



## KEY METHODOLOGY TO SUCCESSFUL COMPETENCE BASED LEARNING

### Research report

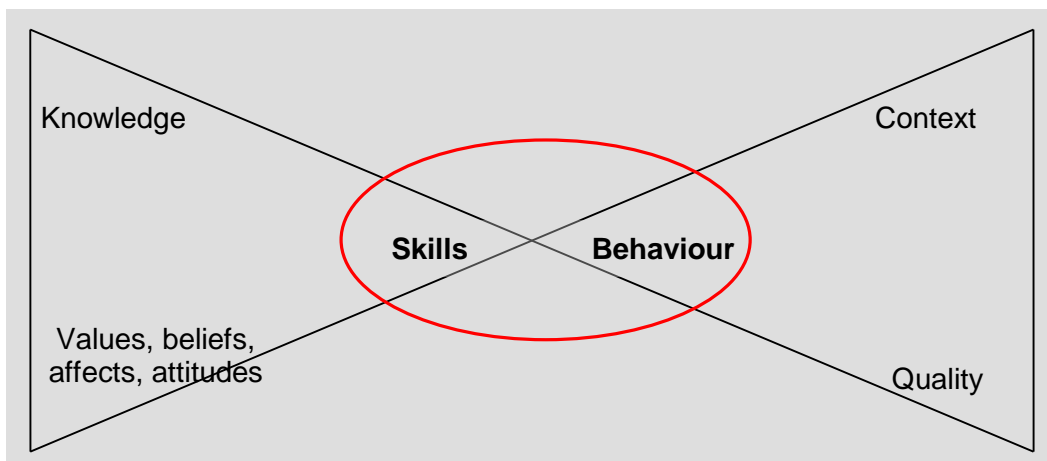
#### 1. DEFINITION OF COMPETENCES

##### Competence instead of competency

The words competence and competency are often used inter-changeably in various field of work. The words are used in various contexts conveying various meanings.

In the field of education the words competency and competencies were emphasized in the decade of dominance of behaviourism in social and behavioural sciences. The word was used to indicate the specific skills educators should have in order to be good teachers. In the eighties and nineties of the last century the educational scene began to change. Instead of building on behavioural theories, researchers and practitioners turned to the cognitive era, later on the constructivist, and even later the social constructivist era in education in which the words competence and competences appeared. These concepts were described as a holistic synthesis of knowledge, skills, and attitudes allowing a person to perform in particular contexts at a particular level of quality.

In order to underline this wider holistic definition of the word, educationalist and authors have chosen to use the words competence and competences, rather than competency and competencies.



The European Parliament, the European Commission and the Council of Europe agree on the importance of eight key competences for Lifelong Learning:

1. Communication in the mother tongue;
2. Communication in foreign languages;
3. Mathematical competence and basic competences in science and technology;
4. Digital competence;
5. Learning to learn
6. Social and civic competences;
7. Sense of initiative and entrepreneurship;
8. Cultural awareness and expression;

(Cf. RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 on key competences for lifelong learning (2006/962/EC) <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32006H0962>)

## 2. WHY ARE COMPETENCES IMPORTANT?

### A political reason

Through the “Lisbon Strategy” and its successor, “Europe 2020”, the European leaders want to turn Europe into the “most competitive, knowledge based economy in the world”. Since Europe is not gifted with many natural resources this ambitious plan would find its basis in the “rich potential of human resources”. Therefore, the plan involved a substantial investment in education and training and the introduction of the concept of lifelong learning.

Initial training only does no longer suffice for a learner in the rapidly changing society and work environment in present Europe. Adult education, continuous training, non-formal learning, informal learning, workplace learning ... are all elements in this Lifelong Learning approach in an answer to the education and training of the population in Europe.

Since education and training is a national matter of the EU member states, the EU can only work via common goals, guidelines, indicators, standards and peer pressure in order to entice the member states to reach a common level (open method of coordination). One of these common standards is the set of Key Competences for Lifelong Learning as set out in the European Framework which states that: “Each citizen will need a wide range of key competences to adapt flexibly to a rapidly changing and highly interconnected world. Education in its dual role, both social and economic, has a key role to play in ensuring that Europe’s citizens acquire the key competences necessary for personal fulfilment, active citizenship, social cohesion and employability in a knowledge society”.

### A social reason

Another argument for introducing the concept of competences lies in the international and social situation of the population in Europe: ageing population and mobility of people and workforces. In a formal education context validation (certification) used to be ‘input based’: the curriculum, the learning context, the school were ‘validated’ and a student who ‘passed’ his/her exams was supposed to be qualified for certain tasks. In non-formal lifelong learning contexts there is less ‘ground’ for input based validation since there is less control on the quality of this

input and the context in which this input is (was) offered. A person, on the other hand can be 'able' to do the right thing in a given context. Why not validating this 'ability', no matter in what context it was acquired? Also the increased mobility of (potential) employees – immigrants with clear competences but without recognized certification - requires a new view on validation and a shift from recognition of input to recognition of output: learning outcomes and performed competences.

## **Problems with the input**

School curriculum content has become increasingly unclear. Nobody is able to say what people will need to know or be able to do in 15 years time. There is an explosion of knowledge: one has calculated that the half-value period of knowledge is 18 months. This means that the 'knowledge mass' doubles every 18 months. What school curriculum, based on acquisition of knowledge, can cope with this pace? On top of that there is the ICT (r)evolution. New media have brought about a major change: access to information is no longer confined to the study of books but is, provided you have a TV, computer, radio or smart phone available to everyone. However, it takes processing to turn information into knowledge. This provides new challenges for schools. Teachers have lost their monopoly as knowledge providers. This means schools have to prepare both teachers and pupils to become lifelong learners.

## **Problems with the output**

Traditionally schools/teachers were used to deliver input (knowledge) to pupils who were asked to "absorb" this input. The result of this learning was the reproduction of what the teacher had been teaching. There was hardly any attention paid to the learning process and the main output was a reproduction based body of knowledge.

Reproduction of knowledge is no longer a highly valued output of a learning process. School graduates today are expected not only to have acquired a body of knowledge, but also the ability to do research, to work in teams, to live in multi-cultural societies, to manage their own emotional skills, to be open for new things – all this in a mixture of knowledge, attitudes and skills, in other words: competences. Stimulating and helping pupils to acquire these competences is the challenge for schools. In order to meet these challenges the learning process should include knowledge as well as attitude and skills (competences); learning should be an enjoyable and worthwhile experience so learners will embrace the perspective of lifelong learning; learners need to gain insight into the process and goals of their own learning.

