to understand how regularly the students are exposed to ICT usage, furthermore in a Higher Education context. The Figure B.3 shows the number of students splitted in five categories of weekly hours: category 1 = from 0 to 5 hours per week, category 2 = 6 to 10 hours, category 3 = 11 to 20 hours, category 4 = 21 to 40 hours, category 5 = 41 hours and more. There is a significant average increase of the number of hours of computer use per week after the students have entered University.

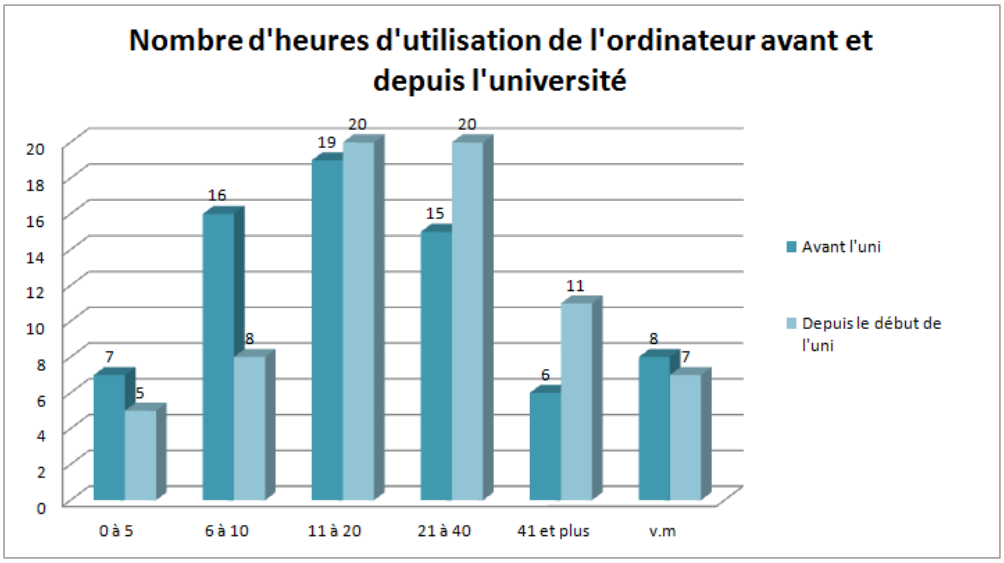

Figure B.3: Time of computer utilisation per week (before and since university)

How is this average increase of time true for individuals? Table B.4 (data of the two times - before and after entering university - for individuals) allows us to observe more precisely the analysed change of time per week for each students. This table is composed of two parts: the individual change of hours (of computer use per week) and the individual change of category (categories 1 to 5). From this data treatment, we find that 42 students (59.2%) spend more time, using a computer, after they entered university, 17 students (23.9%) spend the same quantity of time and 4 students (5.6%) decrease this quantity. In our population, 8 students (11.3%) did not answer to this question.

The second part of the table helps to understand if this change of time is an important behavior change or not. This data treatment shows that 25 students entered in a upper category (+1 category: 22 students; +2: 2 students; +3:1 student), 34 students stayed in the same category and 3 students enter a lower category (-1 category for the 3 students). Also, for 9 students, data were missing and they were rejected of this treatment. From these results, we could conclude that there was a big change for the 28 students (39.4%) who changed from hour category. But this would be a mistake if we do not check exactly if they were at the limit of two categories or not. A further calculus is made to determine the proportion of additional time relative to the time spent before entering University (cf. Table B.5). We see that about 25% of the students express no change at all and we add them to the 8.4% of the students who have less than 25% of additional time, we can say that about 33% of the population is not concerned with a change feeling with their computer habits. On the contrary, there are almost 52% of our sample who live a significant additional time of computer use when entering university. Among them, 27% of the students use their computer between 25% and 100% more. For this group, it really depend on the individuals if they consider that this is a big additional time or not. But there is no doubt that the additional time (at least 2 times more) is felt as big, or even very big, by the group of students (almost 20%) who are concerned.

Echantillon	Avant (heures)	Depuis (heures)	Echantillon	Avant (heures)	Depuis (heures)
1	15	24	37	18	20
2	25	25	38	999	999
3	6	10	39	13	25
4	15	20	40	22	15
5	35	40	41	999	21
6	22	27	42	14	49
7	14	14	43	15	15
8	21	42	44	25	35
9	6	12	45	4	6
10	10	20	46	7	3
11	70	70	47	20	25
12	999	10	48	22	27
13	42	96	49	999	999
14	42	56	50	2	5
15	21	28	51	10	10
16	49	49	52	10	10
17	10	999	53	25	25
18	8	15	54	20	25
19	15	15	55	999	999
20	10	20	56	3	4
21	20	50	57	1	1
22	999	999	58	28	35
23	35	30	59	10	20
24	58	58	60	32	32
25	0	2	61	25	25
26	10	13	62	9	11
27	10	12	63	20	40
28	20	8	64	20	20
29	999	999	65	999	999
30	10	15	66	0	24
31	28	28	67	20	20
32	5	8	68	7	7
33	6	12	69	32	49
34	12	12	70	14	20
35	49	49	71	30	60
36	20	30			

Echantillon	Avant (tranches)	Depuis (tranches)	Echantillon	Avant (tranches)	Depuis (tranches)
1	3	4	37	3	3
2	4	4	38	999	999
3	2	2	39	3	4
4	3	3	40	4	3
5	4	4	41	999	4
6	4	4	42	3	5
7	3	3	43	3	3
8	4	5	44	4	4
9	2	3	45	1	2
10	2	3	46	2	1
11	5	5	47	3	4
12	999	2	48	3	4
13	5	5	49	999	999
14	5	5	50	1	1
15	4	4	51	2	2
16	5	5	52	2	2
17	2	999	53	4	4
18	2	3	54	3	4
19	3	3	55	999	999
20	2	3	56	1	1
21	3	5	57	1	1
22	999	999	58	4	4
23	4	4	59	2	3
24	5	5	60	4	4
25	1	1	61	4	4
26	2	3	62	2	3
27	2	3	63	3	4
28	3	2	64	3	3
29	999	999	65	999	999
30	2	3	66	1	4
31	4	4	67	3	3
32	1	2	68	2	2
33	2	3	69	4	5
34	3	3	70	3	3
35	5	5	71	4	5
36	3	4			

	Diminution	1 = 0 à 5 heures	4 = 21 à 40 heures
	Stable	2= 6 à 10 heures	5 = 41 heures et plus
999	v.m (valeurs manquantes)	3 = 1 à 20 heures	

Table B.4: Time (in hours, then by categories) of computer use for each student

The average increase of time, also true for more than 50% individuals of our sample, confirms that the computer has become an essential tool for a student at university. However we have no data today to attribute this bigger use of the computer to a specific task. We think there are two reasonable hypothesis. The first one is that students use a lot a computer because the university cursus work requires it, or is helped by a computer usage. In this perspective, and on the basis of our data, we can not say if students like to use a computer, and computer based tools, for their learning tasks at university. But, at least, the average increase that we found would indicate that the students think about the computer tools (globally) as useful for their work. Otherwise, they would abandon them. The second hypothesis is that many students, entering university, also enter a more free living environment by leaving the family house. As a

consequence, next to their university work, these students spend a lot of time on social networks and/or with games.

Proportion of additional time at University (in comparison with time before University)	**Number of students**
+200% or more	3 (4.2%)
between +100% and +199.99%	11 (15.4%)
between +50% and +99.99%	9 (12.6%)
between +25% and +49.99%	10 (14.0%)
between +0% and +24.99%	6 (8.4%)
no change	19 (26.6%)
between -25% and -0.01%	1 (1.4%)
-25.1% or less	3 (4.2%)

Table B.5: Number of students relative to the proportion of additional time of computer use

1.2.3 Results of acceptance, usability and utility for the seminar activity 1

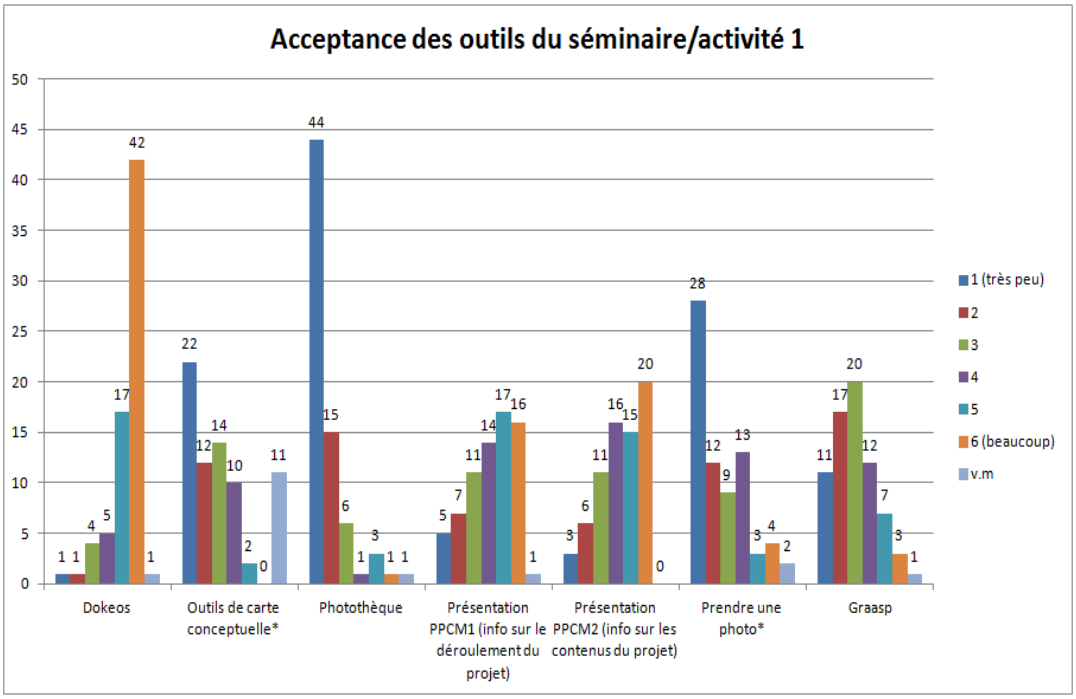

Figure C.1: Acceptance of the tools used for seminar activity 1

In the Figure C.1, we see two main trends for the acceptance of tools. Apart from Graasp, each tool was used much or little. Indeed the powerpoint documents and the Dokeos platform were much more used that the other tools. Students needed the presentations to be informed about the course validation modality. Thus we find here a logic acceptance. On the contrary, according to the professor, Dokeos was not so useful in the course scenario. But Dokeos is the usual course platform in the University of Geneva. Students then have a regular interaction with this tool, imposed by their university. Then, we make the hypothesis that students have included a broader learning context than the course when answering the question. The professor said: "It seems that for the students, Dokeos has become a main part of any course."

