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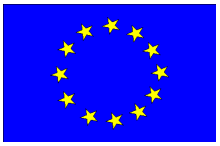

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Abstract	The document is an update of D.5.1. It describes how the project went beyond the state of the art in the field of learning design and the methodology conceived for technology enhanced ICH education. Ten exemplar educational scenarios (one for each ICH considered) are also presented.
Keywords	Educational scenarios, pedagogical planning, LMS.

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Table of Contents

1. Executive summary

The i-Treasures project deals with ICH (Intangible Cultural Heritage) preservation and transmission; its primary aim is to develop an open and extendable platform to provide access to ICH resources and contribute to the transmission of the rare know-how from Living Human Treasures to apprentices.

The main purpose of Task 5.1 and of this document in particular, is to propose innovative teaching and learning scenarios, able to demonstrate and exploit the technologies developed by the project.

In particular, in this document we will show that, as far as the educational perspective is concerned, so far the project has brought innovation at least into two sectors:

- In the ICH field, and in particular in the existing teaching and learning practices;
- In the Technology Enhanced Learning (TEL) field.

Regarding the former point, in the present document we will present ***a methodology developed within i-Treasures to support ICH education through the use of innovative technologies;*** moreover, we will also include ***a number of exemplar educational scenarios,*** which have been revised, refined and populated with educational resources in respect to those already presented in D5.1. Main aim is to demonstrate the methodology, by providing examples of the learning activities and paths that can be offered by the i-Treasures platform. Through these scenarios, ***it will be demonstrated that i-Treasures is going beyond the state of the art in the ICH education, by proposing innovative tools and novel pedagogical approaches which have never been proposed before for the teaching and learning of rare cultural expressions.***

Regarding the latter point, we will present the work done so far regarding the creation of ***the integrated environment, able to support educators and experts in the creation of innovative educational scenarios***, as well as in the delivery of the corresponding courses through a Learning Management System. Also from this point of view***,*** we will demonstrate that ***i-Treasures has gone beyond the state-of-the art by creating an integrated tool, able to support the whole 'learning design lifecycle'***, starting from the conceptualization phases, down to the design of sequences of learning activities and the planning of each single activity, till their implementation into a course, which is ready to be delivered to learners through the Learning Management System.

2. Introduction

Work package 5 in i-Treasures has to do with the development of the integrated platform for research and education.
In particular, objectives of WP5 are:

1. To identify the learning scenarios that will be supported by the system;
2. To develop an interactive 3D environment for visualization aimed at supporting sensorimotor learning;
3. To enhance learning of rare singing knowledge through an innovative text to song module;
4. To develop the web platform for research and education;
5. To integrate different parts and modules into an operating system.

To reach these objectives, in WP5 a number of Tasks are foreseen (see Document of Work - DoW). In particular, "Task 5.1 – Educational scenarios" is deputed to reach the first objective. Purpose of Task 5.1 is to define exemplar educational scenarios that can be supported by the i-Treasures platform and that can made available through the LMS (Learning Management System) for learners interested in one (or more) sub-use case(s) (see D5.1).

In particular in this document we will present a methodology for ICH education and a number of exemplar educational scenarios, which have been revised, refined and populated with educational resources in respect to those already presented in D5.1. Main aim is to demonstrate the methodology by providing examples of learning activities and paths that can be offered by the i-Treasures platform. Through these scenarios, it will be demonstrated that i-Treasures is going beyond the state of the art in the ICH education, by proposing innovative tools and novel pedagogical approaches which have never been proposed before for the teaching and learning of the rare cultural expressions.
To be noted that most of these scenarios will be also used under WP6 and WP7 for demonstration and evaluation purposes respectively, but this won't prevent the partnership to create others scenarios during the life span of the project, whenever other contexts/ possibilities of exploitation/dissemination will emerge.

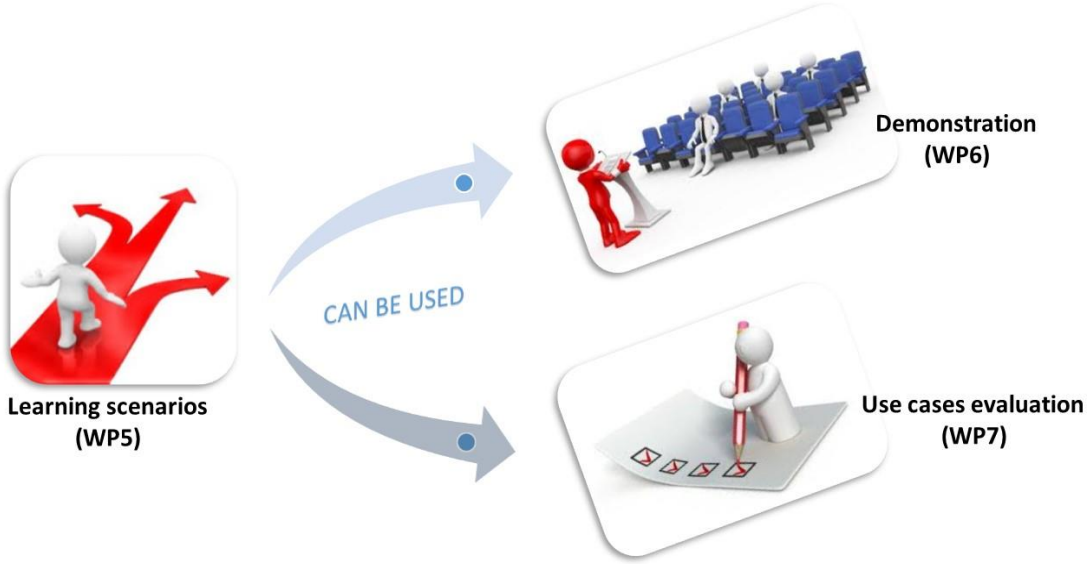

Figure 1 - Work packages relations

In this document we will also present the work done so far regarding the creation of the integrated environment, able to support educators and experts in the creation of

innovative educational scenarios, starting from their conceptualization and design, down to the delivery of the corresponding courses through the Learning Management System.
In D5.1 we already acknowledged the importance of having a single tool able to support the design phase of the educational scenarios, and this tool, called Pedagogical Planner (PP), was developed by CNR during Y1 and is already described in that document. In the same deliverable, the need was recognized to integrate the PP into the i-Treasures platform, and possibly to complement it with functionalities able to support also the automatic transfer of a complete pedagogical plan created in the PP, into one corresponding course on a Learning Management System. This is recognized as a clear gap in the Technology Enhanced Learning field (Reigeluth, 1996; Reigeluth, 1997), which emerges from the analysis of the literature in the field of 'learning design' conducted in Section 3 of D5.1.
From this point of view, i-Treasures has gone beyond the state-of-the art by creating an integrated tool, able to support the whole learning design lifecycle, starting from the conceptualization phases, down to the design of sequences of learning activities and the planning of each single activity, till their implementation into a course, which is ready to be delivered to learners through the Learning Management System. This piece of work is also documented in the present deliverable.

This document is structured as it follows:

- First of all, we synthesize how the creation of an educational scenario is supported in the i-Treasures project, from design to implementation. This is done thanks to a specific tool, called the Pedagogical Planner (PP), whose functionalities are described (Section 3);
- Secondly, we describe the methodology developed within i-Treasures to support ICH education through innovative methods and technologies (Section 4);
- Then we give an overview of the exemplar plans and courses that have been produced so far, to exploit at their best the modules offered by the i-Treasures platform (Section 5);
- Both the PP and the methodology are then discussed, so as to enlighten strong points and open issues, in such a way as to identify possible future research directions (Section 6).