All the more reason to review the way we educate young people: to move to competence oriented teaching and learning, the subject of the following chapters.

### **3. WHAT IS COMPETENCE BASED TEACHING AND LEARNING?**

Competence based learning and competence based education do not consist of traditional teaching situations, which are mainly focused on transmitting knowledge from the teacher to the learner, where the latter has a rather passive role. In line with the definition of a competence, competence based teaching and learning focus not only on the construction of knowledge, but also on developing skills and shaping the learner's attitude.

The **constructivist learning model** is one of the corner stones for competence based teaching

and learning. It is founded on the premise that learners actively construct their knowledge by experience and discovery. Learners generate their own mental models which they use to make meaning of experiences and situations. Therefore, learning is the process of constantly adjusting our previously acquired mental models to accommodate new experiences. This implies that learners need to be actively involved in the learning situation. They learn best in meaningful contexts, and in co-operation and interaction with others and with their environment. Thus, they enable themselves to make meaning, to acquire knowledge by reflecting on their experiences, and by checking and cross-checking their newly constructed ideas with those of others. This means feedback and assessment are vital parts of the learning process. They provide the learner with important information on his learning and push the learning process forward.

Beside the construction of knowledge, competence based learning enables the learner to develop, practice and demonstrate skills. Therefore **the learning objective has to be productive, task oriented**. The educator has to build in room for action and practice of skills, presentation and demonstration of the targeted behaviour in a realistic and stimulating context.

Last but not least the **value** component has to be taken into account in competence based teaching and learning. By tapping into the learners' feelings and enthusiasm, the learning experiences will become more profound and sustainable. Furthermore, value clarification activities can help learners to be more aware of their own values and beliefs. It is important that educators model a positive and open attitude towards the topic and learning in general.

The most distinctive features of competence based teaching and learning are:

- meaningful context
- co-operative, interactive (with peer learner, educators, experts, ...)
- discovery, experience based
- multidisciplinary
- productive, task oriented
- reflective
- personal (learner centered)

#### 4. HOW TO IMPLEMENT COMPETENCE BASED TEACHING AND LEARNING? SOME PRINCIPLES AND METHODS

In the previous parts we have explained the basic principles of competence based teaching and learning. In this section we move from the general ideas to the implementation. We will provide a series of competence based teaching methodologies. Some are more content based while others are more action oriented. They all contain four **principles**:

##### 1. Motivation

Motivation (from Latin *motus*) is a psychological feature that induces an organism to act towards a desired goal and elicits, controls, and sustains certain goal-directed behaviors. It can be considered a driving force; a psychological one that compels or reinforces an action toward a desired goal. Most methodologies start with a motivation phase. In this

phase the learners' interest in the topic is raised, their pre knowledge is activated, learning objectives are set and the learning process and the assessment of learning outcomes is planned.

## 2. Experience

In the experience phase the learners have the opportunity to get actively engaged in authentic learning activities in which they have access to realistic settings, can approach the topic in a multidisciplinary way, can see experts at work or consult them, have room for experimentation, feel allowed to make mistakes, have opportunities to show and share emotions.

## 3. Demonstration

The goal of the demonstration phase is to put the learners in a productive role and present the product or carry out the task they have planned. These products or tasks should be carefully planned by the educator, to make sure they will stimulate the learners to demonstrate the competences the learning process intends to develop.

## 4. Reflection

Reflection activities should not only be planned at the end of the learning process, but all the way through. This will allow the learners to identify their personal learning needs, to make meaning of all their learning experiences and to assess the quality of their learning process, products and cooperation with peer learners.

Whether you implement the following methodologies as such or in a combination or adapted version, these four elements are essential for competence based learning to take place.

### Methods for competence based learning<sup>1</sup>:

#### DISCOVERY BASED CONSTRUCTIVISM

Discovery-based instruction with constructivist concept of exploration, discovery, and invention lays on the premises that the target information **must be discovered** by the pupils within the frames of the task and that it is **material**.

Experimenting is a constructivist way of learning, instead of passively try to understand the nature of physical laws, students have to creatively experiment in order to make it work. The school has traditionally focused on the logical mathematical and linguistic intelligences. Science teaching is in many ways consistent with Howard Gardner's learning philosophy since it adds up with a variety of experiences: creativity, initiative, problem-solving investigation, risk assessment, decision-taking and constructive management. Learning by doing can transform actions in knowledge, knowledge into competence, competence into skills.

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<sup>1</sup> The methods listed below are just exemplary and are selected among the greater number identified by the KEYS resource projects: AQUEDUCT, IDIAL, KEYTTT, SUSTAIN and READIT. Please, refer to the links in the text for more methods and for particular examples of activities. Furthermore, the sequence in which the methods are listed in the present report is random and does not suggest any classification.



It combines many basic learning strategies that will improve the learning outcome. Abstract concepts as in many physical theoretical laws becomes concrete concepts for pupils to manage. Learning by doing promotes interest in practical learning of science subjects, using problem solving methodology.

**Discovery based constructivism** is an interactive and hands-on way of learning. It creates self-reflection, situated cognition, it fosters self-discovery, and it is a way of practicing skills directly, and a part of real world learning. Constructivism develops a variety of teaching strategies, and leads to project based-, problem based-, product based, and case based strategies.



*Staging water rockets – is an example of a constructivist way of learning.*

*Ref. KeyTTT project:*

<http://www.keyttcd.cct.bg>

Overall, the effects of unassisted discovery tasks seems limited, whereas *enhanced discovery tasks* requiring learners to be actively engaged and constructive seem optimal. The effects and learning outcome by use of constructivism workshops is based on the fact that optimal approaches should include:

- Guided tasks that have scaffolding in place to assist learners, or
- Tasks requiring learners to explain their own ideas and ensuring that these ideas are accurate by providing timely feedback, or
- Tasks that provide worked examples of how to succeed in the task.

Constructivism develops best practices and focuses on the **process**, not the product. It includes:

- predicting, observing, explaining,
- conceptual changing,
- constructivist instructional model,
- scaffolding.

It also allows a lot of different ways of collaboration as: group work, cooperative learning, active processes, constructing knowledge, external through processes.

The discovery-based constructivism also coincides with the key competences, and supports developing of *critical thinking, creativity, initiative, problem-solving, risk assessment, decision-taking, and constructive management*. Many of the competences' features overlap and interlock, but they all promote the combination of knowledge, skills and attitude appropriate to the context.