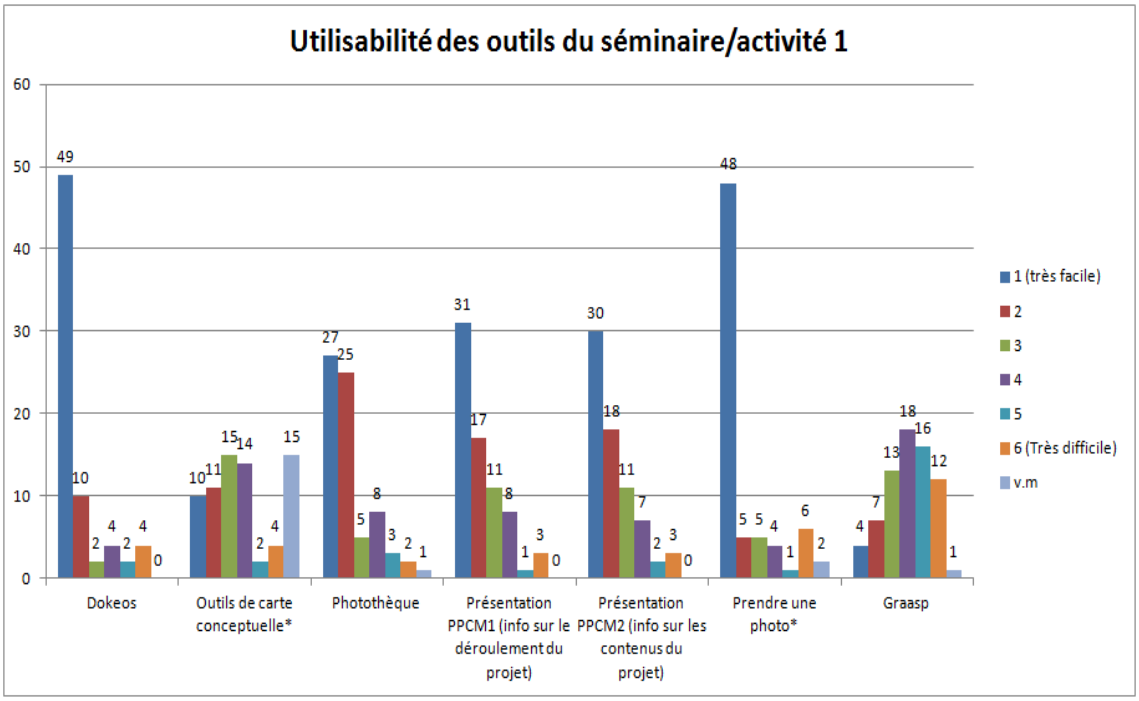

Figure C.2: Utilisability of the tools for seminar / activity 1

Other results of Figure C.1 draw our attention. About two thirds of the students (44/71) say they used the photo library only rarely. But it was important in the learning scenario to explore how a photo library works. It seems that only a few students did it. The same trend appears, a little attenuated, for the "tool" taking a photograph. Taking picture is a very usual act. Perhaps it did not motivate them a lot. Perhaps also that many students made a picture but they did not perceive this as a big activity because it lasts only a few seconds. However some students mentioned the digital camera they used (6 students), the camera of their iPhone/natel/portable/smartphone/ordiphone (10 students) and the Geneva photo library (1 student). For the use of concept mapping tools, 11 answers were missing. When the students were answering the questionnaire, a lot of them were not understanding what was this tool. We discovered after that the teaching team was telling the students about "mindmap" and not about "concept mapping tool". So, there was a misunderstanding with this question. But some of the students who answered precised the tool they used: Mindmap (2 students) and Mindomo (12 students). Finally, Figure C.1 show that the acceptance of the Graasp platform is spread over

two main behaviours : not making a big use of it (28/71 students) or using it but not very much (32/71 students). The results for its usability and its utility should help us understanding its acceptance.

Overall, the tools have been found quite easy to be used but not concept map tools nor Graasp (Figure C.2). For concept map tools, we already mentioned the misunderstanding about the label used, in the questionnaire and by the teaching team. Then the results are perhaps biased. But the comparison with Dokeos, which is very often used by the students, or the camera or the powerpoint presentations, shows that the use of concept mapping tools and Graasp is considered more difficult. Students need time to get familiar with these two tools. An improvement of their usability would for sure increase their acceptance.

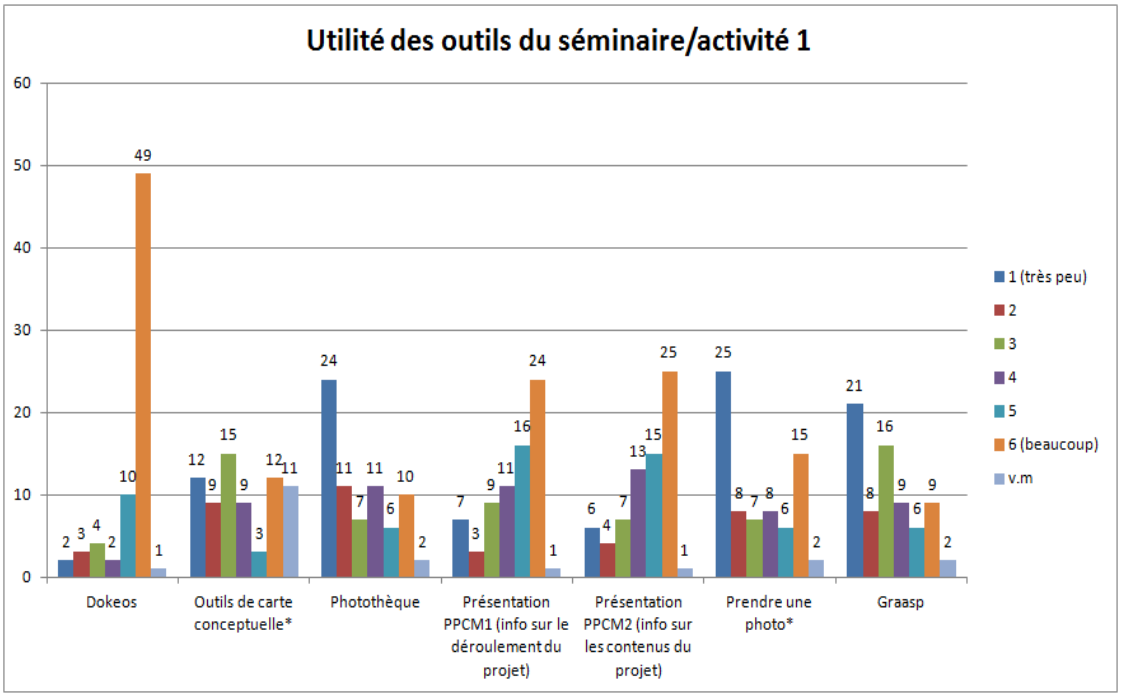

Figure C.3: Utility of tools for seminar / activity 1

Figure C.3 (global utility perception) shows that students perceive tools "taking picture" and "photo library" as very little useful for performing the activity 1 of the seminar. They have a similar perception for Graasp, at least in the learning context of the seminar activity we analyse. Would there be an increase of Graasp utility perception after a change of Graasp functions? If yes, what change? The questions about tools functions will perhaps give us a few indications.

On the contrary, Dokeos and powerpoint presentations were well appreciated for their utility. As we said already, it seems that now the university learning platform is perceived by the students as central and positive in a course. For the powerpoints, the classroom where the seminar is happening (a computer room with separation walls and many visual obstacles between the teacher and the students, etc.) favours this utility: students needed to have a look quite often to these documents. Finally, concept mapping tools imply a very mixed perception, oriented

toward a low utility perception. Apart the questionnaire vocabulary problem (see above), it seems to be that the students did not understand the role of concept mapping tool in the task, or did not see the added-value of using a concept map to think about an image to be inserted into an online photo library.

To deepen the analysis of the tools utility, we refered to the model of Lebrun (2004) where the tools are related to the learning roles they can play in a learning activity. Lebrun identifies five functions and we asked the students if they were seeing the different tools as playing this role or not in the seminar. This further analysis gives us a detailed point of view toward utility perception (see Figure C.4 and Figure C.5). Figure C.4 gives a tools perception and Figure C.5 a learning role perception. Here below is the information given to the students, in the questionnaire, concerning these learning roles:

According to Lebrun (2004), if the use of the tool....

- encouraged, motivated, etc. to make the activity: **then answer to motivate**
- gave you a lot of information about the activity: **then answer to inform**
- allowed to start the activity: **then answer to activate**
- favoured interactions with your colleagues during the activity: **then answer to interact**
- allowed to learn more (knowledge production) or to create more documents, images... (objects production): **then answer to produce**

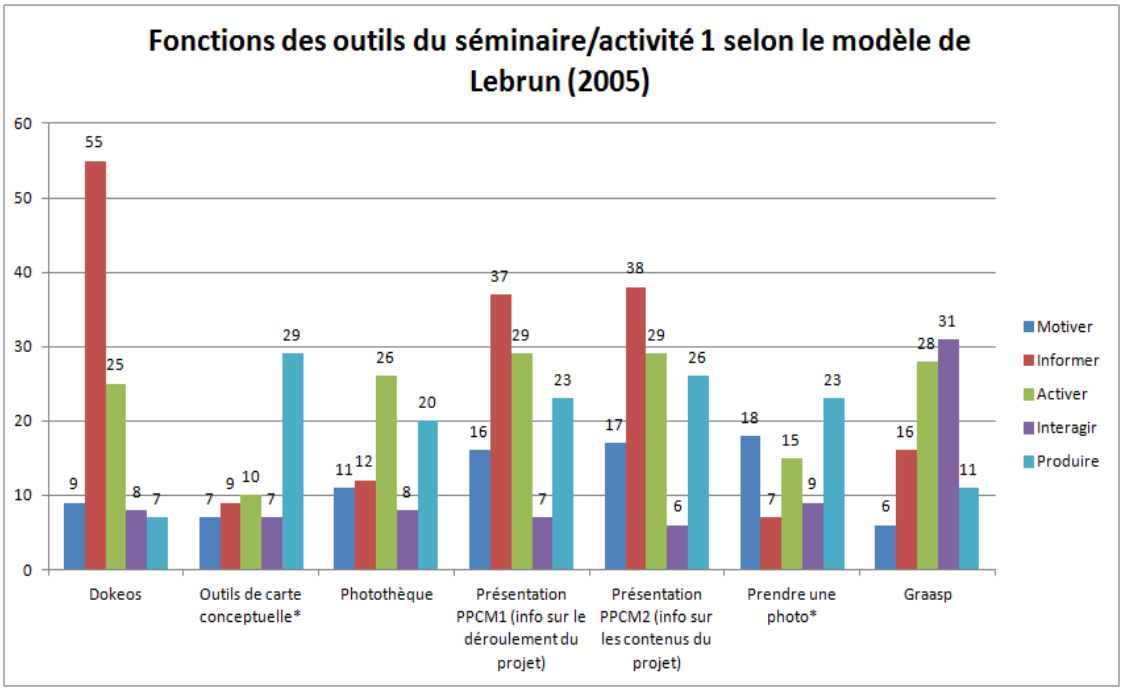

Figure C.4: 5 functions of Lebrun, presentation of ICT tools point of view

Figure C.4 shows a first result: each tool seems to have one or two specific functions. Dokeos is mainly an information tool. Powerpoint presentations are information and activation tools. These results are coherent with previous results of our analysis. Then concept mapping tools is

associated with a production function. Photo library is first an activation tool and second a production tool. The function of the tool "taking a picture" is not so clear, but oriented towards production and motivation. Finally, Graasp is perceived as an interaction and activation tool. It is interesting that the PLE platform is the only tool perceived as associated with interaction.

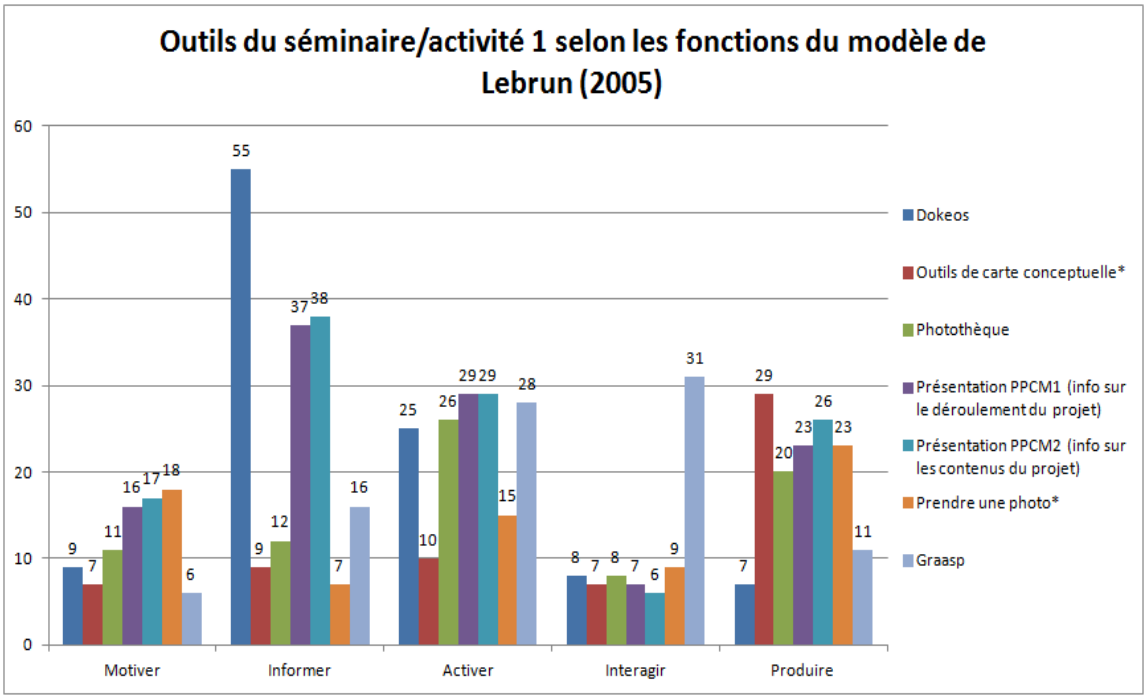

Figure C.5: 5 functions of Lebrun, presentation of functions point of view

Figure C.5 shows clearly that many tools activate (162 answers) and produce (139). But only a few tools motivate (84) or interact (76). This result reflects the learning scenario logic. There is a need of a complex set of tools to activate and produce. The interaction function is concentrated in the Graasp tool (40% of the answers). This perhaps explains the relative negative results of Graasp for acceptance and global utility. Students understand well the potential of Graasp (interaction) but consider that the learning situation does not require much interaction or that they do not need the platform to interact because they are sitting next to their colleagues. And for the information function (174 answers), thus the most important function in the seminar activity 1, three main tools play this role: Dokeos (32% of the answers) and the two presentations (43%). But Dokeos is very focused on information (and activation). Instead the powerpoints have a more composite role, being implied into more functions. Again the result is coherent with the previous ones.