3. Supporting *learning design* in ICH education

3.1 State of the art regarding the *learning design* field

A complete state of the art review regarding the learning design field has already been conducted (1) in D5.1. Here, for completeness sake, we will only report the main results of such review.
In the TEL (Technology Enhanced Learning) research field, it is widely recognized that when one has to do with traditional teaching and learning contexts and wants to introduce an innovation, there is a clear need for educators to be supported in the crucial phase of (re-)designing the educational intervention [1], [2].
This is obviously the case of i-Treasures, where we have to do with contexts (rare ICHs) where traditionally there are no formal or standardized educational paths, and where for sure technologies have played so far a very limited role in supporting the teaching and learning processes [3], [4], [5], [6].
Given that i-Treasures is somehow disruptive in this sense, as the project is trying to make the most of some innovative technologies to transmit and preserve some intangible cultural expressions, we had to provide ICH experts and educators with a tool able to support the *learning design* process [7]
Drawing from the literature in the field, the learning design process is composed of three main phases [8]:

- the *Conceptualization phase*, where educators make a rough design, define the learning objectives to be reached, the contents to be addressed, and consider the target population and the context;
- the *Authoring phase*, where detailed activities are planned and their flow fixed; besides, during this phase teachers usually need to associate to each activity the related educational resources, etc.;
- furthermore, some researchers in the learning design field advocate also the computer-interpretable representation of designs, in order to enable the configuration of technology enhanced learning environments (such as for example Learning Management Systems) according to the design decisions made by teachers in the former two phases [9], [10]. This phase, that here we will call *Implementation*, allows to create environments, ready to be delivered to learners.

The literature in the field acknowledges that, while there is a rich offer in terms of tools and methods supporting learning design [11], [10], at the same time there is a lack of tools able to support the whole process (from the initial phases of macro-design, down to the micro-design of each learning activity, up to the delivery of activities to students). Moreover, Mor and colleagues [12] underline the "shortage in full-cycle integration", i.e., the lack of tools to support teachers not only to make their design decisions explicit, but also for using those instructions to automatically set up the technological learning environments to be used by the students.
Here it is where i-Treasures comes into play and goes beyond the state of the art, by offering a tool able to support the whole design lifecycle, as it is illustrated in the following section.

3.2 Going beyond the state of the art: the Pedagogical Planner

In this section, the Pedagogical Planner (PP) is briefly described, as it has been proposed and used within the i-Treasures project. A more extensive description can be found in D5.1.
The PP is a scalable cross-browser web-based application developed in PHP, MySQL and javascript.

The tool is intended to cover the three learning design phases mentioned above [8]. Consequently, the tool can be conceptually seen as subdivided into three areas: a) the *Conceptualization area*; b) the *Authoring area*; c) the *Implementation area*.
As one can see in Figure 1, in the Conceptualization area the ICH expert is guided in the definition of a number of aspects, among which:

- the target "Population": here the designer can reflect and then make it explicit the main characteristic of the population, their age, their pre-requisites (if any), etc.;
- the learning "Context": here the designer can define the learning situation/environment where the educational intervention will be carried out. In particular, type of context, constraints (if any), timing and setting;
- the "Content domain": the designer defines the main aim of the intervention and builds a map of the content to be addressed;
- the "Objectives and Metrics": here the designer is supported in defining the main learning goals the intervention is meant to reach, plus the criteria to monitor and evaluate the teaching/learning process (during and after the enactment);
- the "Tools": here the designer can tentatively define the innovative tools and the features s/he is planning to use during the enactment phase with learners.

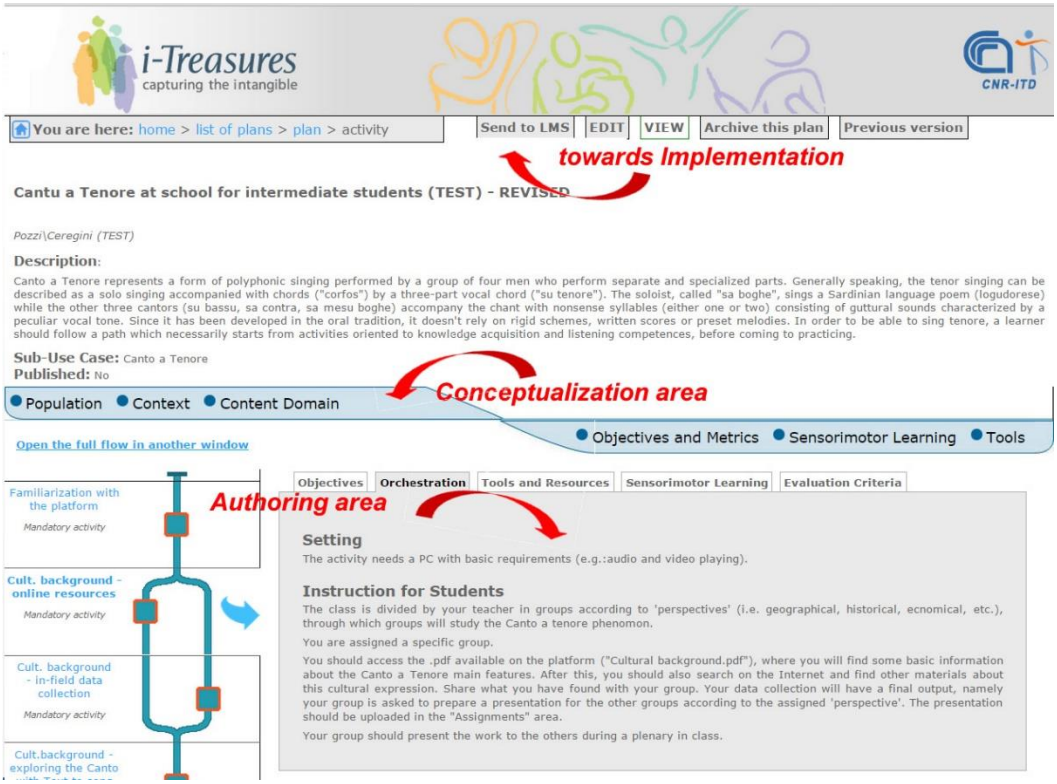

Figure 2 - Areas of the Pedagogical Planner

In the Authoring area of the PP, the ICH expert is supported in the definition of the activity flow, i.e. the sequence of activities to be proposed to learners (left side of Figure 2), which should then lead them to reach the learning objectives. Activities can be mandatory or optional. Besides, the activity flow can be sequential, random or can include more than one ways, so to allow a certain degree of personalization in case one wants to propose different activities to different learners (or groups of learners) to reach the same set of objectives.
In any case, each activity is designed in terms of: Objectives (where specific learning objectives of the single activities are defined); Orchestration (where the required setting is described and the instructions for students are provided); Tools and

Resources (educational resources and tools to be used by learners during the enactment phase are provided); Evaluation Criteria (criteria to be adopted in order to evaluate the effectiveness of the activity are defined) (see bottom right side of Figure 2).

Once the Conceptualization and the Authoring phases are completed, in case you also need the corresponding course to be created on a Learning Management System (LMS), the PP is also able to support the Implementation phase, i.e. the automatic migration of the plan into the LMS and thus the configuration of the corresponding course.
In i-Treasures the LMS adopted is Chamilo[1]. As it was already explained in D5.4 [13], Chamilo was chosen after a review conducted among similar Learning Management Systems, which revealed this software to fully meet the requirements expressed by the project in D2.1 [14]. From a pedagogical point of view, Chamilo allows a rich variety of different learning activities, covering the needs in the field of ICH education. Besides, Chamilo allows to have SCORM resources, which are potentially exportable to any other SCORM-compatible LMS. Last but not least, the choice was also influenced by the fact that UOM was familiar with that tool and this was considered an added value to speed up the development process and make any customization process smooth.

Once the first two design phases are done, all the design knowledge contained in the PP can be automatically migrated (button “Send to the LMS” in Figure 2) into Chamilo, where a new course is created, which contains all the basic information about the educational intervention (objectives, contents, etc.), as well as the activity flow, already filled in with the educational resources and tools provided by the designer in the previous phases (see Figure 3).

