IDentifEYE

D2.6 Approach Methodology
Version 1.1 – 31/01/2015

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Lifelong Learning Programme

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Revision History

Version	Date	Author	Description	Action	Pages
1.0	31/05/2014	CCS, EF, FCP	Creation	C	14
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(*) Action: C = Creation, I = Insert, U = Update, R = Replace, D = Delete

Referenced Documents

ID	Reference	Title
1	2013-1-GR1-LEO05-13907	Project Proposal
2	2013-1-GR1-LEO05-13907	Evaluation Comments

Applicable Documents

ID	Reference	Title
1	FAVINOM QMS	Quality Management Procedures

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1.1. Purpose of the D2.6 Approach Methodology

The purposes of D2.6 Approach Methodology are the following:

- To pinpoint the methods that will be utilized for the instruction of the target groups
- To identify the conceptual framework of the training approach

1.2. Scope of the project

Children today are in danger on the Internet because of not understanding the relevance of data. They either too freely provide their own data and thus run the risk of identity theft or of an unwanted third party being able to target them, or they too easily believe the actuality of data provided by others and thus could become targeted by a third party who is disguised by a false identity. Internet is a great tool that offers youngsters many additional opportunities to their education, entertainment or even social life. Internet is nowadays thoroughly embedded in children's lives.
In order to identify the proper way to reach children it is important to look at the persons that children turn to for advice when something online troubles them. So, the best strategy to protect children is to train teachers that children already trust, to guide them through online activities. Considering that schools have the resources to reach all children, they should take the initiative training them. With the proper training of teachers, ideally, every child would have at least one skilled person to turn to (teacher of even peer).
To address these issues, in the current project we will utilise an augmented reality game and validated pedagogical approaches to empower teachers reach out to children and educate them about the dangers of the Internet and online identities.

1.3. Project Objectives

The primary objectives of this project are to:

- Create a new curriculum module in which teachers will empower a conscious, creative and critical stance by students as evolving responsible civilians [8-14 years] towards online media by means of training essential skills and providing essential knowledge.
- Benchmark effective new methodologies and pedagogical strategies as an essential component of the new curriculum module.
- Publish the new curriculum module both in a traditional form (print) and online together with didactic material and multimedia instructions so that European teachers can implement the new module by themselves.
- Create an international network to evaluate and help promote the new curriculum and function as a help centre for European teachers willing to implement the new module.

The main products comprise:

- A curriculum (based on social psychology) for teachers to educate children on the dangers of being online: "Reflecting on identity by means of multiple viewpoints"
- A delivery methodology for teachers to reach out to children more effectively and educate them about matters that concern them
- The impact is expected to be considerable in terms of in-service training for teachers who today lack important skills.

2. Approach Methodology

The project's outcomes are applied directly to two different groups: teachers and children. Specifically the children's target group which consists of a wide range of ages (8-14) will be divided in two smaller age sub-groups with similar characteristic and needs:

Group A: Ages for 8-11 years.

Group B: Ages for 12-14 years.

The methodology for approaching the target groups is not a one-off task but an iterative process. The approach will be validated and improved using the feedback from the stakeholders each time a workshops' phase is finished (WP4). The conclusions will be embedded each time into the approach and execution methodology for the next workshop phase.

2.1. Introduction

In the present sub-section, we:

- discuss who the conclusions of the country reports guided the design of the curriculum, in terms of its learning modules
- provide insight as to how the methodology and instruction modules differentiate per age group
- elaborate on the Augmented Reality and the Augmented Reality game
- elaborate on the issues considered for the development of the training material.

The implications stemming from the questionnaire results as discussed in the European Overview - giving the project workshop as much of a curricular status as possible, were not the only effects that these results had on the workshop and project design. The issues of three workshop sessions were inspired (session one and two) or partially inspired (session three) by the questionnaire results and the resulting Country Reports:

(1) The fact that teachers rarely signalize online identity challenges while these often occur among students was already touched upon in European Overview. The consequence for the workshop design was that that teachers should understand the relevance of identity related issues not just for the online safety of their students but also for their day-to-day teaching and for the learning and communication skills of their students. This is fully in line with the decisions presented in the European Overview to make clear for teachers what is in it for them.