The **challenge** in teaching by discovery-based constructivism seem to be how to provide feedback in classroom settings, how to create working examples for varieties of content, and how to provide direct forms of instruction during the learning task. It is important to acknowledge that each student does not learn in the same way. The implementing a variety of learning styles throughout the course allows the students the chance to learn in at least one way that matches their learning style. In the constructivist model, the students are urged to be

actively involved in their own process of learning. The teacher functions more as a facilitator who coaches, mediates, prompts, and helps students develop and assess their understanding, and thereby their learning. One of the teacher's biggest jobs becomes asking the good questions.

Ref. <http://www.keyttcd.cct.bg>

Ref. <http://the-aqueduct.eu/>

## INTERACTIVE WEB-CONFERENCING SESSIONS

One of the most significant challenges to the classroom-based learning process, or even generally to the face-to-face learning process **is its abstraction**. The examples are flat, usually emotionless, if there is emotion it is simulated or overplayed, or provoked by force. It is well known that emotion is one of the strongest learning tools and is most wanted in any learning process. The use of information and communication technologies and their networking capabilities can introduce whole new horizon of methods for invoking emotion in the training session.

Some facts:

- Learners prefer real objects to be their study-objects /*Picture of real bear is preferred than illustrated bear/*
- Learners prefer real situations to be their study-situations /*real scene or movie scene is preferred than sketch in the textbook/*
- Learners prefer to have control over the object/situation, that increases the self-esteem and self-confidence, crucial to the learning process
- Learners not physically present in the classroom can be reached and trained with the involvement of information and communication technologies

Videoconferencing allows huge amount of knowledge to be transmitted in compressed time format and the complex character of the knowledge, which students receive. This is possible due to the highly emotional and highly interactive environment that connects real people discussing on real objects or problems.

The videoconferencing implemented through the interactive whiteboards (IWB) contributes significantly to innovate the classroom. IWB surface through which students can view and interact with images, text, animation, video and specialised educational software, helps to transform the classroom in an environment attained by many media and provide access to the universe of information.

The use of interactive whiteboards brings a lot of interaction in the learning process; because of the improved dynamics of the lesson/session it also improves attention and the group control.

However, the focus of this *teaching strategy* is not the mere suggestion to use another piece of expensive equipment in the classroom work, but the networking functions of this equipment which allow connection of two remote classrooms or a real-time communication between a classroom and a scientist, lecturer or a lab, situated in different city or even country.

Some more facts:

- Interactive whiteboard can be mastered by a teacher (trainer) in 20 hours of training and 10 hours of individual practice
- The network capability of interactive whiteboards is especially effective when used with new or unknown topic; the first-step results as knowledge to the learners are stunning!
- With an IWB session complex and interlinked knowledge is introduced, for example in same session learners can be taught in engineering and in German or in climate changes and in digital competences.

## The work plot:

1. **School calendar:** it is very important all activities to be done in well planned consequence to prevent mistakes. An interactive web-conference can be divided in general in three stages: activities to be done **before** the web-conference, the **web-conference** itself, activities to be done **after** the interactive lesson.
2. **Teachers prep-meeting:** teachers (tutors) have to exchange information in advance by email or web-conference (f.i. Skype connection) to agree on the topic, aims and main contents of the lesson. This exchange may require several interactions.
3. **Exchange information about students:** exchanging information about the students is useful, because it would allow remote pairing of pupils or making virtual teams or tailoring the knowledge to the skills of the learners (in case of web-conference with a lab or a scientist).
4. **Tools** (for each side of the interactive connection):
  - a computer
  - an internet connection
  - a software to connect the partners (f.i. oOvoo, Skype, VZO as open source software, PVX Polycom, Adobe Bridge...)
  - an IWB and multimedia projector
  - a webcam
  - speakers or a sound system suitable for the whole study-room (or headphones)
  - a camcorder and/or a camera to document the lesson (Note: if there is no available camera, it could be enough to work with IWB video-capture function, to make a record of the videoconference)
  - microphone (optional)
5. **Test videoconference:** to avoid mistakes it is better to test the connection between partners before the date fixed for interactive session. The test should involve the technical equipment and the materials to be uploaded as a lesson track.
6. **Starting web/videoconference**
  - connect camera and IWB to the computer
  - open connection software
  - invite the partner to web-conference by using IWB software
7. **Web/videoconference**
  - teachers/ tutors introduce themselves
  - students introduce themselves to make them feel involved in activities (just telling the names might be sufficient if the time is limited)
  - one of partners starts the activity (or introduces the topic) interacting with the other partner by using slides or pictures imported on the IWB stage
  - teachers should plan and ask questions to students to be sure they are always involved in the lesson



- students should receive some written tasks to allow them to check all their work and the activities to be done.

**9. Revision & Documentation:** a follow-up revision after the end of the web-conference is an important part of the work. It gives students opportunity to reflect on the activities they have done/ experienced and allows teachers to explain points of strength or weaknesses.

## The challenges

Using interactive whiteboard to represent a certain topic is a challenge to the teacher to a greater extent than to the students. It requires investing significant quantity of time for planning and preparation, and demands some skills from the teacher who has to have at least moderate *digital competences*, among which general ability to operate with computer and peripheral equipment and basic knowledge of the functions of the IWB.

Nevertheless, a networking videoconference session is among those teaching formats when teachers do not have to be better than their pupils in the ICT, as they can rely on the pupils' competences and even to request their support. Alongside with many other features this can help a lesson with an IWB to be perceived by the learners as a **game** which may bring along positive emotions, in spite of the fact that the *game-based learning* has its own clues and should be approached carefully.

Ref. <http://www.keyttcd.cct.bg>

## STORYLINE

The storyline approach is a method for active learning, adapted education which was developed by *Steve Bell, Sallie Harkness* and *Fred Rendell* at Jordanhill College of Education in Glasgow, Scotland. The storyline approach emphasizes the experience by its focus on identification with persons and their stories.

The Storyline approach provides a structure for planning classroom experience based on the knowledge, skills and attitudes, which the teacher intends pupils to acquire. The method is applicable to classes, groups and individuals. The method is sequential, ensuring progression as the chosen topic unfolds. The input of pupils' is an essential part of the development of the storyline process.