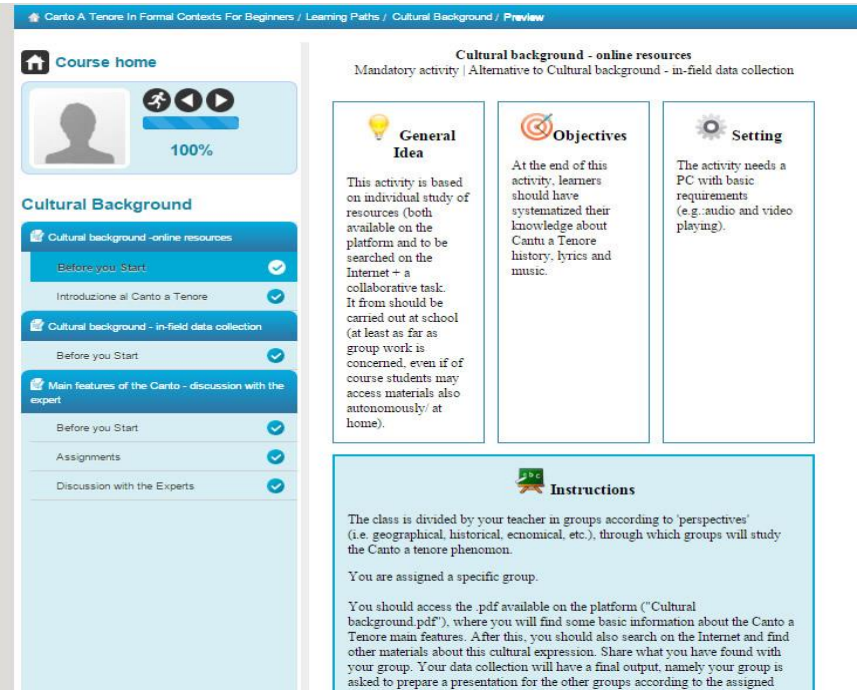

Figure 3 - Implementation in the LMS

From a technical point of view, in order to allow the migration from the PP to the LMS, once the design is ready, an XML is produced. The XML document, conveniently

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encrypted, is then sent through a POST form to the LMS, which elaborates the request and uses the received information to create and properly populate a new course in Chamilo.

To conclude this section about the Pedagogical Planner, it is important to underline that not in all the i-Treasures contexts a LMS course will be necessary, as there are situations, as for example non-formal ones (i.e. museums, exhibits) where the mediation of such a platform does not make any sense. In these cases, though, the design phase is still crucial and thus it is conducted in i-Treasures through the Pedagogical Planner (Conceptualization and Authoring phases), the only difference being that the Implementation phase is not carried out.

4. Towards a methodology for technology enhanced ICH education

4.1 State of the art regarding *ICH education*

ICH is becoming an emerging topic at all the levels and starting from the Convention for the Safeguarding of Intangible Cultural Heritage adopted by the General Conference of UNESCO in October 2003 [15], which clearly stated there is a need to foster ICH education, a number of initiatives and projects around this topic has started to be offered. An extensive overview of these initiatives (mostly repositories or projects that take an archival approach) has been already published in D2.1 [14].

Along with these archives, more formal and structured training initiatives have started to be delivered, often in the form of online and/or face-to-face courses about the ICH topic. Usually these courses address the ICH domain as a general topic (or with a focus on one country) and are targeted to people working in the field, to help increasing their awareness and to support them in finding innovative solutions to the issue of preservation and dissemination to the wider public.

UNESCO through its field offices and secretariat has organized a series of training and capacity building initiatives for the safeguarding of intangible heritage internationally.

For example, the UNESCO Office in Brasil is promoting an online course on "Management Training of Intangible Cultural Heritage"[2]. Aim of the course is "to strengthen the local capacities for structuring and implementing intangible cultural heritage policies in Brazilian states and municipalities through training of cultural managers for action towards safeguarding intangible cultural heritage – legislation, identification, recognition, support, and fostering its sustainability." The course targets public managers in charge of administrating Intangible Cultural Heritage safeguarding policies.

Similarly, the Asia/Pacific Cultural Centre for UNESCO has delivered a series of "Training course(s) for safeguarding of Intangible Cultural Heritage"[3]. Objectives of these courses are: "a) to learn about the Japanese systems for safeguarding of ICH, in terms of inventory making at the national and local authority levels; b) to learn about the activities which communities are working on for safeguarding the Gion Festival Yamahoko Events through observation of their activities in Kyoto; and c) to share information on safeguarding of ICH in each country of the International ICH Network, and to collect useful information for own countries".

UNESCO Bangkok and the Sirindhorn Anthropology Centre in Thailand have supported over a series of years the annual fieldschool focused on safeguarding intangible heritage in the Lamphun region of North Thailand. The fieldschool aims to bring together local communities and heritage professionals from the Mekong region to develop safeguarding projects (see [16]).

Also Universities have started enriching their offer with courses addressing ICH. For example the University of Massachusetts Amherst (UMass Amherst University) is offering a course covering the area of "Safeguarding intangible heritage"[4]. The course "aims to equip participants with an understanding and a working appreciation of both theoretical and operational approaches to intangible heritage. It also aims to equip

[2] http://www.unesco.org/new/en/brasilia/about-this-office/single-view/news/open_registrations_for_the_distance_course_on_intangible_heritage/#.VWcU08_tlBd
[3] http://www.accu.or.jp/ich/en/pdf/2009-10TrainingCourseFinalReport.pdf
[4] "http://www.umass.edu/chs/images/safeguarding%20intangible%20heritage.pdf"

participants with the necessary skills to empower communities and engage them in the safeguarding of their own heritage." The course targets heritage professionals, community leaders, non-profit organizations, staff members, and civil servants, as well as higher education students from the social sciences/humanities (anthropology, cultural studies, sociology, public policy, etc.).

The University François Rabelais of Tours is also offering a master's degree programme ("Master Intangible Cultural Heritage"[5]). "The degree seeks to render students capable of taking charge of intangible heritage projects of all kinds by equipping them with a carefully considered range of intellectual and methodological tools. Besides theoretical knowledge, this degree confers practical competences, both adapted to specific areas of the ICH field (inventorying, promotion of ICH visibility and recognition, etc.) and of a boundary-crossing nature (cultural heritage law, administrative law, collectivity and community rights, project development and management, etc.)." Other courses are more oriented to train teachers and educators about this topic. As an example, the training programme "Teaching cultural heritage and cultural diversity"[6], developed by the EU/CoE Joint Project-Support to the Promotion of Cultural Diversity in Kosovo, has got the goal "to share knowledge about cultural heritage and cultural diversity with educators and to help teachers develop their content knowledge and teaching skills within this topic area."

As part of the UNESCO recognition process, states that apply for their chosen cultural expressions to join the Intangible Heritage List should include a safeguarding action plan with specific educational activities for the nominated cultural expression. This may include specialist apprenticeships for the transmission of crafts knowledge, as in the cases of Aubusson tapestries with the support of small companies and specialist workshops. Or, it may also include specialist training schools, like the acting schools for Noh Theatre in Japan[7].

The number of existing courses shows that there is a growing interest around the ICH area.

Nonetheless, when one wants to get an in depth insight in one specific cultural expression, it is far more difficult (often impossible in the case of *rare* ICHs) to find formal and structured training initiatives, being them online or face-to-face. Of course we are not talking about finding information or data on the web, as there are plenty of archives or repositories collecting info about one or more ICHs. On the contrary, we are talking about finding more structured and articulated training initiatives to learn the Tsamiko dance, or on the Canto a Tenore. This is justified by the fact that often these cultural expressions do not have stable and consolidated teaching and learning practices, but are informally and orally transmitted (see more details about these aspects in D2.1). This means that face-to-face learning paths do not exist for most of these rare ICHs, let alone online courses.