In order to understand the impact of identity related issues, teachers should first understand the concept of identity. This meant that the issue to be seriously considered in the workshop is the concept of identity, its practical meaning and online variety, and its impact on teaching, student learning and communication and student online safety, all naturally differentiated for the different age groups where necessary.

<u>Differentiating between age groups</u>

The age group differentiation is to follow the following distinctions:

- For age group 8-11 the stress should be on simple operations it starts to perform and the fact that the child becomes a conscious part of a group, yet without the faculty of reflecting on the group's norms yet. The child should be able to reflect on the question what elements are making its new mental activities a success. The child should also be

opened up more to feedback from their group – peers and teachers – to enhance their learning opportunities.

- For age group 12-14 critical reasoning is enabled which allows for activities that challenge the current dominant norms and empower the strong sense of "I" that emerges for young adults in this age group. An introduction should be given on the general context of our identities – society. This introduction should present stimuli for critical thinking and should challenge the tendency towards moral conformism of the age group that emerges side by side with the will to test out hypotheses by one's self and rebel.

(2) As was analyzed in European Overview teachers already approach challenges to student online safety and identities, when they do signalize them, by means of communication with the stakeholders. This interactive approach is not only something they do, but also something that they see as a good practice.[i]

This existing teacher approach should be supported by modules on interactive didactics and elements of prophylactics, again differentiated for the different age groups where necessary. The age group differentiation is not so relevant for interactive didactics in which the same basic elements are proposed for age groups 8-11 and 12-14, but is highly relevant for prophylactics where therapists and psychologists use the distinctions as presented in the document for the social-psychological characteristics of children in the age group 8-11 in their day to day work.

Differentiating between age groups

The age group differentiation is to follow the following distinctions:

- For age group 8-11 the stress should be on providing students safe and clear frames and embedding them in their surroundings while giving them the freedom and responsibility to act on their own within that framework.
- For age group 12-14 the stress should be on promoting pro-social behavior among students that takes place in their natural environment and on stimulating students to share with their peers the skills they've acquired.

(3) Teacher knowledge of identity related ICT tools is low[ii]. This might be interpreted as a specific gap in teacher knowledge – but other data from the questionnaires[iii] and follow-up research in Poland and Greece revealed that it is rather a symptom of a more general lack of ICT skills among teachers, even though many of their schools are open to the use of ICT.[iv] As a result, a more general introduction to educational ICT tools and their practical use is needed.

An additional introduction on educational technology could also be seen as a stepping stone towards the use of Augmented Reality since the latter is a cutting edge technology that might "scare" the teachers. The reason for that is that it became clear that the fear for the use of cutting edge technology among teachers is enormous, especially because many teachers lack basic knowledge about educational technology.

2.2. Workshop Learning Sessions

The final form of the proposed learning sessions has the following structure:

Table 1: Learning Sessions

Session ID	Content/Context 8-11	Content/Context 11-12
Session 1	• Explaining aim of the workshop	• Explaining aim of the workshop

Session ID	Content/Context 8-11	Content/Context 11-12
	• Identity labels • Good practices • Discussion • Learning types • Good practices • Discussion • Identity theories • New online technologies and identity • Discussion	• Identity labels • Good practices • Discussion • "Liquid life" • Good practices • Discussion • Identity theories • New online technologies and identity • Discussion
Session 2	• Interactive didactics • Good practices • Discussion • Elements of prophylactics • Good practices • Discussion	• Interactive didactics • Good practices • Discussion • Elements of prophylactics • Good practices • Discussion
Session 3	• Educational technologies • Playing the AR game • Creating an AR game • Discussion • Teacher perspective on the lesson plan • First lesson plan sketch	• Educational technologies • Playing the AR game • Creating an AR game • Discussion • Teacher perspective on the lesson plan • First lesson plan sketch
Session 4	• Teachers create individual lesson plans • Discuss the evaluation template	• Teachers create individual lesson plans • Discuss the evaluation template
[After implementation] **Session 5**	• Teacher summaries of their implementations • Discussion leading to a BP/LL list • Handing out certificates	• Teacher summaries of their implementations • Discussion leading to a BP/LL list • Handing out certificates

The approach that will be followed is about a meta-workshop to be implemented by instructors to empower teachers creating lesson programs within their own fields of expertise – supported by the AR game, dynamic identity and dynamic context good practices, interactive didactics and prophylactics good practices and linking to the themes of "dynamic identities" and "dynamic contexts".