### ***The storyline approach: a social constructivist approach to learning***

The storyline approach is based on social constructivist learning theory in which knowledge is seen as complex and many layered. Learning is guided by the prior knowledge and experience of individual learners, and learners construct their own meaning through action and experience. The method creates a context for learning with the active involvement of the pupils. It provides tasks which arise from the context, and which the child sees as significant and meaningful within it, and gives the child opportunities to develop understanding and competences with the support of the context. Pupils learn with and from each other and adults. The role of the teacher is educational designer and coach.

A key feature of the approach is the very positive way in which it depends on and builds on pupils' existing experience and knowledge. Also significant is the degree of pupil involvement,

both imaginatively and in practical problem solving. The storyline approach poses problems and asks questions to pupils rather than giving them answers to questions they have never asked. The pupils and the teacher explore ideas together. The approach is essentially experiential and constructivist. It draws the curriculum together using the environment and social subjects as a stimulus to explore, using expressive arts and language as a means of discussing, describing and explaining. Research and reference skills are extended, as pupils are encouraged to search for answers and information by using various sources: oral stories, audiovisual media, databases and books, posters and photographs. As topics are developed, pupils record their ideas, understandings and responses in visual and written formats by creating powerful classroom displays as well as individual files of work. Both of these enable the process of review and evaluation when the storyline is completed.

As the level of pupil commitment is increased, adults (parents and professionals) may become involved in a number of positive ways, such as a visiting witness or 'expert', to take part in the celebration at the climax of a topic study, to assist and supervise on a visit out of school, to be a classroom helper during practical activities and to help create displays of pupils' work.

Ref. <http://the-aqueduct.eu/>

Ref. [www.readitproject.eu](http://www.readitproject.eu)

## GUIDED DISCOVERY

Guided discovery can be seen as a refined version of project based learning. Traditionally learning projects are built on four phases:

- Motivation: learner or teacher defines the theme the project is based on.
- Brainstorm: learners think about and discuss their working path: the group, the actual activities, the information and the time schedule they will work in
- Action: learners work on their project.
- Presentation: learners present the result of their work.

Four basic characteristics may be distinguished in project work:

- Learning projects work on a socially relevant theme or problem. There is a clear link between society, reality and/or actuality. Typical project themes are 'diversity', 'environment', 'migration', 'entrepreneurship', 'democracy' and 'citizenship'.
- Projects aim to stimulate the creativity of learners. Children work actively, interactively and independent.
- Projects are multidisciplinary, cross-curricular and the focus is on co-operation. Teachers, classes, schools and/or organisations work together and come to a new synthesis.
- Working in projects is process oriented. Developing attitudes is often seen as an important goal.



Ref. AQUEDUCT project:  
<http://the-aqueduct.eu/>

In a guided discovery, the traditional phases of project based learning are redefined in a competence oriented way.

## **1. Confrontation and questioning**

In this phase the learners are confronted with a problem, a case, one or more questions or quests. The confrontation can adopt different forms: stories, excursion, pictures, cartoons, theatre, music, paintings, dance, but can also be a more classic appeal. It is possible but not necessary to work with heritage in this phase, but it is extremely important that the confrontation evokes different kinds of questions.

In every phase reflection is a most important activity. Learners should reflect on the questions the confrontation evokes. In this phase learners set out their learning goals: what do they want to investigate, what strikes their interests? Possibly learners get already acquainted with the transversal key competences, but that's not necessary. Furthermore it is advisable to divide the learners into workgroups or pairs. Nonetheless, it should also be possible to work alone. The level of co-operation depends on the group, the content, the age and the learning style.

## **2. Input**

In this phase learners experience different types of heritage, or sources. They get a variety of inputs. The teacher hands out different routes on which the learners are able to 'train' themselves in different aspects or sub themes of the case. The input is multidisciplinary. The routes, activities or experiences are diverse. They may include:

historical, geographical, biological, chemical, mathematical, linguistic etc. political, social, cultural, religious, economical, ecological etc. more art oriented, or more theory oriented, objective or more personal information.

Ideally different types of activities are also provided on each sub theme. Every aspect, type of heritage or learning source can be linked with another kind of information gathering activity. Learners may visit different places and engage in different activities during excursions, for example:

- Learners may search for information
- Learners may play games, or do quizzes
- Learners may tell, or listen to different stories

It is not important that every learner accomplishes all activities or follows all routes. The learner has the opportunity to make his own choices. This means that every learner follows the input-route of his own choice. Teachers only propose different types of learning routes and suggest different perspectives.

The so-called jigsaw-method may be interesting. According to this method learners form groups and each member of the group follows a different route. In a next phase they put their experiences and results together and thus together broaden the scope of their individual searches.

## **3. Goal and action setting**

The learners reflect on the different experiences they went through. This may be done in the initial group of phase one (jigsaw), but also in plenary, or in an individual coaching setting. In every case the reflection follows these steps:

- Learners tell about their activities in phase 2 and emphasize the essential experiences.
- Learners look back to the questions they set out in phase 1.

- Learners decide on the goals they want to achieve in the next phase.
- Learners get acquainted with (a selection of) the transversal key competences
- Learners decide how they want to accomplish their goals and how they want to solve the problems or questions they pointed out.

The result of the work may again be diverse. Mostly the students will work on a product, a diary, or a log, or any other demonstration of competences. It is important that learners are active and have various options: the types of activities and the outcomes may vary. It is important that teachers offer various proposals. The choice is made by the learner, but should link to the goals set out at the beginning. The individual or group actions may be diverse either as far as actual content is concerned, but also in their emphasis on theory or arts, humanities or science. Furthermore, the sequence of actions may vary according to the preferred learning styles of learners.

#### **4. Problem solving**

Learners work on their self-defined tasks and are coached by the teacher. During their work they are inevitably confronted with different types of problems. Teachers coach the learners in ways adapted to the needs of the learners. In a learning process problems may be approached in three different ways. The most appropriate way of approaching problems depends on the experience and the personality of the learner and the type of task at hand. The ways are:

- Buffering: the problems are absorbed by the learners without the active intervention of the teacher.
- Feed forward: the teacher anticipates problems. Learners are given attention preventively when difficulties may arise.
- Feedback: solutions may have to be modified. Learners are given room for experimenting and get feedback afterwards.

To make sure that the learners are able to solve or neutralise their problems, the teacher must not only provide opportunities to experience the problems but also coach the learners when needed. The coach has to:

- create a safe climate and embed moments of reflection, rest and self-evaluation
- pay attention to co-operation techniques, conflict management and peer evaluation
- explain methods of problem solving
- provide training, or instruction when skills and knowledge are needed.