From this perspective, i-Treasures is going beyond the state of the art, by trying to address the challenge of how to offer training initiatives, possibly mediated by the technology, to support teaching and learning processes in ONE specific cultural expression. In the following section, we propose the methodology developed by i-Treasures, to support ICH education.

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[5] http://international.univ-tours.fr/admissions-courses/master-intangible-cultural-heritage-vocational-m2--314192.kjsp

[6] https://www.coe.int/t/dg4/cultureheritage/cooperation/Kosovo/Publications/TEACHER-MANUAL-TIPS_en.pdf

[7] You can find more examples of similar educational activities on the UNESCO website of nominated elements. Each candidature file contains among other topics information about existing and planned educational activities.

4.2 Going beyond the state of the art: the i-Treasures methodology

Based on the numerous interactions we had in the last two years with the various ICH experts, we have started developing a completely new methodology for ICH education. This should not be intended as a methodology for 'general purpose' training initiatives on ICH preservation and safeguarding, but rather for ICH education when this has to do with preserving and transmitting one specific ICH, either rare or not.

The methodology is based on the idea that, when one wants to learn a cultural expression, there are three main essential stages that s/he needs to get through, namely:

- The Basics: at a first stage, if one wants to learn more about a cultural expression, s/he needs to have a clear idea about the cultural background where the expression originated; s/he must get information about the historical, geographical, socio-cultural conditions/factors that influenced its origins, as well as getting information about the main features of the cultural expression itself; in other words, the learner must have access to the 'basics', i.e. the corpus of theoretical knowledge that will allow her/him to appreciate and understand the ICH in its intrinsic and cultural value, including the ways this is typically taught and learnt.
- The Exploration phase: at a second stage, the learner must have the chance to be exposed to a number of performances, allowing her/him to observe and/or listen to the expert performers, in such a way that s/he becomes a 'good listener/observer', able to appreciate/ detect the main features of the ICH itself (steps, moves, parts of songs, etc.), but also s/he should become able to appreciate the differences (if any) between styles, local variations, etc.
- The Immersion phase: last stage, if the learner wants also to start performing it, s/he will need to practice, i.e. s/he will need to have the chance to try to perform, having the possibility to get feedback in such a way to detect her/his mistakes and improve the quality of the performance.

The three phases basically reflect what usually takes place when naturally and spontaneously ICH learning occurs within one local community of performers: even if the stages are not formally and explicitly done in 'real contexts', this is what happens *de facto* for the people who are naturally exposed to the ICH, because they live in daily contact with the cultural expression and its cultural context.

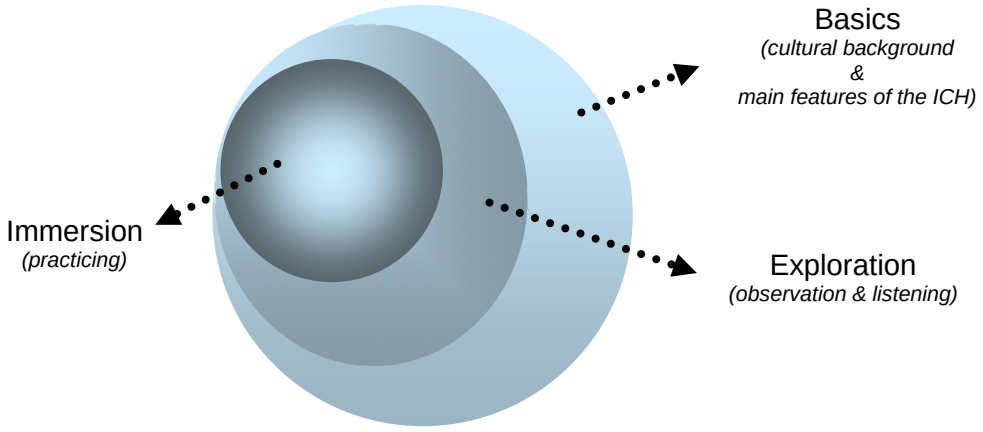

Figure 4 – The i-Treasures methodology for an ICH education

When one wants to offer a training initiative addressing an ICH, depending on the context and the objectives, one can decide to address one of the above mentioned stages (typically the Basics), or focus on the former two stages (Basics and Exploration), and - on some occasions - it will be also possible to offer the whole package, i.e. Basics + Exploration + Immersion. What is not possible/advisable, is to

go directly to the third phase (Immersion), without having gone through the former two stages, as this won't allow the learner to appreciate the real, intrinsic value of the cultural expression at hand.

Of course here ***we are NOT claiming that an 'artificial' training initiative, which is also limited in time, can ever replace the 'natural' daily contact of a person living within a specific culture, but we are trying to demonstrate that – especially thanks to the use of technology – it is possible to allow people to know and appreciate an ICH even in depth and even if they are at a distance; this aspect is of paramount importance for ICH preservation, especially since we consider that most probably the same people, without the technology, could have never acquired the same knowledge and skills.***

The proposed methodology can be implemented either in formal or non-formal learning contexts; moreover, it can be applied in technology enhanced learning initiatives, as well as within in person training. In the following, more details about these different situations are provided.

4.2.1 Technology enhanced learning initiatives vs. in person training

As already mentioned, the methodology can be applied in the context of technology enhanced learning initiatives, or through in person actions, but each phase of the methodology brings certain requirements in terms of methods and tools to be adopted to adequately cover its contents.

For example, in face-to-face contexts, the Basics phase can be covered by providing materials to the learners, or asking them to search for it, possibly through direct contact with the performers. During this phase collaborative learning approaches can be very helpful, by dividing learners in groups and asking each group to cover one specific area and then to share the results with the others; this will help to cover the complexity of the ICH domain.

In online contexts, the same kind of activities can be proposed, by providing (or asking the learners to retrieve through the Internet) texts, audios and/or videos able to document the various features of the ICH, so to provide an idea of the cultural background beyond the ICH. Here the technology can play an important role, especially if the training initiative is proposed 'far away' from the original community of performers, as ICT helps 'to cover the distances' by allowing information retrieval, as well as interactions with the experts.

Also the Exploration phase - where possible - will rely on the direct contact with the performers, while, in other situations, can be addressed through audios and videos, possibly annotated, in such a way that the learner starts appreciating the different steps/ moves /sounds/ parts of songs /styles, etc., depending on the ICH at hand.

The Immersion phase is usually the more complex to be addressed, as here the learner needs to practice and an expert performer should be able to provide feedback. When this situation is not possible, sensors (of various kinds) can track the learner while performing, in such a way that her/his performance is than compared with the one of the expert(s) (previously recorded) in such a way that s/he gets feedback in real time [17]. This phase is of course particularly challenging and costly, because it requires the availability of sensors (some of which may even be expensive), big amount of data previously recorded and analyzed, the presence of algorithms to compare the two performances, etc. In i-Treasures most of the work had the aim to provide solutions to support the Immersion phase.

In any case and at various degrees, technology can in any case play a significant role when one wants to create conditions for a learner to acquire both theoretical knowledge, as well as sensorimotor skills in one specific ICH domain.

4.2.2 Formal vs. non-formal learning contexts

Training initiatives on one ICH can be offered both in formal (schools, universities, etc.) or non-formal contexts (museums, exhibits, etc.).

Of course the learning objectives that you may set in the two contexts are very different, more ambitious in the former case, more low-level in the latter one. In formal settings, you usually know your target population and you can set your objectives according to their characteristics; in non-formal contexts, you usually address a wide and variegated population. Moreover, in a formal context you usually can count on a number of sessions/lectures, in the non-formal context, you have typically one-spot visits.