1.2.4 Results of acceptance, usability and utility for the seminar activity 2

During the activity 2 of the seminar, the students had to exploit the results of activity 1 in order to build up a prototype of photo library including, in particular the photo they took. The tools used by the students during the activity 2 are the same as in the activity 1. Except Drupal Gardens which is used to build your own website, and except the tools of mindmap and take a

picture which were canceled. Globally, the results gathered from the activity 2 coincide with the one obtained from activity 1.

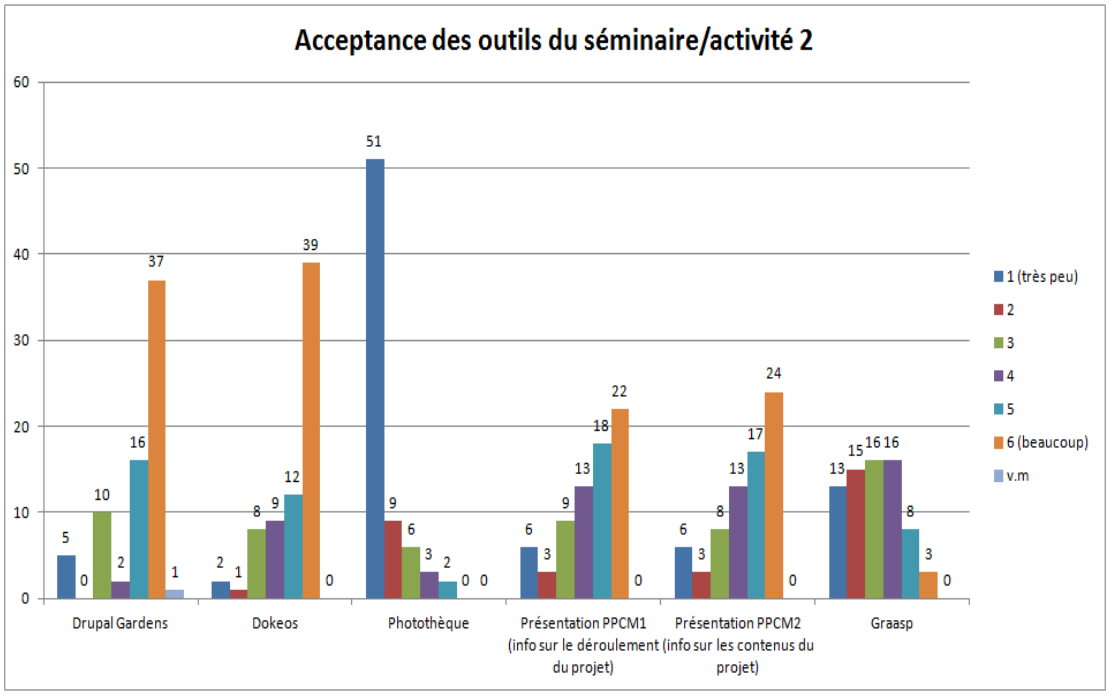

Figure D.1: Acceptance of tools for seminar / activity 2

The observation of Figure D.1 show very similar results for tools acceptance, compared with results from activity 1, for Dokeos, photo library and presentations. For Graasp, results show a small increase of acceptance during activity 2, but not enough representative to make objective conclusions. Then the new tool, Drupal Gardens, is defined as very much used (more than 50% of the students).

For tools usability also (Figure D.2), results are similar with those of activity 1, in particular for Dokeos and the powerpoint presentations. We see directly from the Figure that students are used to powerpoints : the slope decreases towards difficulty. Usability of Graasp is little bit better, than during activity 1, but remains low. It would be interesting to evaluate the use of Graasp between the two seminar activities in order to know if the constancy of answers (low usability) is due to an absence of practice or if the tool use remains difficult despite practice.

Concerning Dokeos and the photo library, the number of answers "1 = very easy" increased: +4 (+8%) for Dokeos and +12 (+44%) for the photo library. The usability perception of the two tools thus increases, reflecting the impact of familiarity due to prior experience. And concerning the new tool, Drupal Gardens, we can see that the answers are very similar to those of Graasp. It means that the introduction of a new tool, unknown from the majority of the students, in a learning environment implies a large spectrum of usability perceptions: from easy to difficult, and often oriented towards difficult.

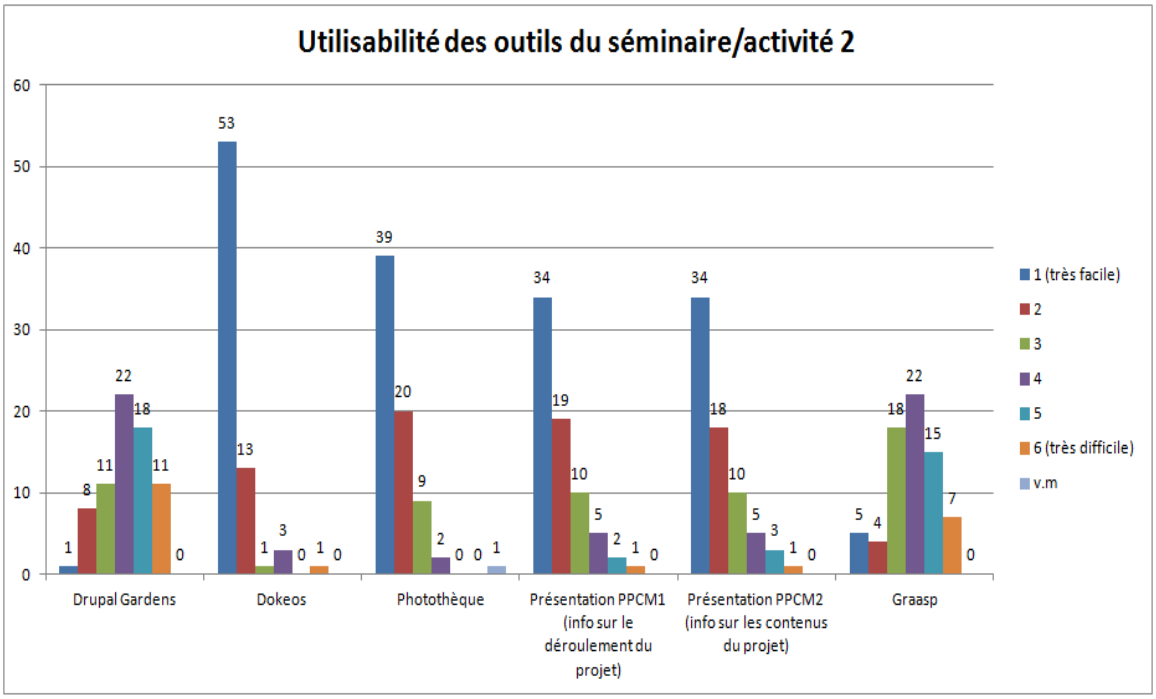

Figure D.2: Usability of tools for seminar / activity 2

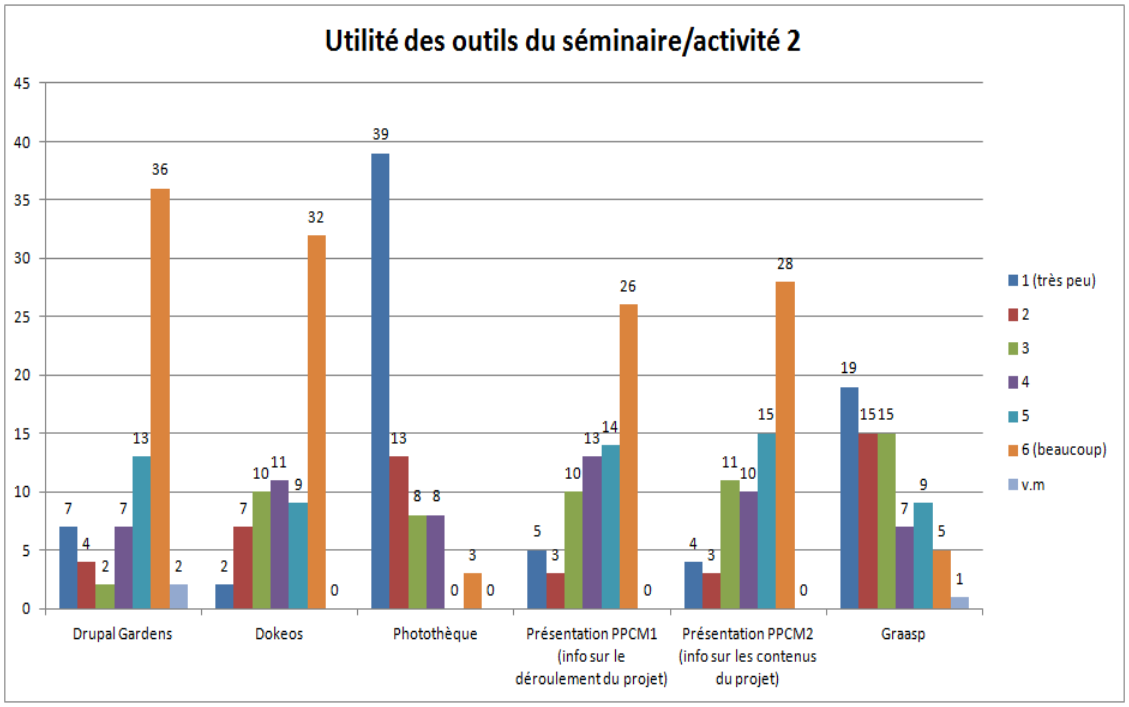

Figure D.3: Utility of tools for seminar / activity 2

For the utility perception (see Figure D.3), the results are different from utility perceived for activity 1. This is very coherent with the fact that the tasks are different. For example, Dokeos is still considered as useful, but less. It is also the case for the photo library which becomes not

very useful for the 39 of the students (almost 55%). On the contrary, powerpoints remains very useful ; their contents are necessary to perform the task.

Drupal Gardens is another tool considered as useful or very useful by a large majority of students. According to the teacher, this tool was crucial for the activity 2. This result reflects then the logic of the learning scenario. Perhaps that the persons who said Drupal Gardens as not very useful (18%), did not do the task themselves (students are working in small groups during activity 2). Finally, for Graasp, the results are similar to activity 1 but shifted a little towards the middle, then a bigger utility. It reflects also the logic of the learning scenario where Graasp is a direct support for the activity 2.