#### **5. Demonstration and evaluation**

The learners demonstrate what they have learned through the heritage task and reflect on the transversal key competences they worked on. They give answers to the questions they asked them- selves and show how they worked on their goals. A demonstration is not the same as a presentation. The learners need to be able more than just to present what they individually contributed to the task. Each learner has to demonstrate and reflect on different types of knowledge, skills and attitudes the group collectively acquired. The demonstration may emphasize the process or the product and may differ in many ways. Evaluation therefore will also be diverse and may be different for each learner. Different methods of evaluation may be used in each phase such as: co-assessment (by teachers and learners on agreed upon standards), self assessment (by the learner) or, peer assessment (by fellow learners).

The structure of the guided discovery can be used flexibly. The phases do not have to be separated too rigidly and the number of routes, activities and evaluation forms may be limited depending on the target group, the sources, the teachers and the time schedule. The structure serves as a set of suggestions to make projects more learner centered and competence oriented.

Ref. <http://the-aqueduct.eu/>

## ACTION BASED LEARNING

Action learning is a concept with many faces. The term is used in a variety of publications, but no definitive definition seems to be available. Nonetheless we would like to describe briefly a methodology that may be characterized as learning by doing. It is true that the other methodologies also include many activities and things that children have to do and to experience, but there the active part often consists of research like activities, or making a log, and eventually a presentation. In action learning the things to be done are actually the same things one eventually needs to be able to do, but then at a higher level of performance. So the students learn how to make cartoons by making cartoons. They learn how to speak in public by speaking in public. The process offers the students the opportunity to experience the action and later on to reflect upon these actions. It is a kind of hands-on experience, or, if the competence to be acquired is a very intellectual one, a brains-on experience.

Ref. <http://the-aqueduct.eu/>

Ref. <http://www.keyttcd.cct.bg>

## PROBLEM BASED LEARNING

Problem based learning emphasizes the content and internal consistency. Problems are primarily the vehicle. Problem based learning is a form of student-centered learning in which the acquisition of knowledge by analyzing problems is central. The existing knowledge of the student is the basis for further learning. The approach to a problem consists of confronting the student with prior knowledge, and the existing gaps in his knowledge, to solve the problem or to fully understand it. Small groups of 6 to 12 students, along with a teacher, examine the underlying aspects of the problem. The groups make a preliminary analysis of the problem based on the existing knowledge of the students. The questions that arise during the analysis form the basis for the formulation of learning goals for self- study. Between two group meetings on the same day, students work individually or in groups: reading and studying articles, books, internet search, etc. During the next group meeting, students report what they studied and formulate their views about the learning goals. In this way they check whether they understand the problem better.

Ref. <http://the-aqueduct.eu/>

Ref. <http://idial.iccfound.org>

Ref. <http://www.keyttcd.cct.bg>



## CO-OPERATIVE LEARNING

Co-operative learning emphasizes the process of co-operation both as a vehicle and an outcome of learning. Co-operative learning is a form of social constructivist learning. It has a consistent and obvious impact on knowledge construction, motivation and learning attitudes, the development of social competences and meta-cognition. It also ensures individual learners understand that their contribution is vital to the team.

The co-operative learning approach contains these five elements:

- positive interdependence – ‘we sink or swim together’;
- individual and group accountability;
- face-to-face interaction or its electronic equivalent;
- explicit learning of interpersonal and team work skills;
- group processing – to evaluate team functioning and agree which behaviours to change.

Co-operative learning in a way is a specific kind of action learning in which students learn to co-operate effectively by actually doing it. The added value of the methodology is that it allows students to share each other’s achievements and as such the individual learning outcomes accumulate into a broader and shared set of outcomes, while at the same time the ability to work together increases.

Ref: <http://the-aqueduct.eu/>

Ref: <http://idial.iccfound.org>

Ref: <http://www.keytttcd.cct.bg>

Ref: [www.readitproject.eu](http://www.readitproject.eu)

Ref: <http://www.sustain-project.eu/>

## RECIPROCAL MAIEUTIC APPROACH –RMA (CSC)

### **Rationale**

The Reciprocal Maieutic Approach (RMA) is a dialectic method of inquiry and "popular self-analysis" for empowerment of communities and individuals and it can be defined as a "*process of collective exploration that takes, as a departure point, the experience and the intuition of individuals*" (Dolci, 1996). RMA can be described as strategy of group communication (Habermas, 1986) that permits all the elements in the group to give their ideas and opinions, contributing through this to the development of a final common idea (Mangano, 1992).

This methodology is very “democratic”, in the sense that everybody has the space to talk. In this methodology, the educational process happens in two senses:

1. The real discussions that happen and that might have concrete results.
2. The development of competences, which happen through the discussions and group meetings.

### Assumptions

- Dialogue as a tool for reciprocal research and active participation.
- Each person has an inner knowledge that comes from experience.

- Knowledge is dynamic and in constant evolution and it should be built within a group.
- Everybody being in connection inside a group can be an element of change

## Characteristics

- Emphasis on the individual and group experience.
- Deep grassroots analysis/participation of everybody in the process whereby we understand our real needs and our responsibility to make a change.
- Connection with reality in order to identify concrete problems, develop reciprocal awareness and find positive solutions.
- Building complex images of reality through the plurality of points of view and everyone's contribution.
- The horizontality of the process: sharing of power instead of domination/concentration of power.
- Active participation, active listening, communication, confrontation, cooperation, nonviolence, creativity, self-reflection, openness.

## ***Procedure***

As the name says, RMA is a “reciprocal” process between at least two persons and it is normally done inside a group, with one person asking questions and others giving answers.

Students sit in a circle, so everyone has the same distance from the centre and can look each other in the eyes. The space is the metaphor of relations, communication, expression and creativity. There isn't any leader, boss, desk or pulpit; because the aim is to create a democratic dialogue where it is possible to listen to questions and think about making responsible choices.

It's useful to have a flipchart or a notebook to write down the diverse interventions and to record the outcomes of the lesson.

The students are guided by the teacher, the RMA coordinator, who first introduces the issue or a “good question”. The lesson should begin as a process of dialectical inquiry that should be easy and based on a democratic open structure.

The teacher harmonizes the group discussion in order to allow each student to have the proper amount of time during each session, so that each one can express her/himself on the issue according to her/his own style and personality. It is important to always put emphasis on real needs, interests, desires and dreams first.