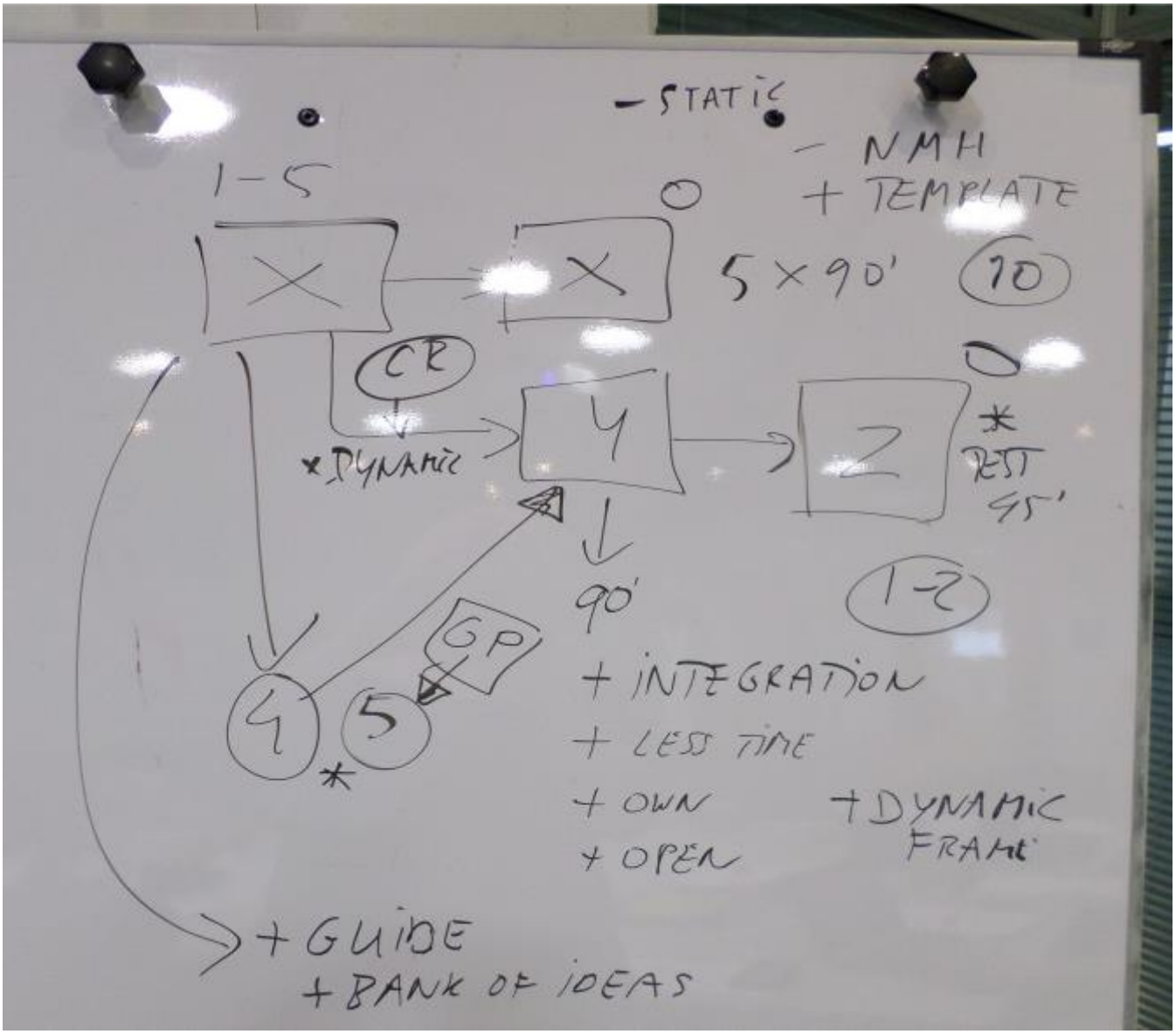

Figure 1: Sessions content pre-design

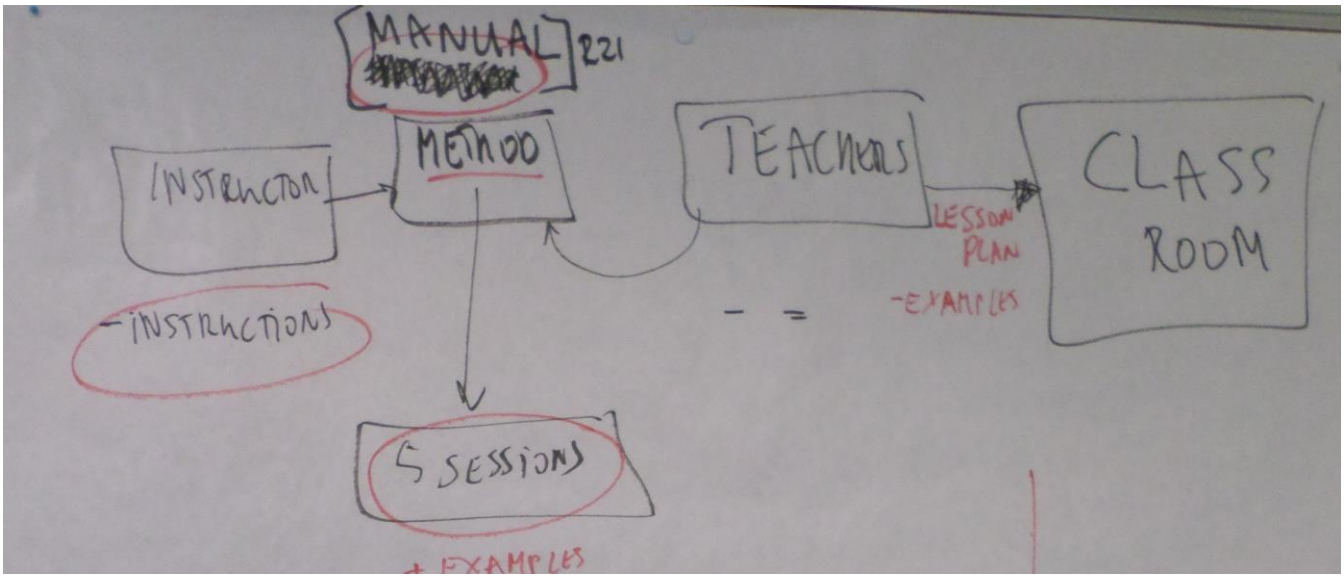

Figure 2: Workshop flow alternatives

The curriculum design will have the following form:

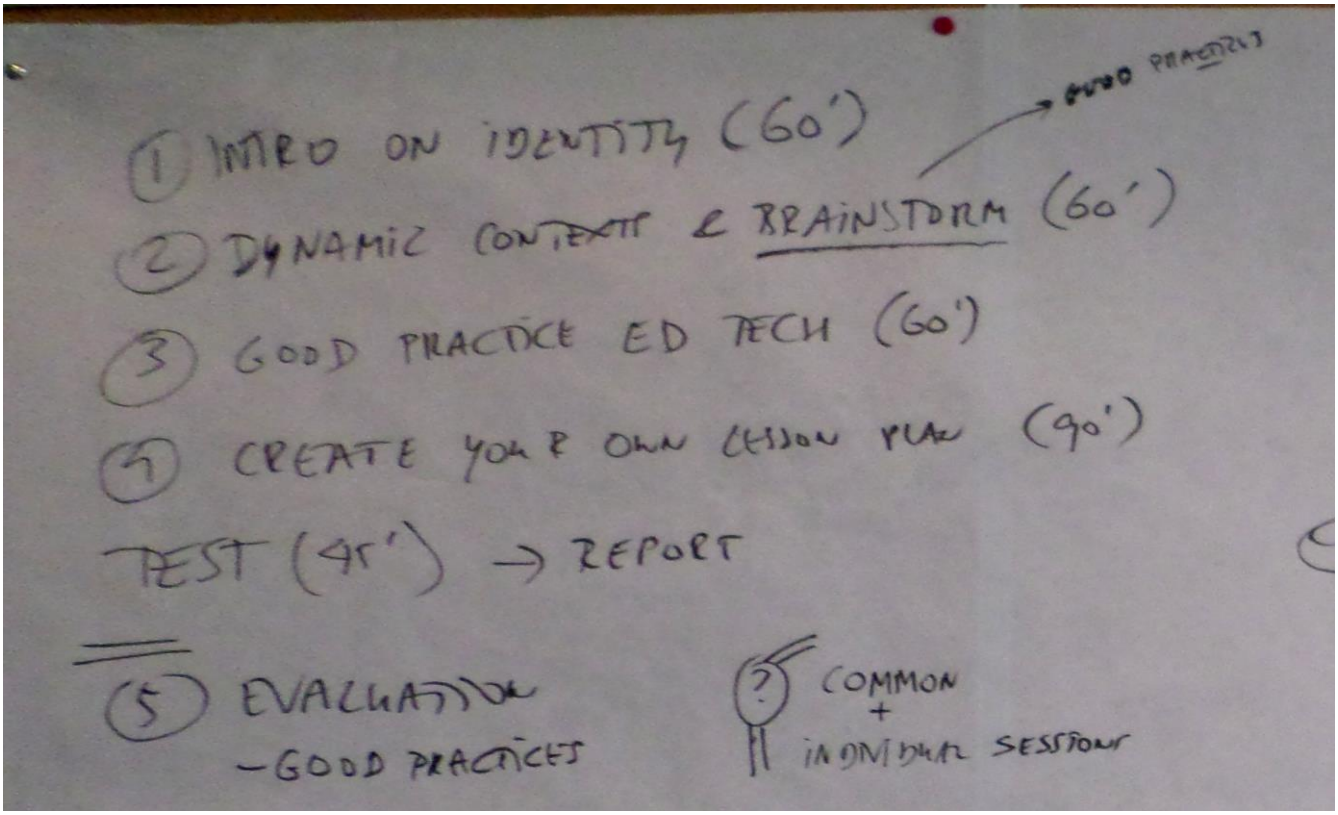

Figure 3: Curriculum Modules pre-design

2.3. Augmented Reality, the AR game and lesson requirements

The starting point of the project is the transfer of innovation stem from the CDEI project: an serious Augmented Reality game and didactic pointers on how to create a lesson plan to embed the use of the game.

The legitimations for playing an AR game in the class room are the following (partly taken from the CDEI project):

- Augmentations that are triggered by Augmented Reality in theory can be audio, tactile, aromatic, tasty – but in practice they are predominantly visual. As such, they are a product of the modern age in which visual triggers are everywhere. This means that young individuals accept the visual effects of Augmented Reality without hesitation.
- Augmented Reality is a new and niche technology. Since new technologies currently are part of the communication grammar of young individuals, Augmented Reality, like quite a few other new technologies, immediately trigger student engagement. This effect is enhanced by the fact that Augmented Reality is a niche technology. Most students will not have experienced Augmented Reality. Therefore, students will be hyper engaged by the technology, prone as young individuals are to test out any new technology. For young individuals the use of Augmented Reality will feel like "fun".
- As a new technology, as part of the communication grammar of young individuals, Augmented Reality triggers trust. Young individuals, according to f.i. Sherry Turkle (Alone together, 2011), open up far less critically and much more trusting and empathetically to technologically steered apps and objects like robots than they do to individuals. Augmented Reality therefore is ideally suited to use to address "difficult" or very private subjects.
- The openness and trust that are generated by new technologies such as Augmented Reality can lead to an uncritical endorsement of consumerism.
- Augmented Reality's most used effect in marketing and communication is to trigger interest by the user for specific objects or points of interest in the environment of the user. The interest is triggered for objects or points of interest that are visible on the screen of a device or are in line with the direction in which the device points. Following this logic, Augmented Reality can be used to trigger interest in anything. It can also trigger interest in ourselves when we are visible on the screen of a device. As such, it is a rare technology that evokes reflexivity.
- The visual quality of Augmented Reality enables a different kind of presentation: rather than logically explaining a process step by step, the visual elements can create an experience in which processes become clear without the need for a rational effort. As such Augmented Reality reaches students that are less served by a transfer of knowledge by means of transmission.
- As many new technologies, Augmented Reality is interactive and immediate. It therefore appeals to students who have a short span of attention.
- Online identities have an "emergent" quality: they are triggered by the online actions of an individual and by online actions by individuals and institutions around them. There is no clear, causal chain of actions, leading from cause to effect. Therefore, an alternative instrument than regular top-down teaching is need to address the emergent relation between data sharing and online identities. Since Augmented Reality itself as a technology also is "emergent" (a trigger triggers augmentations but this process is, just as the relation between data sharing and online identities, "emergent"). As such it is a great instrument to show "emergence" rather than falsely present a causal explanation. Following this logic, Augmented Reality is very useful to use to address any "emergent" process as such.