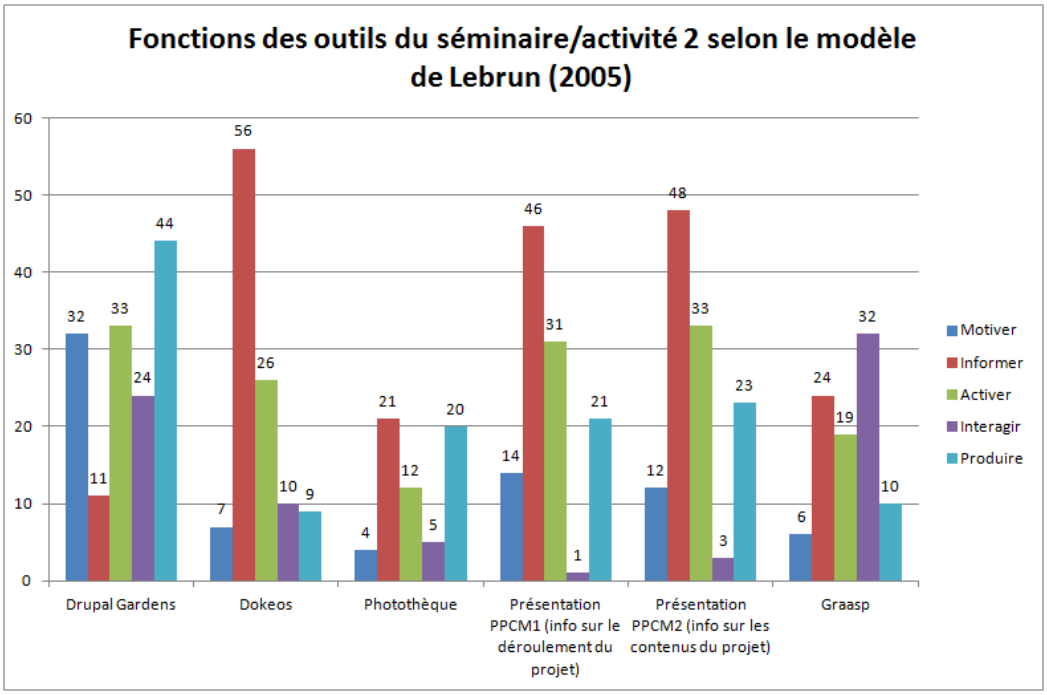

Figure D.4: 5 functions of Lebrun, presentation of ICT tools point of view

For the role played in the course by the tools (Figure D.4), Dokeos keeps the same roles than in activity 1: information (large predominance) and activation. Same result with powerpoints which keep their information and activation functions. The teacher perfectly agrees with the strict necessity of the two presentations to transmit information to his students, information that makes them start the task. Graasp is still perceived as the tool to interact, but now there is also Drupal Gardens playing a part of this role. Graasp plays also now a bigger role of information in the perception of the students. This is confirmed by the teacher: Graasp in used in activity 2 to give access to information. The photo library changes also its role in the perception of the students, having more an information function but less a motivation one. During the first activity, students have to use the photo library as a model to be observed and also used in order to insert a photography. During the second activity, depending on the online service they are developing, the information extracted from the photo library is more or less useful (plus the fact it is not anymore a new tool). Then the motivation role of the photo library also decreases

between the two activities. Finally, despite Drupal appears as not easy to manipulate, it has a motivation role. There are for sure different reasons: Drupal has a big role of production (developing an online service is quite sure motivating), Drupal is used in the professional world giving a further attractive aspect to its use. In fact we see from the Figure 2.4 how Drupal is central in the activity 2. It would be a little incoherent in such a case that Drupal has not also a high motivation role.

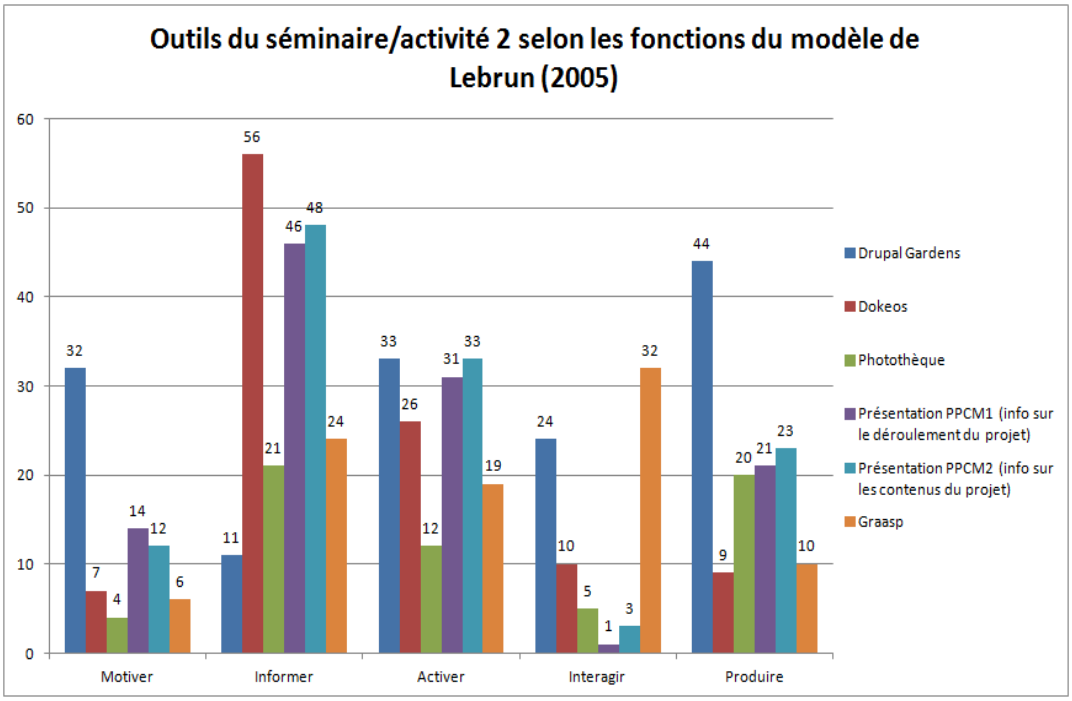

Figure D.5: 5 functions of Lebrun, presentation of functions point of view

This is exactly what we see in Figure D.5: Drupal has the role of motivation in the activity 2. Before, in activity 1, there was no tool playing a major part of this role. For the information role, Dokeos and the two presentations keep the lead. But, during activity 2, Graasp and the photo library play also an important part in this function. Then during activity 2, students perceive the possible information function of Graasp, which could however be improved. Let us remark also that the information function is bigger in the activity 2 (206 answers) than in activity 1 (174).

For the activity 2, the activation function is dominated by the tool Drupal Gardens and the powerpoints. Indeed the photo library is not designated anymore for this role, nor Graasp. On the contrary, Dokeos increased significantly its part in this role. Then interaction is always the role of Graasp, mainly. But Drupal is also part of this role as a second tool of interaction for students. Finally production is leaded by Drupal Gardens (almost 35% ot answers for production). The Professor confirms that this perception of the students is coherent with the learning scenario he thought about for activity 2.

1.2.4 Students opinion about Graasp at the end of the course

This last section of the questionnaire is made of open and close questions dedicated to the use of Graasp, during the course and as previewed in the future after the course. Our analysis is based on the Figure E.1 and is completed by answers given to open questions. We focus first on comments made about the usage of Graasp during the course and then on the comments concerning a possible future usage.

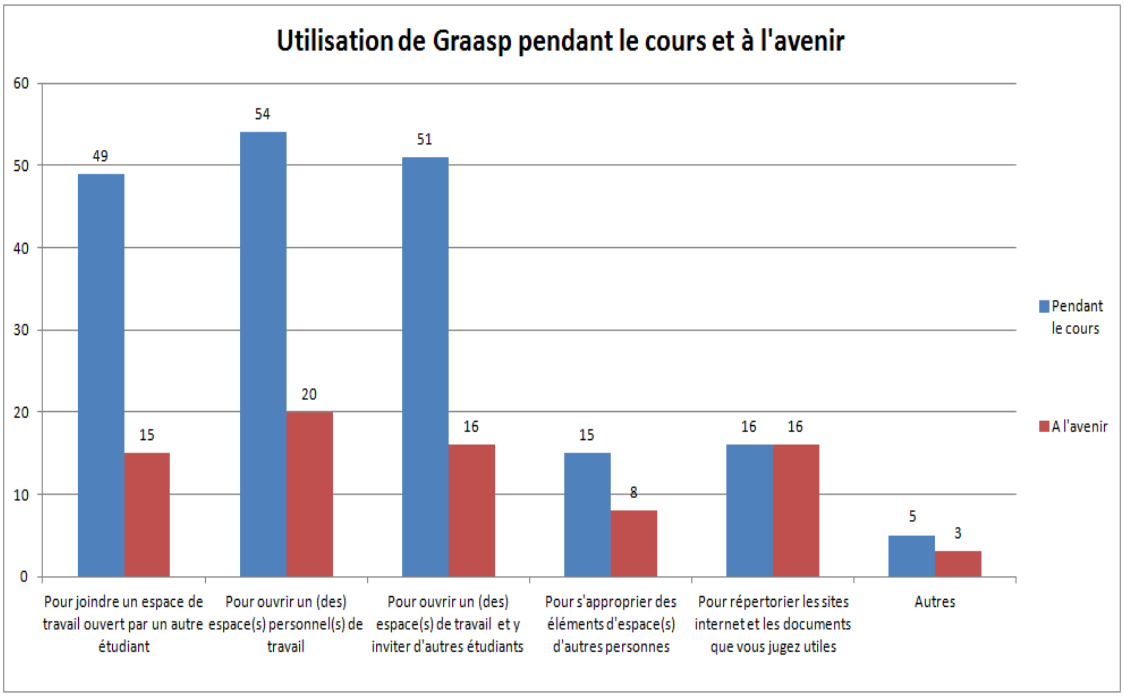

Figure E.1: Utilisation of Graasp during the course and prediction for the future

Figure E.1 contains two parts. The first one (activities asked by the teacher) has the following categories: "Join a work space opened by another student", "Open a work space", "Open a work space and invite others to join". The second part (non mandatory activities) has the categories: "Take some elements from work spaces of other people", "List internet sites and documents considered as useful", "Other activities". From Figure E.1, we can see that the majority of the students strictly followed the instructions (about 70% of students for these mandatory activities) and only a very small number of them explored the PLE tool more deepen (about 20% of students for these activities). The comments left by students for the function "Join a work space opened by another student" confirms this global attitude: "This was fundamental", "Need", "No choice", "Mandatory to get information", "Join the group". On the contrary, students who say they are not using a Graasp Function say also: "this was not asked", "not mandatory", "no time for it", "this was not necessary to access Graasp in order to get the necessary information and do the task". This analysis could be further developed to investigate strategies of students belonging to a group (activity 2) and saying they did not use a Graasp function. Perhaps it would appear that they delegated their work to other members of their group. Some students were saying it explicitly.

Also, among the criteria for the use decision of a Graasp function, there was the personal interest, the desire to do so. Some students think Graasp is useful for gathering information, to organise the work, to store works from the group. Other students think that it is useless and prefer to find another work spaces. Also we think that two individual remarks are important. A student says he did not even try to use Graasp. A second one thinks nobody will use Graasp and, as a consequence, and then judges it is useless to appropriate the tool. These individual attitude differences are linked to the individual involvement in the work groups. It is possible that the students divided the work in a way that some group members had no opportunity to discover Graasp. Also the perceived utility of the tool and the motivation average level to appropriate it are linked, and also some functions which interest some students who did not find a similar tool that they consider efficient.

Finally, the use of Graasp also gave rise to reactions from students saying that the tool is difficult to use (in particular from home), too slow, not natural, badly structured, with bugs, etc. Students seem also to prefer other online work space. For example, they mentioned Facebook. All these remarks are crucial if we work in the perspective of providing a similar PLE tool to the students. Through our analysis we perceived some reactions, from some students, positive and negative, towards Graasp, for its use in courses. But we would need more data, coming from more learning situations, to give a broader perspective on the students perception of Graasp, and/or of a similar PLE platform, in the curriculum context.

Let us consider now the remarks made by the students concerning a future use of Graasp's functions. There is a great similarity with the remarks made for the course context. There are first the mandatory criteria, applied to other courses, projects or professional environments. Many students say they do not want to reuse Graasp, with the hypothesis they will not need it. It seems to be that in our population sample, there will not be much reuse of the PLE platform.

The second criteria is linked with personal interest and desire to use Graasp. The comments, already made before, reappear in favour of a possible reuse: easy access to useful information, utility of the platform to make a repository of documents, or to interact. Also personal positive remarks were formulated about the platform: the platform is appreciated when mastered, the wish to follow the evolution of tools, the tool is useful for a university curriculum, a good perception of the built workspace and the feeling it can be reused, no need of a USB key to transfer documents, useful platform for professional network, an interesting concept, interesting for the future but problem with the login.

On the contrary, other students say: only for university, no interest for the future, no knowledge of such functions, preference for other tools or sources, nobody would see what is produced on Graasp because nobody uses it, I do not like it, I hate the tool.

Last question. 45 students say they never used before a tool similar to Graasp, but 12 students did. They give examples: Facebook, forums, google drive, dropbox, Dokeos and games (like Age of empire, world or warcraft). The more often appearing tool is Rezoinf (the computer network of services sciences).