During the discussion, the students ask when they want to speak. It is important that everybody listens actively to each other's voice. The teacher might also invite to speak those students who are silent, giving them the possibility to accept or refuse the invitation. However, they are not pressed to give necessarily some kind of answer, but rather to silently reflect on what they have just heard from others and then talk.

At the end, the teacher asks a short evaluation to all students about their personal experience and about what they have learnt within the group. This final evaluation allows the students to have reciprocal feedbacks. Then the teacher makes a short summary of what has been said

during the lesson and draws conclusions on what emerged from it.

## ***The roles of the teacher and the students***

### The RMA teacher:

- works as the moderator, coordinator and facilitator,
- creates conditions in which each student can learn how to express him/herself and research individually and in groups,
- introduces the issue, asks and initiates the good question,
- facilitates the communication,
- gives all the students the chance to talk, keeps the time, reflects feelings and clarifies interventions,
- writes down the diverse interventions, records the outcomes of the lesson,
- makes the short summary and asks a short evaluation to get the reciprocal feedback of the students.

### The students:

- sit in a circle and work as a group,
- answer the question, discuss the issue,
- express opinions and communicate with each other,
- listen actively to each other's voice.

The maieutic process activates and develops in participants fundamental competences and values fundamental to live in society and build together, including learn to share different points of view with other people, learn to communicate, learn to confront with other people in a nonviolent way, learn to value and respect others, learn to value the group and to cooperate, develop active participation awareness and skills, strengthen democratic competences, facilitate and reinforce the integration between people from different backgrounds. As well it promotes the increase of self-esteem, self-awareness and creativity.

Ref: <http://www.sustain-project.eu/>

## **VALUES CLARIFICATION**

### ***Rationale***

The object of the values clarification strategy is not to teach specific values, but to involve students in practical experiences, making them aware of their own feelings, their own ideas, their own beliefs; so that the choices and decisions they make are conscious and deliberate and are based on their own value systems.

### ***Procedure***

Values may be acquired in two ways:

- The first one is the cognitive process involving activities, which are designed not to arouse feelings but to present information for analysis. The activities define, state, defend, explain, generalize, predict, analyze, compare, test, select, examine, summarize and support.
- The second one is the affective process wherein emphatic identification takes place between the child and an individual or a model. The child is asked how s/he feels and how

s/he thinks another would feel under the same circumstances. The activities describe, identify, qualify, differentiate, feel, make aware, receive, respond and value.

Materials and devices used in value clarification may include instructional media, stimulation, role-playing, games, value-sheets, brainstorming, interviews, values grid, open-ended questions and questionnaires. They all seek to help the students make value choices for themselves by judging, differentiating and reaching a defensible decision.

Though values clarification activities take a variety of forms, there are certain basic procedures that should be followed when using the strategy:

- The teacher begins the lesson with "opening up" activities, which focus on low-risk issues and uses warm-up exercises. If possible, the teacher uses small groups because this allows everyone to share.
- The activities require students to indicate their position on an issue in an overt and explicit manner.
- The teacher asks questions in three different categories:
  - 1-Factual Questions: They are aimed to determine knowledge of factual data.  
"What happened? / What did they do? / Who was involved in the incident?"
  - 2-Definitional Questions: They are aimed to find what meanings students attach to a certain term or phrase used.  
"What do you mean? / Can you give an example? / What characteristics must a thing possess to qualify as a ...?"
  - 3-Inferential Questions: They are aimed to go beyond the data previously acquired.  
"What caused him to do that? / How did he feel? / What conclusions can you draw from this? / What would you say he considers important? / If he had done that, what might have happened?"

The questions, which should be thought of beforehand, should be a few; four to six at the most. The teacher must avoid yes-no questions; as they don't lead to thought. Also "why" questions may cause students to become defensive. It's better to ask: "Do you want to tell us the reasons for your choice?" It's important to keep the questions simple and let the students reflect.

- The teacher accepts student responses without judgment or evaluation and discourages any attempts by students to challenge or mock each other's position.
- The students should be asked to explain or provide reasons for holding a specific value position. This is the clarification aspect of the strategy.
- The activities should, whenever possible, be related to issues that have historical import or are related to current social or political concerns.

**Closure:** No assessment is really desired unless it is the observation of whether or not students share their values and possess an appropriate sense of their own values. There has to be an overt response: pointing, choosing, writing, etc. and as many of the value processes as possible should be involved—choosing, prizing, etc. At the end, the teacher remains non-judgmental and offers to reveal his/her own values.

### ***The roles of the teacher and the students***

The teacher is only a facilitator rather than an expert on values. S/he;

- tries to create conditions, which will encourage students to identify issues, state hypotheses, clarify, probe and resolve conflicting ideas,

- establishes a climate of psychological safety; an atmosphere of openness, trusts, honesty and acceptance as well as respect for others,
- applies a clarification procedure; as s/he shows non-judgmental attitude, shows interest in the students' ideas by listening carefully and remembering what they say and encourages children to share their ideas and feelings in many different situations,
- allows the students to pass when they don't want to respond; as people share only what they feel comfortable in sharing,
- encourages students to listen to and understand each other and not to moralize or criticize one another,
- participates in the exercises and discussions whenever possible,
- asks questions that are likely to explore values effectively.

The situations are largely student-dominated. As they:

- answer the questions,
- brainstorm and discuss,
- identify issues, state hypotheses, clarify, probe, resolve conflicting ideas and opinions,
- listen to and try to understand each other without moralizing or criticizing one another,
- make value choices for themselves by judging, differentiating and reaching a defensible decision,
- discover their values by themselves.

Value clarification promotes team building and conflict resolution. The students seek congruence of their personal values and behaviour with the social and cultural requirements of their environment.

Ref: <http://www.sustain-project.eu/>

## ROLE-PLAYING APPROACH

### ***Rationale***

“Teamwork skills and team member participation can often be enhanced through role-playing” (Lingard & Berry, 2002) as it allows for hypothetical situations to be approached in an authentic setting. This is corroborated by research that concludes that situated learning allows learners to construct their own meaning and improves outcomes (Alessi & Trollip, 2001; Anderson, 1983; Park & Hannafin, 1993; Schank 1997). Applying skills toward achieving a specific goal provides a context in which those skills are useful (Bransford, Sherwood, Hasselbring, Kinzer, & Williams, 1990; Collins, Brown, & Newman, 1989).