Thus, Augmented Reality will be easily accepted by students in the class room and will trigger high engagement. It is very suited to address "difficult" or private subjects and evoke reflexivity among students while at the same time being experienced by them as "fun". Or it can clarify complex, emergent processes. Augmented Reality thereby reaches students that are less well reached by the traditional transfer of knowledge and will serve even those with a very short span of attention. The downside of Augmented Reality, like any new technology, is that can lead to uncritical consumerism.

The AR game, based on Augmented Reality, will do all of the above. It nevertheless needs to be embedded in a lesson plan that has specific characteristics, linked to the characteristics of Augmented Reality:

- The lesson may not be based on a top-down transfer of knowledge, as was found out in the CDEI project by coincidence. A pilot teacher who had a bad day fell back on het traditional, top-down style of teaching while playing the game, after which the pilot lesson evolved just as any other traditional lesson, notwithstanding that the AR game was being played.
- The lesson must be interactive and must convey a sense of immediacy. The student engagement that is triggered by the game, even by those who are rarely engaged in the class room, must be supported to be maintained.
- Since the game evokes student openness and trust, students may become not only far more spontaneous but also forget to keep certain boundaries. This is especially poignant when private themes are touched upon in the game, such as friendship and love. During the CDEI pilot sessions 12-year olds in one class room started discussing their sexual experiences online. Thus, elements of prophylactics must be in place in the lesson to guide students through their emotions.
- The downside of the technology, empowering an uncritical consumerism needs to be counterbalanced in the lesson. For students in the age group 8-11 this means that they need to feel empowered in their sense of agency since their psychological development does not yet allow for independent critical thinking. For students in the age group 12-14 this means that their newly acquired mental skills to think more independently and critically needs to be stimulated.

The characteristics of the lesson plan that is fit to provide Augmented Reality in the class room are quite different from the characteristics of every-day lessons. Teachers therefore need not only be instructed how to implement an Augmented Reality-based lesson plan, but also need to understand what it in it for them in order to leave their regular comfort zone.

2.3.1. Learning needs to be addressed

The workshop thus needs to support teachers in:

- Applying interactive didactics;
- Applying elements of prophylactics;
- Understanding the effect of new technologies on students;
- Empowering students aged 8-11 in their sense of agency;
- Empowering students aged 12-14 in their independent, critical thinking skills;
- Understanding why using an AR game actually makes their day-to-day teaching easier.

This means that the workshop needs to encompass modules on:

- Interactive didactics (session 2);
- Prophylactics (session 2);
- The impact of technology on identities (session 1):
- Empowering a sense of agency (session 1). This is executed by means of addressing student learning types and empowering "growth mindsets" (for students aged 8-11) and by means of addressing "identity labels" empowering less strict identity labels;
- Empowering critical thinking skills (session 1). This is executed by introducing students (12-14) to the analyses and good practices by Zygmunt Bauman ("liquid life");

The teacher should be able to transparently describe the impact of all the workshop modules on their teaching and on their students.