Then we observe two extreme appreciations about Graasp and about future use pronostics. Figure E.1 informs us a large majority of our population is not wishing to reuse Graasp.

In order to favour the reuse of the platform in a future context (of work or learning), two types of work must be enhanced. The platform understanding must be improved, it means communication actions about the potential usages of Graasp and, as a consequence, to develop a better understanding about the utility of Graasp. A second axis of development is usability. A lot of the comments linked to a probable future use deal with slowness, program bugs, difficulty to get familiar with the tool, etc. Globally, the aim is to increase the user motivation for choosing such a platform in other university courses or professional environment.

1.2.5 A synthesis of the course, focus on the PLE platform

What we see from all the results explained just above, coming out from the context of the course given at the University of Geneva (BA students in a "Enterprise Management" curriculum) is a global coherence for the learning environment perception. The Professor, responsible for the course and the seminar, confirms that the way students perceive the utility of the tools is reflecting a good global understanding of the learning scenario of the course. Then it is a valid approach to push a little forward our reflexion about the students usage of the different tools, proposed in the course, in particular for the PLE platform.

The main result about the Graasp platform is a problem of usability. It is difficult for the students to use this PLE platform. In addition with the results presented before, we would like to make here below a list of the students have left in the final open space of the questionnaire. We translated here from the French language, then keeping the meaning but not the exact words they used for saying: "not functional design", "relatively slow site", "problem of compatibility with browsers", "difficult navigation", "badly designed site", "It is unclear", "We are easily lost", "The site is very slow to download". As we asked already before, we would like to know the usage of the Graasp platform was done by the students between the two activities of the seminar (its usability was little better in activity 2), in order to have an indication if the usability problem could decrease with practice or not.

This is not to say that Graasp is useless. Perhaps the learning scenario of the seminar and its two activities was not the ideal case for enhance the potential learning function of Graasp. The interaction function is concentrated in the Graasp tool (40% of the answers). This perhaps explains the relative negative results of Graasp for acceptance and global utility. Students understand well the potential of Graasp (interaction) but consider that the learning situation does not require much interaction or that they do not need the platform to interact because they are sitting next to their colleagues.However the students recognised its utility, even if not very high. In particular they designated the interaction function of Graasp and also, activation and information.

We observed the high potential of Drupal Gardens for motivation, activation, interaction and production. We noted also that motivation is linked to the use of Drupal in the professional world. On another side, the perception of students for the Dokeos platform is very positive. If we transfer these two remarks to Graasp, what would be the motivation of students to the PLE platform if used in the professional world and/or if used, and imposed, by the university as a learning platform? Would Graasp become, after a time of practice, a usable and useful tool for the majority of the students?

2. Development of trainings for ICT skills and PLE usage

The global process of design applied to conceive and develop the foreseen training (scenario and resources) was explained in a book chapter that was asked us by editors of a book project on different case studies about distant learning courses design.

Here is the abstract of our case study:

> *Résumé: Nous présentons ici le cas du processus de développement d'un module de formation destiné à soutenir les étudiants dans les utilisations des TICE (Technologies d'Information et de Communication en Enseignement/Apprentissage) qui aident leurs tâches d'apprentissage pendant leur cursus universitaire. Dans l'institution où se déroule le cas, les compétences des étudiants dans l'usage des TICE sont très hétérogènes. Le centre de compétence elearning, en charge du développement technopédagogique dans cette université, met en place un module de formation hybride, offrant des scénarios d'apprentissage et des matériels de formation, afin de pouvoir proposer des ateliers présentiels et des apprentissages en autonomie à distance. L'étudiant-e pourra choisir à la carte pour quelles thématiques il-elle voudra se former en autonomie et/ou suivre un atelier en présence. La création de ce module est en cours de conception-réalisation. C'est ce processus de design qui constitue le coeur du présent chapitre.*

In the following text of the report 2, we concentrate on specific aspects of this design process. A lot of the assembled ideas expressed here below were built and became pillars of our ICT training principles thanks to the interviews and questionnaires answered by students.

2.1 Learning objectives: do you have a PLE? Or are you a PLE?

Each occasion of discussion with students, teachers and CCSP members was used, as much as possible, to build a better understanding of what is a PLE. From all these moments, two main ideas are emerging.

First idea. When considering it as a learning objective, the PLE concept is deeply related to the engagement of the learner. The learning aim is not to have an access to a series of recipes for

different learning tasks, even if very important. The learning aim is not to have a series of tools to perform these different tasks. The learning aim is to be able to use these tools to perform these tasks and to be always working on improving this approach.

It means that PLE is a very constructivist notion. A student who is building his PLE is building himself: his identity, his way of learning and doing the work, of approaching a problem and finding solution.

We just saw it during the analysis of the course organised at the University of Geneva. A large majority of the students do the task which is asked by the teaching team and that's it. These students are working for the teacher, quite sure also to get the mark at the end. Other students do more. They take the learning situation where they are as an opportunity to test, practice, exchange, learn and think. They work for themselves. They are PLEs.

Second idea. If we design a "training" introducing PLE to students, this design must include the first idea. Concretely, it means that it is perhaps not possible to train the students since the first minute of the session. There must be a first step to let the learners becoming a PLE. As a consequence, we see now a basic schema of a PLE training organised in three levels:

1. level 1: sensibilisation, awareness:
    a. learning about how to learn-work is important
    b. learning about how to learn-work is your job
2. level 2: information
    a. building a panoramic view about ICT tools
    b. building a panoramic view of tasks where ICT tools can help
3. level 3: learning
    a. making first steps on different tasks and tools
    b. going deeper on different tasks and tools

Within these three levels, there are then different learning focuses. In the first level, the focus is to convince the students of the usefulness of ICT for learning (Ramanau, Hosein, & Jones, 2010). In the third level, the focus is more oriented to the increase of the confidence in the use of ICT for learning. As it was enhanced in our Report 1 (Platteaux, Foerster, Luethi & Hoein, 2011), it is important because of its impacts on curriculum results for the students: «Confidence level: students who are less confident in their ability to carry out daily tasks on a computer or the Internet also had worse results than more confident students» (OECD - CERI, 2008, p. 15).

2.2 Global "training" scenarios

2.2.1 The "A la Carte" model

The WP1 team work showed that there is an heterogeneity in the ICT skills of students. The heterogeneity was seen through the literature study we made during the WP1 first phase and explained in our Report 1 (Platteaux, Foerster, Luethi & Hoein, 2011). Heterogeneity was seen

also during the interviews and discussions with students about their ICT work habits (cf. section 1.1). Then there are plenty of different needs in the students population concerning ICT skills to be further developed. The heterogeneity can come from:

- a need for a different objective: sensitization, information, learning (see section 2.1);
- a need and/or an interest for various themes: one or several subjects in the list of our 10 students tasks;
- a preference for a learning modality, more or less autonomous.

Then we think about a global "training" scenario that we call "A la carte". There are two main axes in the scenario. First an online space is opened to give open access to all learning materials (see section 2.3) produced and/or available (for an autonomous work). Second, a list of workshops is proposed. Each workshop is focused on one subject-task and oriented towards level 1 or 3 (see section 1.2) depending on the participants. Also a regular presentation is organized for informing about new ICT tools (level 2. see section 2.1).

In this "A la carte" model, there must be also a rule for the learning time management. The previous analysis with students gave us perhaps a rule. Indeed we saw that more a more informal task requires more time. It is basically less known, in comparison with a very formal task where everything is defined. Then a more informal task needs more explorative tests of more tools, more learning activities (autonomous or more face to face). It means this can be a global introductive advice: try first to determine to most informal tasks you have to know where you must work more.

A further remark about the consequences of this advice. If we direct more the students towards more informal tasks, we must also help them to manage more tools. Indeed, the informal tasks imply more tools (even if only for tests). Here we then think about the importance of a synthetic representation to tools (see section 2.3.1, comparative table of tools).

2.2.2 Other propositions of scenarios

A Professor from the University of Fribourg proposed a scenario for using our learning resources:

- When he proposes his BA students (usually about 150 students) to work in group, one of the students in each group (usually about 30 groups) volunteers for participating to an ICT workshop organised by the Centre NTE for them.
- At the end of the workshop, the participants are evaluated.
- After the workshop, the participants are training their colleagues, the other members of their groups, on the skills and tools that were the topic of the workshop.

2.3 The different resources developed

2.3.1 The different resources types

A part of the team work was dedicated at structuring the collection of self-learning resources. The table below presents the different types of learning resources that were designed and the learning tasks on which these types were applied.

Name	Description	Diffusion format	Development format
Introduction	Panoramic view of the steps that can be followed to perform the task	Prezi presentation	-
Learning scenario	Explanation of steps that can be followed to perform the task (in details) Proposition of activities to make the steps and choose the tools supporting them Links towards comparative tables of tools (see description below) Proposition of documents and web sites to go deeper	Print version (pdf file) Online version (SCORM, Scenari Chain)	Google doc document
"e-culture card"	Short (2 pages) pragmatic view about an ICT-task question	Print version (pdf file)	-
Comparative table of tools	Comparison of different tools according to different choice criteria (online vs offline, collaboration possibilities, free or not, level of difficulty, etc.)	Print version (pdf file)	Google doc document

In order to develop some resources types (Introduction, Learning scenario, table of tools), the following working phases were applied:

- Documentation about the steps of a task and the supporting tools by a research in books and web sites (online collaborative research of information)
- Decision about the main steps to be detailed in the Scenario and enhanced in the Introduction (team discussion)
- Development of the version 1 for the Scenario and the comparative table of tools (online collaborative writing)
- Review of the learning materials version 1 (expert intervention + team discussion)
- Development of the version 2 for the Scenario and the comparative table of tools (online collaborative writing)
- Implementation of learning resources in diffusion spaces

For the e-culture cards (designed by the Team from the University of Geneva), the design process principles were the following:

- Inspiration from the model "Seven things you should know about" (Educause, 2012)
- It then enhance 4 to 5 important points explaining about a learning situation (called scenario) where students and teachers are involved
- The 4 to 5 important points are a common structure of the cards series. The points are: Scenario, What is it?, How does it work? For whom are these tools? What's important? What are the disadvantages? Where is it going? What implications for training and learning?
- The resource must be maximum 2 page long
- The language used in the text is at a more popularisation level than the learning scenario

The table below makes a list of the resources that are developed today with these resource models and these development methodologies.
(see: http://moodle2.unifr.ch/course/view.php?id=458)

Tasks and/or Topics	**Prezi Intro**	**pdf Learning scenario**	**SCORM Learning scenario**	**e-culture card**
Looking for information	ready	ready	ready	-
Writing (seminaire, bachelor or master thesis,...)	ready	ready	ready	Taking Notes Writing together
My ICT : Choose, use & assemble tools helping me to learn	ready	ready	ready	Author copyrights in teaching
Oral presentation (face to face or distance presentation)	95% ready	95% ready	95% ready	-
Collaborate and Communicate	-	-	-	Communicate to transmit Social networks in education Writing together
Documents management	-	-	-	Never loose documents
Information treatment	-	-	-	Taking notes

And the third table below presents the comparative tables of tools that are developed today with this resource model and this development methodology.

Family of tools	**Tools that are compared**
Concept map tools	Mindomo mindmeister XMind Collaborative Minds CmapTools see: http://moodle2.unifr.ch/mod/url/view.php?id=36660
Orthographic correctors	Reverso BonPatron.com Corrigemoi see: http://moodle2.unifr.ch/mod/url/view.php?id=38042
Text editors	Google Docs OpenOffice.org Office 2010 ZOHO beta Docs SkyDrive see: http://moodle2.unifr.ch/mod/url/view.php?id=36655
Bibliographic management tools	zotero MENDELEY EndNote RefWorks Papers see: http://moodle2.unifr.ch/mod/url/view.php?id=37529
Research of information tools	Google books SCIRUS www.scirus.com BASE see: http://moodle2.unifr.ch/mod/url/view.php?id=36663
Presentation tools	Prezi see:
Note taking	MyNotex see: http://moodle2.unifr.ch/mod/url/view.php?id=38045
Social Networks	twitter MENDELEY ResearchGate Scientific Network academia.edu LinkedIn see: http://moodle2.unifr.ch/mod/url/view.php?id=36658
Documents storage	SkyDrive hubiC see: http://moodle2.unifr.ch/mod/url/view.php?id=37530

2.3.2 Reflexion about further resources needed

In order to allow the autonomous learning principle of the "A la carte" scenario, there are different types of resources needed to help the student's work (scaffolding): resources to guide students and control resources to regulate and control learning (Azevedo & Jacobson, 2008; Hogan & Pressley, 1997).