Of course all these aspects have got implications in the application of our methodology: in a formal context, you can decide to address one, two or all the three phases and you can offer structured, long-term and multi-session courses. This will require the adoption of a Learning Management System (LMS), able to allow an easy and progressive access to the learning materials and to deliver various kind of learning activities (from individual quizzes, to socio-constructivist learning activities, such as discussion, peer-review, etc.). As already mentioned in the precious section, i-Treasures not only offers a LMS, but also supports the teacher/designer in the creation of her/his courses, by allowing the automatic import of the deign into the LMS itself.

In non-formal contexts instead, (such as for example a path within a museum, or a workstation at an exhibition), one should not expect the learner to pay too much attention to what s/he is exploring; in these situations one should rather give the visitor a ‘flavor’ of the variety and complexity of the main ICH features. During a visit or a tour, a dynamic, motivating and appealing context, such as a game, is much more fitting, rather than offering a complete course on a structured and complex learning environment. Still, within one single game, you can decide to cover one or two or all the three phases of our methodology. Note that, even if a complete course on the LMS does not exist, still the Pedagogical Planner is a valuable tool to be used during the design process of the game itself.

Of course the objectives and the level of knowledge acquired are different according to the context in which the learning experience is done and the population involved (general public, apprentices, etc.); anyway, this methodology ensures that even the visitor of an exhibition can go through all these phases, although at a superficial level, gaining, in this way, a global experience of the ICH.

In the following section, we present the educational scenarios implemented so far within the i-Treasures project, with the aim to provide examples of possible ways to implement the above described methodology. It will be illustrated that, depending on the constraints we had, we adopted the methodology by tuning it, in such a way to create different kinds of training initiatives about one ICH.

5. The i-Treasures educational scenarios

During the second year of the project 10 education scenarios were developed. All the scenarios were planned using the PP tool and some of them (e.g. Canto a Tenore, Human Beat Box, Tsamiko, Pottery), became courses on the LMS

Therefore, 10 exemplar pedagogical plans are presently available on the PP: Four for the singing and the dancing use cases, one for the craftsmanship and contemporary music composition use cases respectively. Some of these plans are similar to their first versions described in D5.1, while others were partially or completely reconsidered, envisaging new learning situations and/or in the light of the available resources and tools.

As for the first versions, we tried to cover different learning situations (formal and non-formal contexts) and target populations, trying to involve segments of population usually excluded (like the general public). Moreover, we tried to combine on-line and face to face activities.

To do this we have conceived plans in non-formal contexts (like museums or exhibitions), as well as formal contexts appointed for learning in other fields (e.g. schools). In other cases, we have designed plans for more 'traditional' target populations and have proposed the use of innovative methods and technologies to support and enhance the passing down of the know-how.

Furthermore, different learning approaches have been included according to the context and the population involved: from collaborative strategies (e.g. Canto a Tenore plan) to individual learning (Pottery plan). Some plans promote self-regulated and exploratory learning (e.g. Human Bet Box plan), whereas others are more teacher-driven.

As in the first versions, all the paths include at least one activity based on the use of the 3D platform for sensorimotor learning or the Text-to-song, (see D2.1 and D2.2)

A preliminary 'familiarization activity' always introduces all the other learning activities, in order to allow the learner to get familiar with the platform functionalities and sensors, before coming to the heart of the path.

The following table provides an overview of the existing scenarios.

Use case	Sub-use case	Plan	Course	Context
SINGING	Canto a Tenore	X	X	Formal
	Canto in Paghjella	X	X	Non formal
	Byzantine music	X	X	Formal
	Human Beat Box	X	X	Non Formal
DANCING	Calus dance	X		Non formal
	Tsamiko dance	X	X	Formal
	Walloon dance	X		Non formal
	Salsa dance	X	X	Formal

CRAFT-MANSHIP	Pottery	X	X	Formal
CMC	Contemporary music composition	X	X	Formal

In the following, the educational scenarios developed so far are described.

5.1 The traditional singing use case

In the traditional singing use case four educational scenarios were developed. All the scenarios include a plan and a course on the LMS.

As it will be illustrated in the following, plans have been conceived for different learning situations. This variety gave us the opportunity to design plans quite different one from the other, envisaging the use of a wide range of strategies and technologies.

The i-treasures platform, and in particular the 3D module for sensorimotor learning, represents an essential resource and is adopted in all the sub use cases in order to support the different phases.

5.1.1 Cantu a Tenore at school for intermediate students

In the sub-use case of the Canto a Tenore the educational scenario is composed of both the plan on the PP and the corresponding course on the LMS.

The context is formal in this case, i.e. an upper secondary school located in an area where Canto a Tenore is diffused, so that the most part of the students have a previous shallow knowledge of the Cantu a Tenore tradition. In this sense, this target can be considered ‘intermediate’.

The current Canto a Tenore plan mainly reflects the one developed for D5.1. In particular, the results of the conceptualization phase remains the same, as well as the flow of activities originally envisaged, some minor changes have been done mainly related to the type of resources envisaged according with what was available (see D5.1).

The course is made available through the LMS and it is conceived as a blended learning course as it’s based on different instructional methods (individual study activities, group activities, discussions, guided practice, etc.), different level of guidance (teacher-guided activities and self-regulated learning) and it encompasses on line and face to face activities.

Even if it’s an extracurricular path (and therefore entails some time constraints) the formal context allows getting through, at a quite deep level, all the stages foreseen in the methodology developed in i-Treasures:

1) The basics: this stage is addressed through four activities (two are given as alternatives) aimed at supporting the student in systematizing their knowledge about Cantu a Tenore history, lyrics and music. This process is supported by providing materials to be studied and elaborated by groups of students through a collaborative group activity. The innovative technology of Text to song is here adopted in order to make learners appreciate the variations at melody level in Canto a Tenore.

2) The Exploration phase: is tackled by a series of presentations enriched with listening resources (videos and audio) ad hoc prepared in order to help the learner becoming able to recognize the four voices, the different forms of the Canto and the local “modas” (namely local styles).

3) The Immersion phase at the moment is tackled without the support of the technology with the help of “real” singers, guiding the student in identifying the most appropriate voice for him to be sung.

Students’ achievements were assessed during the course by tests and assignments. Assignments can be evaluated by a teacher (or by peers) while for tests the LMS automatically gives back a score and specific results for each question.

The plan and the course are available in Italian and English:

Plan-English version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2364&uc=singing

Plan-Italian version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2370&uc=singing

Course - English version

Canto a Tenore (ENG) http://i-treasures.multimedia.uom.gr/drupalprivate/lms

Course - Italian version

Canto a Tenore (ITA) http://i-treasures.multimedia.uom.gr/drupalprivate/lms

5.1.2 Cantu in Paghjella in non-formal contexts for beginners

The Paghjella educational scenario was planned (through the PP) to be delivered in form of a course through the LMS. The scenario was planned events in territorial schools or workshops in music club, for a population of 11-50 years male singers but can be also carried out completely on line.

The course is conceived for beginners and its aim is to present the Corse chants and particularly the Paghjella style to a novice.

The course doesn’t reflect the plan presented in D5.1; the conceptualization of the course grounded on completely different bases, since the context envisaged and the aims are completely different from those considered in the first version. The objectives identified are mainly content-epistemological and cognitive and the practical part is not tackled.

As a consequence, the course covers the first two phases, the basics and the exploration phase, and no activities are conceived for the immersion phase.

1) The Basics: this stage is addressed in the first two blocks of activities, aimed at giving an idea about the chants Course a in depth introduction to the Paghjella style and its characteristics (ornamentation, the three voices, etc.). The activities include materials (texts, audios, videos) to be studied autonomously by a single student.

2) The Exploration phase: is addressed through listening resources accompanied by explanatory texts conceived for supporting the learner in acquiring the ability to recognize the vocal techniques peculiar of the Paghjella style.