Role-plays are not simple acts of reading or reproduction the information from a piece of paper. It also gives learners more responsibility in their learning, encouraging interaction and offers students the chance to evaluate their learning progress. According to Johnson, Sutton and Harris (2001) students perceive role-playing as one of the most important techniques for learning communication skills, after discussion. Role-playing scores the highest for the most enjoyable learning environment and since learning is improved if a student is motivated and engaged this is important to their learning outcomes.



## ***Procedure***

Role-playing in the classroom works best when there is an attempt to follow a definite sequence of steps.

1. ***Selection of the Role-Play Situation:*** There are a number of situations, which lend themselves to the use of role-play. These situations include individual dilemmas (e.g., dealing with a pushy salesperson, observing a crime, or testifying in court) and conflict-resolution situations (e.g., a tenant negotiating with a landlord over the terms of a lease or a police officer confronting a suspected shoplifter). The problem should be selected beforehand by the teacher with or without class help.
2. ***Preparation and warm-up:*** The teacher should prepare the students by asking questions before performing a role-play. The questions should incorporate the major parts of the role-play and the vocabulary/idioms involved. Students should be told the situation or problem and instructed as to the various roles. If role-playing is new to the class, "warm-up" or introductory activities may be helpful.
3. ***Selection of the participants:*** After the question-answer session, students can either be assigned roles or the teacher can ask for volunteers. Role-plays may be conducted in front of the entire class or a number of simultaneous role-plays could be conducted by dividing the class into small groups. Students who do not participate in the role-play should act as observers. The students should be comfortable with what they need to do. Also they need to be allowed a few minutes to study the role cards and work out some key sentences. The teacher can help the students wherever needed.
4. ***Conducting the role-play:*** The students act out the role the way they think someone faced with the same situation would act in real life. The teacher should not interrupt the role-play; however, if the students need some help in getting started the teacher should assist the students. After conducting the role-play it is sometimes useful to have students reverse roles or to conduct the same role-play using different participants.
5. ***Debrief and evaluation:*** In this stage, the post role-playing discussion starts, which may take several forms and may be done by role players or the audience or both that contributes to an analysis of the dramatic session. Typical debriefing questions include the following:
  - How did you feel about the role-play and each of the various roles?
  - Was the role-play realistic? How was it similar to or different from real life? Was the problem solved? If so, how? If not, why not?
  - What, if anything, could have been done differently? What other outcomes were possible?
  - What did you learn from the experience?The teacher and the students review the successes and failures of their role-playing experience. The purposes, procedures and effects are all analyzed. Also the teacher makes a further personal evaluation of the experience in the light of his/her original diagnosis and goals considering what verbal and behavioral evidence there is to show that the students have learned from the experience.

## ***The roles of the teacher and the students***

The teacher:

- defines the general structure of the role-play and selects the situation with or without class help,
- prepares the classroom and the students and assigns the roles before performing the

role-play,

- does not actively participate once the structure is set. To quote Jones (1982), "...the teacher becomes the Controller, and controls the event in the same way as a traffic controller, helping the flow of traffic and avoiding bottlenecks, but not telling individuals which way to go",
- keeps learners motivated by stimulating their curiosity and keeping the material relevant, creating a "tension to learn" (Burns and Gentry, 1998),
- asks questions for a further evaluation.

The students:

- are active and have considerable control over their own learning,
- may help select themes and tasks and provide teachers with details of their learning process,
- are free to interact with each other spontaneously, which reduces anxiety and facilitates learning,
- work together as a team or group and communicate in order to understand each other.

Role-playing provides the student with a dramatic confrontation and clarification of his/her relations with others, his/her information about and expectations of society, his/her evaluation of himself/herself and his/her life style, the ways in which academic material may be relevant to his/her daily tasks. Role-playing calls for a student's stepping outside the accustomed role that s/he plays in life, relinquishing his/her usual patterns of behavior in exchange for the role and patterns of another person. Role-playing approach helps students cope with real-life situations, commonly used expressions, forcing them to think "on their feet".

Ref: <http://www.sustain-project.eu/>

## CRITICAL THINKING METHOD

The foundation for the Critical thinking approach lays in *Reading and writing for critical thinking initiative* (RWCT) of the Open Society Institute and the International Reading Association, a non-governmental organization of professional educators. The approach is based on learning cycle in which teachers combine different techniques and methods to help students think reflectively, take ownership for their personal learning, understand the logic of arguments, listen attentively, debate confidently and become independent life-long learners. It promotes active inquiry, student-initiated learning, problem-solving, and opinion formation, relating education to life, critical thinking, and cooperative learning, writing and reading processes, alternative assessments.

### ***What is critical thinking?***

"Critical thinking represents a basic understanding of information. It starts with certain anticipation, studying its influences, revising them, comparing them to opposite opinion, forming a system of support and creating our own opinion on the basis of the whole process. Critical thinking is a very complicated process of unifying concepts and facts. It is an active and interactive linked cognitive process, which takes place on different levels. Critical thinking is mostly goal-oriented, yet it can also be a creative process, without defining specific goals in

advance. Critical thinking is a higher form of thinking..." (Charles Temple, Jeannie L. Steel and Kurtis S. Meredith, 1998.)

The distinct mission of the critical thinking approach is to help teachers change classroom practices at all grade levels and in most school subjects. Through the critical thinking approach teachers learn to help students to:

- Read and listen with understanding,
- Engage in insightful discussions,
- Relate learning to life,
- Work cooperatively to solve problems,
- Write to learn,
- Conduct community-based inquiries.

This is done by:

- Planning active lessons and using various methods and techniques at different phase of the learning process,
- Creating thematic units,
- Developing authentic assessments that evaluate learning processes as well as mastery of content.

The teachers who use critical thinking approach believe that opportunities for preparing students for citizenship in open societies are more likely to be found in the *how* of education than in the *what*. That is, the means to democratic citizenship resides less in studying the *content* of subjects like civics or political science than in the daily conduct of classroom instruction the opportunities that are provided for cooperative work, decision making, critical thinking, opinion formation, and debate.

Through the critical thinking approach students have opportunities to predict the goals of education – how to understand the specific objectives, so that they can later also independently determine the extent of their own reach.

The critical thinking approach includes active learning processes that are reflected through three levels/phases: evocation, realization and reflection (*ERR framework*). The ERR enables teachers to help their pupils understand certain knowledge or actions. Due to methodical reasons, we can only describe individual parts, thus the whole procedure is a holistic, integrated and tightly connected strategy. The framework approach (ERR) for thinking and learning is based on premise: *Things you already know mostly define things that can be taught.*

### ***The Evocation Phase***

Majority of teachers are using some kind of motivation at the beginning of the lesson, but many times this attempt is touching only some students and quite often only the same ones. As many important cognitive activities take place in this phase it is important to use methods to support students in remembering everything they know about a certain topic. In this way, they are forced to revise their knowledge and start thinking about a topic they will soon thoroughly analyze.