In the set of developed resources, Prezi introductions, tools comparative tables and task scenarios have the role of guiding students in the task development and in their choice of tools to help their task performance. But, at the present time, the regulation resources are missing: tests to evaluate the learner achievement. They would be used:

- before a training session to determine the best "A la carte" choice;
- after a training session to determine the student progression and the best learning activities to complete student skills mastering.

A second type of resource is also missing. The scenarios and comparative tables of tools describe the tasks steps, the criteria of tools choice and the links between the tasks and the tools. But they are not including, until now, examples (computer screen copies) of achieved steps performed with different tools. List of quick advices (possible traps, best practices, etc.) could also be added. Screen copies would serve both:

- as a guiding resource, by making the explanation more concrete;
- and as a regulation element by showing possible task results.

Also, comparative tables are complex because of the very large number of criteria they include. This means that the reading of the comparative tables could become difficult and not motivating for some readers. However, we structured the tables as to show global ratings first, then global criteria, and, on a third level of reading, more complex and detailed criterias. So one can read only the first page of the table to get a first comparison. If one then wants more informations, one can continue reading more in details. We are now testing another solution, based on a moodle 2 database activity, to be used as a filtering system helping students in the process of choosing their tools. This filter could then be used by the students to activate the important criteria, for them and for the tasks to be performed, in order to guide them faster and easier to the adequate tools.

A big further work is also the translation needed to deliver always learning resources into different languages: French, German, Italian (English also perhaps). Perhaps a core documents set is needed in three languages and the other resources must be translated according to their use in different contexts.

2.3.2 Next development steps

Today we can make a general remark about the followed development process. For the development team, it is necessary that a learning scenario, described as in section 2.3.1, is

developed before it becomes really possible for the team to develop screen copies and associated explanations for the manipulation of the tools helping in the tasks. Without enough precise scenarios, such explanations would focus on the tools and not on the way the tools help the tasks. However, the design and development of the scenarios is too long. We thus think now about a light version of the scenarios in order to have more time for the development of the tools explanations.

Also, the previous applied development process was leading to learning resources (prezi, pdf and scorm learning scenarios) that can be used in autonomy by the students. But now we are opening face to face workshops to students and we need therefore scenarios of learning activities to do with students during the workshop sessions. They must be coherent with autonomous learning scenarios but they are also different, because adapted to time length of the workshops and also to main aspects, or those where students express most need for help, of tools-tasks (how the tools help the tasks) to be enhanced during the short time of workshops.

We are currently working with this new model for the e-portfolio task and will continue for the other tasks identified as important in the students curriculum: managing my e-identity, managing my time, preparing an examination, managing my documents,treating information (Platteaux, Foerster, Luethi & Hoein, 2011).

After we will have followed the two design methods, it will be possible to compare the two sets of documents.

2.4 Towards the implementation of PLE trainings in Switzerland

2.4.1 A Swiss online space for learning resources

In the perspective of the AAA PLE extension project, a publication and collaboration online space should also be installed to become a big support into the Swiss PLE community development. Concretely, the online space should allow:

- the collaboration on a document (for example a learning resource) for SIG PLE and PLE project members;
- the access to available learning resources for teachers, students, trainers, etc. to download, or consult online, a document for their teaching-learning activities
- the diffusion of new developed resources
- a continuous discussion/exchange/evaluation/comment about
    - a document proposed in the online space
    - hot questions in the PLE field
    - learning activities to be supported
    - ICT learning scenarios
    - etc.
- news about the PLE training field (new books, sites, etc.)

The list above is a first draft of the needed online space. A discussion of the WP1 team (12.10.2012) came to the ideas that this space should be a Swiss space, not attached to the institution of one of the project partners and structured in two basic levels (public, projects). The Word Press (and Buddy press) technology seems to be adequate. First tests are made currently. A learning Café is scheduled to develop this discussion during the next EduhubDays2013 (St-Gall, 30-31.01.2013).

2.4.2 The current attitude towards PLE in the HE context

During the project development, training events were organised (mainly WP2 task). They generated discussions about the notion of PLE, the possible actions to be made for developing PLE, the obstacles to overpass before PLE can develop, etc. The participants were mainly members of technopedagogical support centres, of the HE Swiss institutions, and teachers in the same institutions. The main events were:

- "LMS Alternatives: Yes, we can" (Learning Cafe, Eduhub days 2012, Morat, April 2-3)
- PLE Early adopters workshop (University of Geneva, 06.11.2012)
- PLE project team meeting (preparation of PLE workshop at EPFL, June 25-26)

The WP1 team used these moments to evaluate the current attitude towards PLE in the HE context. A list of all the expressed assumptions and questions can be found in Annexe 5.4. Here below, we give a selection of them, in order to reveal the main ideas that were expressed during those events. In order to treat and present these "data", we made a qualitative analysis and three categories emerged:

- Supports for PLE development
    - Higher Education has to cope with different platforms in order to let collaborate different people in different situations
    - "A mixed way? Teacher as a starter." (The teacher can be a PLE enabler)
    - Students are anyway obliged to build their PLE
    - A workshop in UK: teachers and students were learning together => community exchange
    - Tools that provide the same features to students and teachers (example: exchange of roles)
    - A PLE process with scaffolding
- Obstacles to be managed for PLE development
    - PLE is complexe
    - University is not ready yet for PLE
    - Students do not see utility to work on their PLE
    - Problem of timing, difficulty to synchronize help with need for help
    - A student: "I had courses about learning only at a MA level"
- Open questions
    - Do universities have to help students with their PLE development?
    - Institutional or public servers? what limits? who is the owner?
    - Formal vs. Informal situations? What bridges?

- How to valorize soft skills?
- How much do the students like PLE vs. LMS?

2.3 Implementation of a training during semester SA2012

2.3.1 Description of the training

In order to apply and test our "A la carte" principles and our developed resources, a training was implemented during the semester SA2012 at the University of Fribourg.

- an online space on moodle2: http://moodle2.unifr.ch/course/view.php?id=458
  - open access to learning resources (prezi introduction, learning scenarios, comparative tables of ICT tools) for an autonomous work possibility
  - an online forum (questions-answers / experience sharing)
  - agenda of workshops
- workshops about three tasks ("Looking for information", "Writing", "My ICT : Choose, use & assemble tools")

2.3.2 Communication Actions towards students

- Information about the workshops was included into a flyer "Start" (in common with other computer services for students) and distributed to all new students (about 1'500 copies)
- an article was written in the students UniFR journal online blog "Une aide pour s'en sortir dans la jungle numérique" (Julie Rudaz, Spectrum on line, 02.10.2012, http://student.unifr.ch/spectrum/post/475)
- presence of NTE staff members at the computer service desk during the information & welcome day for new students (17.09.2012)
- two information events about the programme were organised (3-4.10.2012)
- interventions were made in courses of different professors (these contacts with teachers were the occasion to begin a discussion with them for the use of specific task-module for one of their courses during a future semester)

2.3.3 Results of the implementation experience

First feedbacks on first interactions with students

Only a few students came to the two information sessions organised to present the programme. A discussion happening during these events informs us mainly about the timing of the programme and the students' perception about utility of such a training:

- (Diana, Student BA) : "First, we did not see the announcement of the information sessions in the flyer we have received."
- (Diana, Student BA) : "Two weeks after the start of academic year (september 2012), it is perhaps too early. A lot of people are still hesitating for an option, etc."
- (NTE staff) : "But in January-February, it is perhaps too late?"

- (Diana, Student BA) : "Maybe. Or you need to fail an exam to tell you such courses are important..."
- (Student, beginning of MA): "Personaly, I know now this would have made my life easier."

What resources are used by students?

A look of the logfiles (from the Moodle space opened for the students of UniFR) allows an analysis of the resources used by the students in free access (cf. Table below). Along the 9 first weeks of its life, there were 159 connexions to the Moodle space. It appears then that students were more interested by comparative tables of tools (total accesses: 120) than by tasks' scenarios (total accesses: 46 for both pdf and scorm scenarios). It seems to confirm the foreseen importance of such tables (see sections 2.2.1 and 2.3.1). However both scenarios and comparative tables seem to interest students.

	Semaine 41	Semaine 42	Semaine 43	Semaine 44	Semaine 45	Semaine 46	Semaine 47	Semaine 48	Semaine 49	Total
Course View	15	14	19	17	19	12	12	38	13	159
Course Enrol	0	1	0	0	0	1	0	2	0	4
Introduction - Recherche d'info (prezi)	3	2	0	2	1	0	0	2	0	10
Scenario - Recherche d'info (pdf)	1	2	2	0	1	0	0	0	0	6
Scenario - Ecrire un travail (pdf)	1	2	2	0	2	1	1	2	0	11
Scenario - Vos TICE (pdf)	2	3	1	0	3	1	0	4	0	14
Scenario - Recherche d'info (scorm)	2	1	1	1	0	0	0	1	0	6
Scenario - Ecrire un travail (Scorm)	0	0	0	2	0	2	1	0	0	5
Scenario - Vos TICE (Scorm)	0	0	0	1	0	2	0	1	0	4
Tableau comparatif - Carte conceptuelle	1	1	1	1	2	2	0	1	0	9
Tableau comparatif - Correcteurs orthographiques	0	2	0	2	2	1	1	3	0	11
Tableau comparatif - Editeur de texte	3	5	0	4	5	2	2	8	0	29
Tableau comparatif - Gestion Bibliographique	1	5	0	5	3	2	0	3	3	22
Tableau comparatif - Prise de notes	0	3	1	1	3	2	1	7	0	18
Tableau comparatif - Reseaux sociaux (pdf)	1	2	0	1	1	1	0	5	0	11
Tableau comparatif - Stockage de documents	0	4	0	2	3	0	0	0	0	9
Tableau comparatif - Outils de recherche	1	3	1	1	3	0	0	2	0	11
forum view forum	2	2	1	0	2	0	0	2	0	9

Number of acceses to the moodle space at UniFR (10 to 12.2012)

We can also compare how the different proposed subjects were accessed. If we add numbers of accesses of pdf and scorm scenarios for the 3 available subjects (here we do not count prezis because they are not all available), there aren't very big differences of access between the three tasks: 12 accesses for the task "Recherche d'information", 16 for the task "Recherche d'information", 18 connexions for the task "Vos TICE". On the contrary, there are a lot of

differences for the accesses to the families of tools. Students accessed 29 times the comparative table made for "text editors" and 9 times the comparative tables made for "storage of documents" and "concept maps". This can give us hints about what kind of tools is already a point of interest for students and what kind of tools aren't yet. This can help us decide what amount of effort and time has to be put in each of the 3 levels: sensitization-awareness, information, learning (see section 2.1).

3. Conclusions and perspectives

We inserted previously in this report specific sections (1.1.4 and 1.2.5) for specific synthesis about the two series of questionnaires-interviews we made. As a consequence, we would like to concentrate now on conclusion or perspective ideas for the principles of the training, introducing to PLE and ICT skills, we are designing currently.

As a first conclusive idea, we would like to insist on a simple but crucial fact: the students we met said that they want a support, for developing further their ICT skills. Then, for us, the answer to the question "Do you think that students need help for ICT?" is definitely: Yes; they say so. A second conclusive idea concerns the training modality. Students told us that the support they need should offer face to face learning moments and more autonomous ones (which could include tutorials). Also the discursive thread of the documentation and explanation we will propose can be two ways: either with a tools point of view, either a task point of view. Then, the "A la Carte" principle of our training design (including the further development foreseen, see section 2.3.2) seems to correspond nicely to the expressed needs of the students.

Now the main prospective idea. It is a question. How do we motivate students to come to our training sessions, and/or training resources?

Basically, our "A la carte" principle will make our training offer very informal, even if some formal elements will be associated. Also the PLE topic itself is very informal because very personal and always on evolution, etc. We saw, with the Geneva students, that informal learning tasks remain more unknown than formal ones because students seemed to stick on teachers "orders", and, on the contrary, are not going themselves to tasks that are let informal. We need a motivator so that students become attracted by a training about ICT skills.