3) The immersion phase: is tackled through the game. The game is structured in two steps ‘Observe’ and ‘Practice’. During the ‘Observe’ phase the learner observe the virtual tutor performing. After having observed the performance, the visitor can try

to imitate it and gets a score, resulting from the comparison of his/her performance with the one of the expert

Tests are available at the end of each block of activities in order to help the teacher or the learner assessing the achievements

Only a French version of the plan and the course are available, since the sub-use case leader identified as possible target just French learners.

Plan- French version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=10004&uc=singing

Course French version

Cantu in Paghjella (FR): http://i-treasures.multimedia.uom.gr/drupalprivate/lms

5.1.3 Introduction to Byzantine music

The Byzantine music educational scenario is designed with the help of PP plan and LMS course.

The plan is different from the one presented in D.5.1, which was conceived for experienced singers; the aim of the new plan is to attract non-professional Byzantine trainees (irrespective of the age) to study the Byzantine music and history. For this purpose, a course has been designed to help the trainees to learn Byzantine music scripture (parasymantiki) and to chant this kind of music. The course is based on different instructional methods (individual study, team-work, guided practice) and includes different kind of activities (activities for all kind of learners, visualization of byzantine notation, ear training in this kind of music education, guided practice, etc.). Additionally, the trainees will be supervised through online activities, forum discussion, expert-trainer activities, etc.

The course includes seven blocks: (1) Familiarization with the platform, (2) History of Byzantine music, (3) Byzantine Music scale, (4)Characters of Quality, (5) Characters of time, (6)Characters of expression, (7) Byzantine music practice (Psalmody)

The scenario involves the following three stages:

1) The Basics: the goal of this stage is to give basic information to the trainer about the Byzantine music. An introduction will be available for everyone. The material will be provided through audio/video, text etc.

2) The Exploration phase: at this stage the trainer will be able to observe and listen the expert (byzantine notation/neumatic notational system (parasemantiki), rhythm etc.), but also she/he will be able to recognize the basic byzantine scale. The preparation of the activities addressing this phase is in progress.

3) The Immersion phase: in this stage the trainer will be able to imitate the expert, through a 3D module sensorimotor game. During this stage, the trainer can also observe and hear each step and, then, reproduce it. At the end of the activities, he/she will be able to reproduce the melody of byzantine music. The preparation of the activities addressing this stage is in progress.

Students' achievements can be assessed at the end of the activities (theoretical and practical) through different kind of tests (quiz, questions etc.).

The plan and the course are available in Greek and English:

Plan – English version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=10021&uc=singing

Plan – Greek version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=10011&uc=singing

Course English version

Byzantine music(ENG): http://i-treasures.multimedia.uom.gr/drupalprivate/lms

Course Greek version

Byzantine music(GR): http://i-treasures.multimedia.uom.gr/drupalprivate/lms

5.1.4 Human Beat Box in non-formal context for beginners

The HBB educational scenario is conceived for being delivered as a course through the LMS, therefore it was firstly designed with the PP tools and then transferred in Chamilo. The context envisaged is non-formal, i.e. (cultural centre or music club), where the learner could have the opportunity to use the equipment (hyper-helmet) necessary for taking advantage of all the affordances of the HBB game. Nevertheless, the course can be carried out partially or completely at distance, in this last case the learner will use just the audio functionalities of the game. The course can be considered for 'beginners', since no prerequisites are requested, of course if a person has already experimented other musical or singing styles and knows some basic info about musical scales and rhythm, the learning will be easier. Even though the results of the conceptualization phase remained rather constant, the flow of activities and the activities themselves are quite different from the first version of the plan included in D5.1. This second version is 'topic cantered'; almost each topic is tackled at the three levels: the basics, the exploration and the immersion phases.

The course includes six blocks: (1) Familiarization with the platform; (2) The origin of HBB, (3) Basics of rhythm, (4) Adapt your breathing (respiration), (5) Beats and tempo, (6) Create a melody

1) The Basics: are provided for all the five blocks through texts and audio/video resources

2) The Exploration phase: is supported in all the blocks through audio/video resources, starting from the very basic sounds to more complex ones.

3) The Immersion phase: is envisaged in four blocks (from 3 to 6) and tackled through the game functionalities. Basically the learner is trained to reproduce the basic sounds of the HBB and, eventually, a short piece.

Students' achievements can be assessed at the end of each group of activities by means of tests.

The plan is available in English, while the course is available in French and English.

Plan- English version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2365&uc=singing

Course – English version

Human Beat Box (En): http://i-treasures.multimedia.uom.gr/drupalprivate/lms

Course – French version

Human Beat Box (Fr): http://i-treasures.multimedia.uom.gr/drupalprivate/lms

5.2 The dancing use case

In the traditional dancing use case four educational scenarios have been conceived. All the scenarios have a corresponding plan, but only two are delivered in form of courses through the LMS

The plans have been conceived for different learning contexts (formal and non-formal) and for different target learners. In particular, the contexts considered vary from dance schools (formal) to temporary exhibitions/museums (non-formal).

The i-treasures platform, and in particular the 3D module for sensorimotor learning, represents an essential resource and is adopted in all the sub use cases in order to support in particular the Exploration and the Immersion phases.

5.2.1 Tsamiko dances at dance schools for beginners

In the sub-use case of the Tsamiko dance, the educational scenario is composed of both the plan on the PP and the corresponding course on the LMS.

The context considered in the plan is formal, i.e. a school dance academy. The population envisaged is composed of adults who want to learn Tsamiko and no specific prerequisites in term of dances are required (‘beginners’), while a good familiarity with ICT is desirable.

The current plan is an updated version of the one presented in D5.1, the main elements (context, population, objectives, etc.,) that guided the conceptualization phase remain the same envisaged in D5.1 while changes concern the activity flow, reflecting the special needs of applying the available technology in the specific educational scenario.

The course is self-contained and can be carried out completely on line through the LMS in self-regulated learning or in a blended condition, guided by a teacher; the setup of the basic i-Treasures system for the Tsamiko dance sub-use case uses one or more low-cost (Kinect) sensors, so this scenario can be implemented either at the dance school or at home.

The course is quite complete and covers all the stages foreseen in the methodology developed in i-Treasures:

1) The Basics: this first stage is covered through four activities (two are given as alternatives) aimed at supporting the student in acquiring theoretical knowledge about the Greek traditional dances and in particular the Tsamiko dance. Students can choose between a guided tour and a self-study activity both aimed at providing information on the topic.

2) The Exploration phase: is tackled by means of a presentation and a series of videos showing the dance steps and also introducing the dance variations.

3) The Immersion phase: is addressed through the Tsamiko game-like application as to the single dancer. The learner accesses the game directly through the LMS. The game is aimed at teaching the basic steps of Tsamiko. The learner can observe each step and, then, reproduce it. The system gives back a score based on the comparison of learner performance with a benchmark (performance of an expert). A last activity, related to dancing in group is tackled through a group of real dancers. The learner initially dances with a group of dancers, then an expert evaluates him while dancing in the group.

Students’ achievements are assessed during the course by tests and assignments; tests automatically give back a score and specific results for each question; moreover thresholds are set so to inform the learner if he/she can go ahead or needs to come back to resources and study again.

Assignments can be revised by a teacher or by peers.

The plan and the course are available in Greek and English.

Plan-English version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=383&uc=dancing

Plan-Greek version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2373&uc=dancing

Course - English version

Tsamiko (En): http://i-treasures.multimedia.uom.gr/drupalprivate/lms

Course - Greek version

Tsamiko (Gre): http://i-treasures.multimedia.uom.gr/drupalprivate/lms

5.2.2 Walloon dance in non-formal contexts for beginners

The Walloon educational scenario is conceived for an informal context (an exhibition or a museum), therefore, the educational path conceived through the PP will not be delivered through the LMS in form of a course.

The plan reflects the one presented in D5.1; the aim of the plan is to provide a structured opportunity for a person coming to an exhibition or a museum of having a very first approach of Walloon traditional dances. This first contact with this expression could raise the interest of a visitor and encourage him/her to join a Walloon traditional dance club.