2.4. Learning modules

In summary, the learning modules that will be instructed are the following:

- Identity labels
- Learning types
- Identity and society
- Liquid life
- Good practices
- Identity theories
- New technologies
- Interactive didactics
- Prophylactics
- Lesson plan development
- AR Game creation
- Good practices (of the above – where applicable)

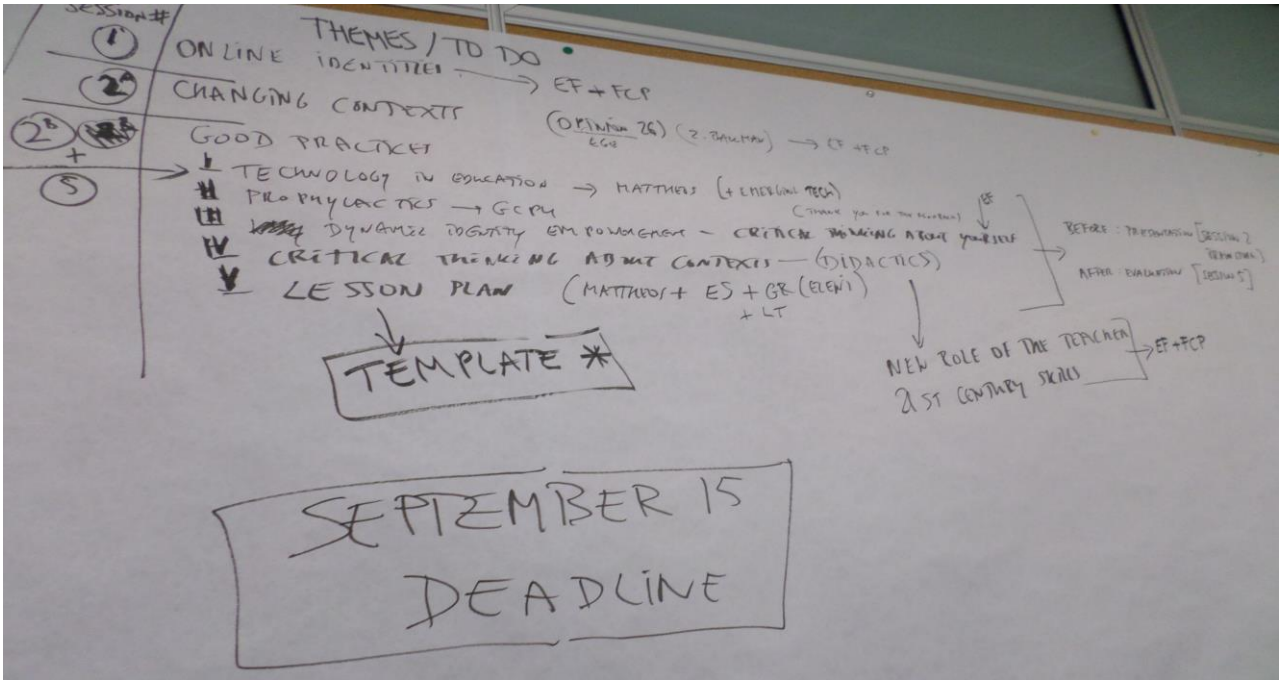

Figure 4: Conceptual map

2.4.1. Workshops General Framework

As far as the workshop organisation goes the partnership has reached to the following common agreements:

- 2 workshops per country
- 1 workshop per age group per country
- Per workshop minimal of 8 teachers present – subject teachers for age group 12-14, general teachers for age group 8-11, mentors for age group 15+ (where applicable)

The Country Reports' outcome has the following impact on the recruitment:

- In all countries there is a great willingness among teachers for the Curriculum, but they seem to have a wrong understanding of the subject – they limit it to online safety only and not to other risks and, more importantly, opportunities. This misconception should be pointed out during the recruitment.
- In Lithuania recruitment will take place in different schools.

[i] In Spain most mentioned as good practices are: speaking with students, with parents. In Greece a majority of teachers prefer discussing the subject with students, the school management and parents. In Poland talking with students and parents is the number one good practice. The same holds for Lithuania and the Netherlands.

[ii] In Spain 78% cannot name tools relevant for online identities, in Poland and the Netherlands 67% and in Lithuania almost nobody can name any tools. The tools that were mentioned were often irrelevant.

[iii] Lack of ICT among teachers is mentioned as a show stopper in the Greek and Lithuanian Country Reports.

[iv] In Spain 75% believes their schools are (very) open to the use of ICT in education, in Greece 83%, in Poland 40% while 26% rates it as average and in the Netherlands it is rated mainly as average.