There is then perhaps a perspective. Students are not attracted by informal activities. But, they are immersed in informal. To succeed into their curriculum, they will have to master many informal and complex tasks.

The informal tasks are complex because implying more tools, because being more explorative (less structured) activities, because less known, etc. Do the students have interest to manage all of this complexity by their own? Do they have so much time to manage it (we saw they increase a lot their time of their computer use after the university entry door)?

It means they must understand this is the utility of a PLE process and of a PLE introduction training. To manage better complex tasks in a shorter time. When they will have in mind this utility of the training, they will adopt it. We saw it within the students perception of Graasp: they would use it if placed in a learning situation where its potential main functions are useful. Then, for an ICT-PLE training, students entering university must first be aware of two factors in theirs tasks: time and complexity.

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5. Annexes

5.1 Questionnaire for BA students

Questionnaire en ligne

1. Profil

1.1 Données personnelles (pour faire le lien avec les entretiens)

Age:
Sexe :

Possédez-vous un ordinateur personnel? (possibilité de cocher deux cases)

- ☐ Ordinateur portable
- ☐ Ordinateur fixe
- ☐ Pas d'ordinateur personnel
- ☐ Tablette (iPad ou autres)
- ☐ Ordiphone (iPhone ou autres)

Depuis combien d'années utilisez-vous un ordinateur? .....
A raison de combien d'heures par semaine?

Avant l'université	Depuis le début de l'université

Quel(s) est/sont votre/vos domaine(s) d'étude actuel(s)?

☐ Bachelor en Sciences de l'éducation ou ☐ Bachelor en Sciences économiques

2ème branche : .....

☐ Autres:

Avant vos études actuelles, avez-vous réalisé une/des autre(s) formation(s) ou avez-vous étudié dans un/des autre(s) domaine(s)? Si oui, le(s)quel(s)?

☐ Formation supérieure. Domaine : .....

☐ Autre(s) formation(s) sur et impliquant un/des outils informatique(s) :

La/Lesquelle(s) :
………………………………………………………………………………………

☐ Cours au collège ou au lycée sur et impliquant un/des outils informatique(s) :
La/Lesquelle(s) :
………………………………………………………………………………………

1.3 Quels outils informatiques/logiciels savez-vous utiliser, quel est votre niveau de maîtrise pour chacun d'eux et pour quelle(s) ***tâche(s)**** les utilisez-vous?

*Tâche: lors de l'activité "écrire un travail de séminaire", vous avez à effectuer plusieurs tâches qui sont, par exemple, *rechercher de l'information, prendre des notes, etc.*

Outils	**Usage** (possibilité de cocher les 2)	**Niveau**	**Tâches**
	☐ Etudes ☐ Personnel	Très peu de maîtrise ☐ ☐ ☐ ☐ ☐ Très bonne maîtrise	
	☐ Etudes ☐ Personnel	Très peu de maîtrise ☐ ☐ ☐ ☐ ☐ Très bonne maîtrise	
	☐ Etudes ☐ Personnel	Très peu de maîtrise ☐ ☐ ☐ ☐ ☐ Très bonne maîtrise	
	☐ Etudes ☐ Personnel	Très peu de maîtrise ☐ ☐ ☐ ☐ ☐ Très bonne maîtrise	
	☐ Etudes ☐ Personnel	Très peu de maîtrise ☐ ☐ ☐ ☐ ☐ Très bonne maîtrise	
	☐ Etudes ☐ Personnel	Très peu de maîtrise ☐ ☐ ☐ ☐ ☐ Très bonne maîtrise	

1.4 Seriez-vous disposé(e) à prendre part à un entretien pour nous aider à approfondir la recherche? Si oui, veuillez indiquer votre nom, prénom et votre adresse e-mail dans les champs correspondants ci-dessous:

Nom:
Prénom:
Adresse e-mail:

Fil rouge d'entretien

1. Utilisation des TIC pour réaliser des tâches dans votre contexte de travail (à l'université)

1.1 *Reprendre le questionnaire*

Selon vous, vos réponses ont-elles évoluées entre temps? (autres outils/autres tâches)

Pour chaque tâche, indiquez quels outils vous utilisez?

Aujourd'hui pensez-vous à d'autres tâches?

De même, à quel degré informel/formel situez-vous ces produits/processus selon les critères ci-dessous?

Informel	Formel
Spontané Libre Implicite Hors cours (personnel)	Imposé Structuré Explicite En cours (université)

(A compléter par Marie)

Tâche (à compléter si besoin)	**Outils (à compléter si besoin)**	**Produit et processus** (Produit = résultat, savoir, contenu, document, etc.; Processus = outils, façon de faire, lieu, durée, etc.)

Rechercher de l'information		Formel ☐ ☐ ☐ ☐ ☐Informel
Construire sa thématique de recherche		Formel ☐ ☐ ☐ ☐ ☐Informel
Écrire des travaux (séminaire, bachelor, master,...)		Formel ☐ ☐ ☐ ☐ ☐Informel
Réaliser une présentation orale (en présence ou à distance)		Formel ☐ ☐ ☐ ☐ ☐Informel
Préparer un examen		Formel ☐ ☐ ☐ ☐ ☐Informel
Gérer sa collection de documents		Formel ☐ ☐ ☐ ☐ ☐Informel
Mes TICE : Choisir, utiliser et rassembler ses outils de travail TIC pour apprendre		Formel ☐ ☐ ☐ ☐ ☐Informel
Gérer son identité numérique		Formel ☐ ☐ ☐ ☐ ☐Informel
Gérer son temps		Formel ☐ ☐ ☐ ☐ ☐Informel

Collaborer - communiquer		Formel ☐ ☐ ☐ ☐ ☐Informel
		Formel ☐ ☐ ☐ ☐ ☐Informel
		Formel ☐ ☐ ☐ ☐ ☐Informel
		Formel ☐ ☐ ☐ ☐ ☐Informel

2.2 Choisissez deux tâches que vous jugez les plus importantes. Pour l'une d'entre elles, vous devez vous sentir très à l'aise et pour la deuxième, beaucoup moins à l'aise. Puis, essayez de décrire votre démarche du début à la fin, en mettant en évidence les outils que vous utilisez?

Tâche à l'aise :

Tâche moins à l'aise :

2.2.1 Pour vous, qu'est-ce qui rend ces tâches importantes?

2.2.2 Sur une échelle de 1 à 7, 1 étant "Pas du tout efficace" et 7 "Tout à fait efficace", comment jugez-vous votre efficacité pour ces deux tâches? Pensez à une situation précise.

(A compléter par Marie)

Tâche 1 :						
2.2 Démarche		2.2.1 Importance			But	
-	OUI ☐ ☐ ☐ ☐ ☐	Fréquence Obligation Envie de Utilité Autres:	NON ☐ ☐ ☐ ☐ ☐	OUI ☐ ☐ ☐ ☐	Sémio-cognitive (Aide à construire des connaissances) sensori-motrice (Aide à réaliser des actions) praxéologique (Aide à réaliser des projets) relationnelle (Aide à entrer en relation avec d'autres) réflexive (Aide à réfléchir sur ce que je fais, à mieux me comprendre)	NON ☐ ☐ ☐ ☐

Est-ce que vous procédez toujours de cette manière ?	
Ou bien est-ce que vous vous y prenez autrement dans d'autres situations :	
Efficacité :	Pas du tout efficace ☐ ☐ ☐ ☐ ☐ ☐ ☐ Tout à fait efficace

*Ne pas oublier de faire une copie d'écran d'un travail final

Tâche 2 :						
2.2 Démarche		2.2.1 Importance			But	
-	OUI ☐ ☐ ☐ ☐ ☐	Fréquence Obligation Envie de Utilité Autres:	NON ☐ ☐ ☐ ☐ ☐	OUI ☐ ☐ ☐ ☐	Sémio-cognitive (Aide à construire des connaissances) sensori-motrice (Aide à réaliser des actions) praxéologique (Aide à réaliser des projets) relationnelle (Aide à entrer en relation avec d'autres) réflexive (Aide à réfléchir sur ce que je fais, à mieux me comprendre)	NON ☐ ☐ ☐ ☐ ☐

Est-ce que vous procédez toujours de cette manière ?	
Ou bien est-ce que vous vous y prenez autrement dans d'autres situations :	
Efficacité :	Pas du tout efficace ☐ ☐ ☐ ☐ ☐ ☐ ☐ Tout à fait efficace

*Ne pas oublier de faire une copie d'écran d'un travail final

2.2.3 Et pour l'ensemble des tâches que vous devez accomplir pour vos études, comment jugez-vous votre efficacité à les réaliser?

Pas du tout efficace ☐ ☐ ☐ ☐ ☐ ☐ ☐ Tout à fait efficace

3. Environnement de travail

3.1 Vous venez d'évoquer les divers outils informatiques que vous utilisez. De quoi d'autre(s) aurez-vous besoin pour travailler ?

3.2 Comment appelleriez-vous cet ensemble ?

3.3 Pour chacune des deux tâches, pourriez-vous nous indiquer où vous les réalisez, à quel(s) moment(s) et avec qui?

(A compléter par Marie)

Tâche	Lieux	Moments	Avec qui ?
Tâche 1			

Tâche 2			

4. Changements éventuels de pratique et découverte des outils

4.1 Remémorez-vous le début de vos études. Sur une échelle de 1 à 5 (1 signifiant que rien n'a changé et 5 signifiant que tout a changé), avez-vous l'impression d'avoir plutôt gardé ou changé votre manière de réaliser les deux tâches que vous avez identifiées comme les plus importantes?

Rien changé ☐ ☐ ☐ ☐ ☐ Tout changé

4.1.1 Qu'avez-vous changé? Et concernant les outils (informatiques/technologiques)? Et qu'avez-vous gardé?

4.1.2 Quels étaient les objectifs de ce(s): (quelles médiations?)

- changement(s)?

- invariance(s) ?

Changements		***Rappel des médiations***	***Invariances***	
Tâche1	***Tâche2***		***Tâche1***	***Tâche2***
		Sémio-cognitive (Aide à construire des connaissances)		
		sensori-motrice (Aide à réaliser des actions)		
		praxéologique (Aide à réaliser des projets)		
		relationnelle (Aide à entrer en relation avec d'autres)		
		réflexive (Aide à réfléchir sur ce que je fais, à mieux me comprendre)		

4.1.3 Comment se sont passés ces changements et ces invariances?

Changements :

Invariances :

4.1.3.1 Qu'est-ce qui vous a poussé, motivé ou ''retenu'' d'opérer ces changements?

Changements :

4.1.3.2 Comment avez-vous découvert les nouveaux outils que vous n'utilisiez pas avant?

4.1.3.3 Avez-vous découvert des outils que vous n'avez pas souhaité utiliser? Si oui, lesquels?

5. Alors que nous arrivons à la fin de cet entretien, et maintenant que vous avez eu l'occasion de réfléchir à votre mode d'apprentissage et à votre PLE, pourriez-vous nous dire s'il y a des tâches pour lesquelles vous aimeriez découvrir d'autres outils?