The scenario includes all the three phases but at a 'superficial' level, since the goal is that a learner can just get a flavour of the dance and have the opportunity to experience it also at a practical level.

1) The Basics: this phase is addressed through an introductory video to be shown at the beginning of the exhibition. After having watched it, visitors are expected have gained a general overview on the Walloon dance, its origins, main characteristics, etc.

2) The Exploration phase and 3) the Immersion phase are both tackled through the game. As a matter of fact, the game is structured in two steps 'Observe' and 'Practice'. During the first step the player can observe a sequence of dance steps performed by an expert in a video or by the avatar. After having observed the performance, the visitor can try to imitate these steps and gets a score, resulting from the comparison of his/her performance with the one of the expert. 'Pass a pied' and 'Maclotte' are the two basic steps tackled by the game.

A final challenge can be faced by the visitor, in order to put together the steps learnt in a piece of the dance.

No tests are envisaged since the scenario is conceived for a demonstration and not for a learning situation.

The plan is available in English

Plan-English version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2361&uc=dancing

5.2.3 Calus dance in non-formal contexts for beginners

The Calus educational scenario envisages an informal situation (an exhibition or a museum), therefore, the educational path conceived through the PP will not be delivered through the LMS in form of a course.

The plan doesn't reflect the one presented in D5.1, since this second one tackles an informal context. The plan is a self-contained experience having the aim of enabling the visitor of a museum/exhibition/stand in a dance festival to experience very few basic Calus traditional dance steps. The plan is conceived as a stimulus; the participant is invited to learn some typical Calus dance motifs and figures. The aim is that the visitor will get a first experience of Calus traditional dance, and in this way s/he will become aware of its existence, and possibly desire to join a Calus dance school in the future.

The scenario includes the three phases envisaged in the i-Treasures methodology, but of course at a shallow level, so that the visitor can gain some general information about the expression, can observe experts performing and have the opportunity to experience it also at a practical level.

1) The Basics: this phase is addressed through an introductory activity. A video/presentation about the history (music, photos etc.) of the dance will be available for the visitors. This activity can also be skipped, in case a visitor just wants to try the game.

2) The Exploration phase and 3) the Immersion phase are both tackled through the game. In the 'Observe' mode of the game, player can observe a sequence of dance steps performed by an expert in a video or by the avatar. After having observed the performance, the visitor can try to imitate these steps and gets a score, resulting from the comparison of his/her performance with the one of the expert. The game proposed different Activities, where the basic Calus dance styles ("Calus style 1", "Calus style 2", etc.) corresponding to different regions are presented. During the 'Practice' phase, the player has the opportunity to perform each style without music, and with music in the last exercise of each activity.

No tests are envisaged since the scenario is conceived for a demonstration and not for a learning situation.

The plan is available in English

Plan-English version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2380&uc=dancing

5.2.4 Salsa dances at dance schools for beginners

In the sub-use case of Salsa dance, the educational scenario is composed of both the plan on the PP and the corresponding course on the LMS.

The context considered in the plan is formal, i.e. a school dance academy. The population envisaged is composed of adults who want to learn Salsa and no specific prerequisites in International dances are required ('beginners'), while a good familiarity with ICT is desirable.

The current plan is a new one since this sub-use case has not been designed in the deliverable D5.1.

The course is self-contained and can be carried out completely on line through the LMS in self-regulated learning or in a blended condition, guided by a teacher; the setup of the basic i-Treasures system for the Salsa dance sub-use case is one or more low-

cost (Kinect) sensor(s), so this scenario can be implemented either at the dance school or at home.

The course is quite complete and presents many similarities with other dance use cases (e.g. Tsamiko) of i-Treasures:

1) The Basics: this first stage is covered through four activities (two are given as alternatives) aimed at supporting the student in acquiring knowledge about the International dances and in particular the Salsa dance. Students can choose between a guided tour and a self-study activity both aimed at providing information on the topic.

2) The Exploration phase: is tackled by means of a presentation and a series of videos showing the Salsa steps and also introducing the dance variations.

3) The Immersion phase: is addressed through the Salsa game-like application for a single dancer. The learner accesses the game directly through the LMS. The game is aimed at teaching the basic steps of Salsa. The learner can observe each step and, then, reproduce it. The system gives back a score based on the comparison of learner performance with a benchmark (performance of an expert). For the couple dance, the scenario envisages a real situation: the learner initially dances in couple; then an expert evaluates him while dancing in couple.

Students' achievements were assessed during the course by tests and assignments; tests automatically give back a score and specific results for each question; moreover thresholds were set so to inform the learner if he/she can go ahead or needs to come back to resources and study again.

Assignments can be revised by a teacher or by peers.

The course will be available in English.

Plan-English version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2381&uc=dancing

Course - English version

Salsa course: http://i-treasures.multimedia.uom.gr/drupalprivate/lms

Under development

5.3 The craftsmanship use case

The pottery educational scenario is composed of both the plan on the PP and the course on the LMS.

The plan globally reflects the one presented in D5.1. It's conceived for a formal situation and its aim is supporting pottery students who want to learn wheel-throwing and specifically how to create small objects (bowl, plate, cylinder, sphere and combinations of the above). No prerequisites are requested, the plan is conceived for 'beginners'. Some minor changes were done in the flow of activities, mainly related to the type of resources envisaged according with what was available.

The course is conceived as a blended learning course as it is based on different instructional methods (individual study activities, discussions, guided practice, etc.), different level of guidance (teacher-guided activities and self-regulated learning) and it encompasses on line and face to face activities. The course tackles all the three phases envisaged in the i-Treasures methodology.

1) The Basics: this first stage is covered through a set of activities, aimed at supporting the student in acquiring theoretical knowledge about the pottery origins and main aspects. Students can choose between a guided tour and a self-study activity both aimed at providing information on the topic.

2) The Exploration phase: is tackled by means of a series of presentations and videos showing the basic phases in pottery creation and, of course, through the 'Observe' phase of the game.

3) The Immersion phase is addressed through the pottery game-like application and a last activity carried out by a potter in a face to face situation. The learner accesses the game directly through the LMS. The game is aimed at teaching the basic steps of pottery creation. The learner can observe each step and, then, reproduce it. The system gives back a score based on the comparison of learner performance with a benchmark (performance of an expert). At the end of the activities, the learner should be able to perform the basic actions of the wheel throwing and create a simple object (such as a bowl). This ability is assessed through the final challenge.

The creation of others and more complex objects should be supported in a face to face condition by a potter.

Students' achievements are assessed during the course by tests and assignments; For tests the LMS automatically gives back a score and specific results for each question; moreover thresholds are set so to inform the learner if he/she can go ahead or needs to come back to resources and study again. Assignments can be revised by a teacher or by peers.

The plan and the course are available in Greek and English

Plan-English version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2340&uc=pottery

Plan-Greek version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2342&uc=pottery

Course - English version

Pottery (Eng): http://i-treasures.multimedia.uom.gr/drupalprivate/lms

Course - Greek version

Pottery (Gre): http://i-treasures.multimedia.uom.gr/drupalprivate/lms

5.4 The Contemporary Music Composition (CMC) use case

The CMC educational scenario is composed of both the plan on the PP and the course on the LMS. The plan envisages a formal situation (a music school or academy) and can be considered for 'beginners', since no prerequisites are requested but the learner should be familiar with classical music. The aim of the plan is introducing learners to the contemporary music composition and, in particular, to the Intangible Musical Instrument (IMI) developed within the project.

The course is made available through the LMS and it is conceived as a blended learning course since it encompasses on line and face to face activities.