5.1 Y a-t-il des tâches que vous aimeriez pouvoir réaliser de manière (encore) plus efficace?

5.2 Quel type de soutien aimeriez-vous avoir pour mieux maîtriser un outil informatique dont vous avez besoin?

- Aucun, j'apprends tout seul à me servir des outils que j'utilise
- Des cours
    - présence
    - distance
- Des fiches tutorielles montrant pas à pas ce qu'il faut faire
    - Ecrit
    - Video
- Des grilles de comparaison montrant ce que l'outil sait faire, et ce qu'il ne sait pas faire.
- Des espaces d'échange entre utilisateurs où poser mes questions (et donner des réponses aux autres)
- Une personne de contact ou un tuteur auquel poser des questions au besoin.
- Autres

6. Avez-vous des compléments, des remarques ou des questions?

5.2 Complete list of tools cited by students

Type	Outil	Occurrence	Nbre d'outils	Occurrence totale
Infrastructure	Client VPN	1	7	9
	iPad	1		
	iPhone/ordiphone	3		
	MacBook	1		
	Ordinateur	1		
	Ordinateur portable	1		
	Ordinateur uni	1		
Collaborating	Facebook	5	10	27
	Gmail	2		
	Google +	1		
	LinkedIn	2		
	Mail	4		
	Mendeley	1		
	Natel	1		
	Outlook	3		
	Réseaux sociaux	2		
	Skype	5		
	Twitter	1		
E-portfolio	CV en ligne	1	1	1
Playing	Stream	1	1	1
Managing my Documents	Delicious	1	13	19
	Dossiers électroniques	3		
	DropBox	2		
	EndNote	1		
	gestionnaire de références w	1		
	gestionnaire fichiers	1		
	iTunes	1		
	Mendeley	1		
	Read it later	1		
	SkyDrive	1		
	Sugarsync	1		
	Windows Media Player	1		
	Zotero	4		
Platform	Gestens	3	2	4
	Moodle	1		

Oral Presentation	PowerPoint	9	1	9
Programmation	Aptana	1	7	8
	Dreamweaver	1		
	Eclipse	1		
	Editor	1		
	KompoZer	2		
	Oxygen	1		
	R.	1		
Looking for Information	BD Universitaires	1	17	23
	Blogs scientifiques	1		
	Flux Rss	1		
	Google Chrome	1		
	Google Scholar	3		
	Maps	1		
	Mozilla	3		
	NEBIS	1		
	RERO	2		
	Safari	2		
	SAGE, JSTOR, ScienceDirect	1		
	scopus	1		
	Site web Vatican	1		
	uTorrent	1		
	Web Browser	1		
	Web of Knowledge	1		
	Wikipedia	1		
Managing my Time	CalDav	1	4	6
	Doodle	1		
	Google Agenda	3		
	Outlook calendar	1		
Treating Information	Adobe Reader	2	21	34
	Audacity	1		
	bloc-note	1		
	EverNote	1		
	Excel	8		
	Finale Print Music	1		
	Gimp	1		
	Google	4		
	ICCAP	1		
	Light room	1		
	MatLab	1		
	MindManager	1		
	Open office Spreadsheets	1		
	PdF-Sam	1		
	PdF-Viewer	2		
	Photoshop	1		
	Splus	1		
	Spss	2		
	Windows Movie Maker	1		
	Wolfram alpha	1		
	x-Mind	1		
Writing	Google Docs	4	8	23
	LaTex	2		
	MS office	1		
	Open office works	1		
	SkyDrive	1		
	Texnic center	1		
	Translate	1		
	Word	12		

5.3 Questionnaire for the students of Geneva

PLE Project / Questionnaire étudiants BA-MA 2012

10.05.2012 - HP et MF

1. Profil Etudiant-e

1.1 Age:

1.2 Sexe :

1.3 Possédez-vous un ordinateur personnel? (possibilité de cocher plusieurs cases)

☐ Ordinateur portable

☐ Ordinateur fixe

☐ Tablette (iPad ou autres)

☐ Ordiphone (iPhone ou autres)

☐ Pas d'ordinateur personnel

1.4 Depuis combien d'années utilisez-vous un ordinateur? .....

1.5 A raison de combien d'heures par semaine?

Avant l'université	Depuis le début de l'université

1.6 Quel(s) est/sont votre/vos domaine(s) d'étude actuel(s)?

☐ HEC ou ☐ Système d'information

☐ 2ème branche : .....

2. Séminaire / activité 1: Veuillez svp mettre une croix dans la case qui correspond à votre expérience.

2.1 Quelle a été votre quantité d'utilisation de ces outils pour le séminaire ?

Outils	*Acceptance*
Dokeos	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Outils de carte conceptuelle*	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Photothèque	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Présentation PPCM1 (info sur le déroulement du projet)	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Présentation PPCM1 (info sur les contenus du projet)	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Prendre une photo*	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Graasp	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup

NB.
Lorsque vous voyez "*" (par exemple, Outils de carte conceptuelle*), veuillez svp préciser l'outil-appareil-programme-logiciel que vous avez utilisé. Faites de même svp dans la suite.

2.2 L'outil a-t-il été facile ou difficile à utiliser?

Outils	*Utilisabilité*
Dokeos	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Outils de carte conceptuelle*	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Photothèque	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Présentation PPCM1 (info sur le déroulement du projet)	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Présentation PPCM1 (info sur les contenus du projet)	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Prendre une photo*	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Graasp	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile

2.3 L'outil était-il utile? (Sans lui, auriez-vous pu mener l'activité 1 ?)

Outils	*Utilité*
Dokeos	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Outils de carte conceptuelle*	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Photothèque	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Présentation PPCM1 (info sur le déroulement du projet)	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Présentation PPCM1 (info sur les contenus du projet)	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Prendre une photo*	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Graasp	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup

2.4 Pour chacun de ces outils, cochez svp la (les) fonction(s) concernée(s), à savoir motiver, informer, activer, interagir ou produire? Pour vous aider, vous trouverez ci-dessous un descriptif de ces fonctions.

D'après (Lebrun, 2005): Si l'utilisation de l'outil vous a ...

- ... incité, motivé, donné envie de faire l'activité : **cochez motiver**
- ... donné beaucoup d'information sur l'activité : **cochez informer**
- ... permis de démarrer l'activité : **cochez activer**
- ... d'être plus en relation avec vos collègues durant l'activité : **cochez interagir**
- permis d'apprendre plus (produire du savoir) ou de créer des textes, images, réalisations diverses (produire des objets): **cochez produire**

Outils	*Motiver*	*Informer*	*Activer*	*Interagir*	*Produire*
Dokeos					
Outils de carte conceptuelle*					
Photothèque					
Présentation PPCM1 (info sur le déroulement du projet)					
Présentation PPCM1 (info sur les contenus du projet)					
Prendre une photo*					
Graasp					

3. Séminaire / activité 2: Veuillez svp mettre une croix dans la case qui correspond à votre expérience.

3.1 Quelle a été votre quantité d'utilisation de ces outils?

Outils	*Acceptance*
Drupal Gardens	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Dokeos	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Photothèque	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Présentation PPCM2 (info sur le déroulement du projet)	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Présentation PPCM2 (info sur les contenus du projet)	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Graasp	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup

3.2 L'outil a-t-il été facile ou difficile à utiliser?

Outils	*Utilisabilité*
Drupal Gardens	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Dokeos	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Photothèque	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Présentation PPCM2 (info sur le déroulement du projet)	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Présentation PPCM2 (info sur les contenus du projet)	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile
Graasp	Très facile ☐ ☐ ☐ ☐ ☐ ☐ Très difficile

3.3 L'outil était-il utile? (Sans lui, auriez-vous pu mener l'activité 2 ?)

Outils	*Utilité*
Drupal Gardens	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Dokeos	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Photothèque	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Présentation PPCM2 (info sur le déroulement du projet)	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup

Présentation PPCM2 (info sur les contenus du projet)	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup
Graasp	Très peu ☐ ☐ ☐ ☐ ☐ ☐ Beaucoup

3.4 Pour chacun de ces outils, pourriez-vous svp indiquer s'il s'agit de motiver, informer, activer, interagir ou produire?

D'après (Lebrun, 2005).

- **motiver** : si l'utilisation de l'outil vous a incité, motivé, donné envie de faire l'activité
- **informer** : si l'utilisation de l'outil vous a donné beaucoup d'information sur l'activité
- **activer** : si l'utilisation de l'outil vous a permis de démarrer l'activité
- **interagir** : si l'utilisation de l'outil vous a permis d'être plus en relation avec vos collègues durant l'activité
- **produire** : si l'utilisation de l'outil vous a permis d'apprendre plus (produire du savoir) ou de créer des textes, images, réalisations diverses (produire des objets)

Outils	*Motiver*	*Informer*	*Activer*	*Interagir*	*Produire*
Drupal Gardens					
Dokeos					
Photothèque					
Présentation PPCM2 (info sur le déroulement du projet)					
Présentation PPCM2 (info sur les contenus du projet)					
Graasp					

4. Graasp: votre opinion à la fin du cours

Question 4.1

Veuillez svp remplir les cases (utilisé ou pas) en détaillant vos réponses (parce que...).

	Pendant le cours	**A l'avenir**
Pour joindre un espace de travail ouvert par un autre étudiant	☐ Je l'ai utilisé... ☐ Je ne l'ai pas utilisé... parce que...	☐ Je l'utiliserai... ☐ Je ne l'utiliserai pas... parce que...

Pour ouvrir un(des) espace(s) personnel(s) de travail	☐ Je l'ai utilisé... ☐ Je ne l'ai pas utilisé... parce que...	☐ Je l'utiliserai... ☐ Je ne l'utiliserai pas... parce que...
Pour ouvrir un(des) espace(s) personnel(s) de travail et y inviter d'autres étudiants	☐ Je l'ai utilisé... ☐ Je ne l'ai pas utilisé... parce que...	☐ Je l'utiliserai... ☐ Je ne l'utiliserai pas... parce que...
Pour s'approprier des éléments d'espace(s) d'autres personnes	☐ Je l'ai utilisé... ☐ Je ne l'ai pas utilisé... parce que...	☐ Je l'utiliserai... ☐ Je ne l'utiliserai pas... parce que...
Pour répertorier les sites Internet et les documents que vous jugez utiles	☐ Je l'ai utilisé... ☐ Je ne l'ai pas utilisé... parce que...	☐ Je l'utiliserai... ☐ Je ne l'utiliserai pas... parce que...
Autres	☐ Je l'ai utilisé... ☐ Je ne l'ai pas utilisé... parce que...	☐ Je l'utiliserai... ☐ Je ne l'utiliserai pas... parce que...

Question 4.2.
Aviez-vous déjà utilisé un outil analogue à Graasp, avant ce cours "Services & Technologies Multimédia" ? Si oui, lequel?

5.4 Statements and questions about PLE in HE context

During PLE project team meeting (preparation of PLE workshop at EPFL, June 25-26)

- les étudiants ne voient pas l'utilité et lachent l'outil mis en place dans le cours dès que le cours est fini
- passage teenager → adulte : responsabilité de l'activité de l'apprentissage encore peu chez l'apprenant
- anonymat: tout le temps? où?
- serveurs institutionnels ou publics? quelles limites ? qui est propriétaire?
- culture de la discussion : mise en danger ou aller de l'avant?
- on les lache dans la jungle si on met un "processus PLE" en oeuvre sans accompagnement
- université encore peu centrée sur l'étudiant
- problème de timing: moment de formation (exemple écrire un travail) décalé du moment où ses résultats doivent être utilisés
- créer un endroit virtuel exprès alors que les étudiants se retrouvent dans leur facebook pour se poser des questions en préparant les examens
- formel / informel : quelles passerelles?
- comment valoriser les soft skills? Notamment dans les examens à réorganiser...

From discussion happening during "LMS Alternatives: Yes, we can" (Learning Cafe, Eduhub days 2012, Morat, April 2-3):

- PLE is interesting as a concept but needs to be demonstrated to see what it is
- How much do the students need to be helped?
- Do you mean formal contexts or also informal ones?
- How does it change the lecture organisation?
- Did you include also skeptical teachers into the pilot classes?
- What do students think? Is it too much formal?
- How much do the students like PLE vs. LMS?
- How much do the students like PLE vs. other tools (twitters, etc.)?
- Do teachers like PLE?
- A negative point of PLE: to create wrong filters?
- Higher Education has to cope with different platforms in order to let collaborate different people in different situations

From final discussion of the SIG PLE "Early Adopters Workshop" (University of Geneva, 06.11.2012):

- break the rule? example = the anchored tables in the classroom
- why a STOP sign when entering the network as a visitor?
- to harvest and diffuse the students skills and ways of learning
- and help also the teachers to improve their ICT skills
- institutional tools or individual ?

- Students learn by doing. => instead of a course, learning by themselves
- To be taught? the environment where they will work ; how to adapt ? to learn about rules also? What is private versus public?
- By not providing help, we loose opportunities because students/workers go somewhere else to find the solution
- Data can be exchanged or not? Level of confidentiality for the individual and/or for the company, institution?
- Why a single role?
- Not forget the purpose which is not having a tool
- To make the students aware that soft skills are important
- Freedom and guidance for developing your way
- A list of tools? If there is one, this not a Personal LE
- How far institution should be involved into the PLE construction?
- If we offer a tool, it must be very clear
- Giving the information when students need it
- Being an innovator is conflictual, not comfortable and being “Student centric” is innovation at the current time => there is a need for experimenting new and diverse ways of doing the things (teaching and learning)
- A mix way? Teacher as a starter
- I had courses about learning only at a MA level
- Students are anyway obliged to build their PLE
- A workshop in UK: teachers and students were learning together => community exchange
- A 98% sure assumption : we need to provide tools that provide the same features to students and teachers (example: exchange of roles)