The course includes all the three phases:

1) The Basics: this phase is addressed through a two SCORM presentations enriched with videos; the first one about basic elements in music theory (namely notes duration, intervals and signature scales) and the second about ornamentation, triplets, dynamics and chords. For the time being, the following musical gestures have been implementing:

2) The Exploration phase and 3) the Immersion phase are both tackled through the game. As the other game-like applications the IMI game encompasses two steps 'Observe' and 'Practice'. Firstly the learner/user can observe the video of an expert

performing a specific musical gesture and then is required to perform the same gestures

- ascending and descending arpeggios involves fingering in order to play the musical sequence.
- ascending and descending scales will help the performer understand the procedure of moving on the intangible instrument and give him/her a sense of motion.

But our goal is to update the gesture vocabulary by adding more musical gestures.

In the final challenge the learner is requested to reproduce sequential ascending/descending arpeggios and sequential ascending/descending scales as well in order to assess whether he/she has learnt the correct gestures.

Each section of the two presentations (the Basics) ends with a test about the contents addressed in order to test the knowledge acquired by the students. A specific threshold is set as a condition for having access to the following sections.

The plan and the course are available in English

Plan-English version

http://i-treasures.itd.cnr.it/scheda_percorso.php?percID=2344&uc=music

Course - English version

Contemporary Music Composition: http://i-treasures.multimedia.uom.gr/drupalprivate/lms

6. Discussion and Conclusions

This document describes the second round of the process that led the i-Treasures project to offer a series of sound and innovative educational scenarios in the field of ICH, all exploiting and demonstrating the technologies and resources developed by the project. The process took advantage of certain advancements in the project that led us to go beyond the state of the art, both as to the design activity and the methodology for ICH education. Moreover, this second round was necessary in order to reconsider the scenarios considering realistic situations for their realization and the resources available.

In the document, first of all, we have described how we went beyond the state of the art by offering a tool able to support the whole learning design lifecycle (section 3.2). To this aim, we integrated two on line tools: the Pedagogical Planner (PP), aimed at supporting the designing phase, and the LMS (Chamilo), aimed at delivering the courses. This allow experts not only to design an educational path, taking into account all the intertwining factors, but to easily transform their design into a course, ready to be delivered to learners.

Secondly, we presented an innovative methodology for ICH education. The focus of the methodology wasn't the safeguarding of ICH in general, (that is widely tackled by numerous courses for different target populations in face to face, on line or blended learning initiatives). Rather, i-Treasures is going beyond the state of the art by trying to propose a methodology aimed at supporting the teaching and learning processes in ONE specific cultural expression, possibly mediated by technology (section 4.2). The methodology reflects what naturally happens when a cultural expression or tradition is transmitted within a local communities, but the systematization of this process allows to conceive training initiatives (even mediated by technologies) having clearly in mind which phases can/should be addressed.

Thanks to the combination of the methodology with the on line tools that were developed/adopted in the project, experts and sub use case leaders in each of the considered ICH were able to develop 10 exemplar educational scenarios (one per sub-use case). The available exemplar scenarios cover different contexts (formal vs. non-formal) and all foresee the use of technologies to be carried out.

We need to say that the process of scenario creation wasn't always smooth: some of the experts were not teachers and met difficulties in conforming to a structured approach to the transmission activity. Nevertheless, as diffusely described in D5.1, this systematization was necessary in order to make possible the adoption of new technological resources and their integration in the current learning practices.

The scenarios presented in this Deliverable reflect the present situation, but .of course, future developments in the i-Treasures platform could probably lead to further opportunities and resources that could be included in other educational scenarios or can enrich the existent ones.

This is the reason why the availability of a tool for pedagogical planning and a LMS integrated in the platform represents an important asset for the project, since they can be used by other experts of different ICHs so as to tailor ad hoc educational scenarios, ensuring the possibility of spreading, sharing and re-using of resources and pedagogical ideas/methods beyond the temporal and spatial boundaries of i-Treasures.

7. References

[1] C. M. Reigeluth, «A new paradigm of ISD?,» Educational Technology, vol. 36, n. 3, pp. 13-20, 1996.

[2] C. M. Reigeluth, «Instructional Theory, Practitioner Needs, and New Directions: Some Directions,» Educational Technology, vol. 37, n. 1, pp. 5-11, 1997.

[3] L. Branchesi, «La pedagogia del patrimonio e la sua valutazione: ambiti di ricerca, metodologie, risultati e prospettive,» in Il patrimonio culturale e la sua pedagogia per l'Europa, L. Branchesi, (Ed.) Roma, Armando Editore, 2006, pp. 29-58.

[4] J. Van der Leeuw-Roord, «Heritage and History Education at Schools,» inThe Hague Forum 2004: “Heritage Education: A European Perspective”, 2004.

[5] T. Copeland , «Heritage and Education: A European Perspective,» in The Hague Forum Heritage and Education: A European Perspective?, The Hague, 2004.

[6] M. Ott, F. M. Dagnino και F. Pozzi, «Intangible Cultural Heritage: Towards collaborative planning,» Computers in Human Behavior, 2014 in press.

[7] G. Conole, Designing for learning in an open world, New York, Heidelberg, Dordrecht, London: Springer, 2013.

[8] J. I. Asensio-Pérez, Y. Dimitriadis, L. P. Prieto, D. Hernández-Leo and Y. and Mor, “From idea to VLE in half a day: METIS approach and tools for learning co-design,” in Proceedings of the 2nd International Conference on Technological Ecosystems for Enancing Multiculturality, Salamanca, Spain, 2014.

[9] J. Dalziel, «Implementing learning design: The learning activity management system (LAMS),» in Interact, Integrate, Impact. Proceedings of ASCILITE, 2003, 2003.

[10] L. Prieto, Y. Dimitriadis, B. Craft, M. Derntl, V. Emin, M. Katsamani, D. Laurillard, E. Masterman, S. Retalis και E. Villasclaras, «Learning Design Rashomon II - exploring one lesson through multiple tools’,» Research in Learning Technologies Supplement, 21, 2013.

[11] D. Persico, F. Pozzi, S. Anastopoulou, G. Conole, B. Craft, Y. Dimitriadis, D. Hernandez-Leo, Y. Kali, Y. Mor, M. Perez-Sanagustin and H. Walmsley, “Learning design Rashomon I - supporting the design of one lesson through different approaches,” Research in Learning Technology, 21, 2013.

[12] Y. Mor, B. Craft και D. Hernandez-Leo, «The art and science of learning design: Editorial,» Research in Learning Technology, 21, 2013.

[13] A. Manitsaris, G. Kourvoulis, S. Nikolopoulos, G. Chantas, E. Yilmaz, Pozzi. F., F. Dagnino and M. Cotescu, “D.5.4: First version of the Integrated Platform, Public Deliverable, The i-Treasures Project (FP7-ICT-600676)”, 2015. [Online]. Available: http://www.i-treasures.eu/content/deliverables-0.

[14] F. Pozzi, M. Alivizatou, M. Ott, F. M. Dagnino, and A. Antonaci, «D2.1: First Report on User Requirements Identification and Analysis, Public Deliverable, The i-Treasures Project (FP7-ICT-600676),» 2013. Available: http://www.i-treasures.eu/content/deliverables-0.

[15] UNESCO, «Convention for the Safeguarding of the Intangible Cultural Heritage,» Paris, 2003.

[16] A. Denes, P. Chalermpow Koanantakool, P. Davis, C. Kreps, K. Hennessy, M. Alizivatou και M. L. Stefano, «Critical Reflections on Safeguarding Culture: The Intangible Cultural Heritage and Museums Field School in Lamphun, Thailand.,» Heritage & Society, vol. 6, n. 1, pp. 4-23, 2013.

[17] E. Yılmaz, N. Grammalidis, A. Kitsikidis, F. Dagnino, P. F., S. Khodor Al Khork, C. P., S. Manitsaris, C. Volioti και C. S., «D.5.2:First Version of 3D Visualization for Sensorimotor Learning, Public Deliverable, The i-Treasures Project (FP7-ICT-600676),» 2015. Available: http://www.i-treasures.eu/content/deliverables-0.