The *evocation* phase is of great importance for a long-term understanding of the process of connecting old information with new one. It strengthens the interest in a specific topic and the

goal of studying. These are two very important conditions for a constant active cooperation of pupils.

### ***The Realization of Meaning Phase***

The second phase of the ERR approach is called *realization of meaning*. In this phase pupils get in touch with new information or ideas. Pupils should receive new information from texts, movies, experiments or when listening to stories. At the same time, this phase represents the method of teaching, in which teachers have the least influence on pupils. Pupils must actively cooperate. Pupils not only monitor their own understanding, but they also cooperate and use the information in already known learning schemes, make sensible connections between the old and the new knowledge. The specific context of the realization phase is determining goals, critical analysis, comparative analysis and synthesis.

### ***The Reflection Phase***

The third phase of the framework EER approach is *reflection*. This phase is often neglected in the teaching process, although it is just as important as the previous two phases. In the reflection phase, pupils revise and strengthen their knowledge and reconstruct their learning schemes in a new way by including new information and knowledge. This is the phase, when pupils actually acquire their knowledge.

### ***Conclusion***

The young people must be prepared to meet challenges of the rapidly changing world and information. Critical thinking competence, as universal strategy, is still one of the biggest needs in society and it can be developed by using concepts and methods for active learning and critical thinking in educational process.

The critical thinking approach provides changes to the position of teacher and students in the educational process and changes to the way of communication between teachers and students, as well as among students themselves. The use of formal knowledge and the ability of problem-solving form the basis for the development of mental processes. Students are also constantly in touch with their own learning processes so that such reflection is becoming a tool of lifelong learning. It includes activities in reading, writing and discussion, dialogue in various fields for developing independent thinking of students; encourages lifelong learning and permanence of learning; encourages creative approach to new situations, the ability to participate and take into account the views of other people, be sensitive for diversities in society, understand social justice.

Ref: <http://idial.iccfound.org>

## **DIGITAL STORYTELLING**

Digital storytelling is the practice of using digital technologies to tell a short story (Robin 2008). Like traditional narratives, digital stories focus on a subject and feature a particular point of view. What distinguishes digital storytelling is the inclusion of digital images, text, audio narration, moving image (video), and music. These multimedia stories tend to be short (2-10 minute), personalised reflections which use still pictures or videos of personal artefacts to create short evocative stories. These might relate an event or personal journey from the author's point

of view (Centre for Digital Storytelling 2010). Such digital narratives are an extension of traditional storytelling, providing engaging stories which can be shared within social/learning communities.

Digital Storytelling is employed in a range of contexts and for a variety of purposes: self-awareness or discovery; narrative (knowledge management) in businesses; facilitating group understanding; engagement of marginalised sections of society; subject learning and development of subject, cultural or societal resources (Benmayor 2008, Petrucco-De Rossi 2009, Roby 2010). The digital story genre is perhaps most frequently associated with the telling of personal stories, often of cultural or historical importance to the author (Lambert 2004, 2007). Such stories often focus on interesting experiences, memories of some past event or person or personal journeys to overcome challenges or achieve goals (Benmayor 2008). Robin (2008) identifies two other types of digital story – one that informs or instructs and one which examines historical events. Arguably digital storytelling could equally be used to examine social environments or political issues. Thinking more generally about the purpose of digital stories, it might be useful to categorise the stories as ‘personal’ stories, informative ‘stories’ and exploring/analysis ‘stories’. Any given story may contain elements of all three.

### ***Digital Book Trailers***

Digital book trailers are essentially multi-media based video advertisements for books, akin to film trailers, offering tasters for content. Digital book trailers have emerged as part of publishers’ response to the changing publication market, brought about in large measure by the advent of the Web and the increasing demands of digital, media savvy consumers (Fitzpatrick 2010). They can be found throughout the Internet on sites such as YouTube and Facebook as well as publishers’ websites. As Fitzpatrick argues, the amount of time and money which publishers are spending on commissioning digital book trailers is a testament to their viral marketing powers. Not unsurprisingly, given the technology-centric lives of young people, and how they engage with digital media, across all of the partner countries, digital book trailers are primarily targeted at young adults and children.

These ‘marketing’ digital book trailers generally take the form of selected abstracts from the book or its cover notes designed to provide a flavour of the story without giving away any critical plot points which would spoil the story/drama. These abstracts are accompanied by supporting stills or video clips, lasting 5-7 minutes.

Digital book trailers are also used in educational settings such as the Digital Book Talk project<sup>2</sup> which provides digital book trailers (and accompanying pedagogical materials) for use in schools. The objectives of these trailers are not necessarily to sell the book; rather, they are concerned with providing the prospective reader with sufficient information to make an informed choice regarding whether to read the book – selecting an engaging book is a key issue if young people are to become active readers. As Gunter and Kenny (2008) argue, digital book trailers introduce the prospective reader to books in a non-threatening, non-textual format, playing to the multi-media centric interests of the digital generation.

While not telling personal stories, digital book trailers can be considered a form of digital narrative or storytelling in the widest sense of storytelling.

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<sup>2</sup> <http://digitalbooktalk.com/>



## ***Educational Application of Digital Storytelling and Digital Book Trailers***

Kenny (2007) argues that classroom practice that combines use of digital media with the art of story – leveraging both the skills and preferences of digital age students and the inherent human interest in story – is a potentially powerful pedagogy. Digital storytelling can be used to engage, inform, explore and transform, and thereby lends itself to educational contexts. Indeed, as shown by Yuksel et al's (2011) world-wide survey investigating the use of digital storytelling to support learning, digital storytelling is used in educational contexts not only to develop subject area knowledge, writing skills, technical skills, and presentation skills, but additionally reflection, language, higher level thinking, social, and artistic skills are also developed.

Digital storytelling, when well-conceived and executed, provides an engaging and powerful account of a 'story' – be it informative, imaginative or reflective. While any well-formed story should achieve this, the integrated visual and audio nature of digital storytelling is particularly potent to generations who have grown up in a social and multi-media world. The nature of the engagement goes beyond mere entertainment, although the value of fun in educational contexts is not to be underrated; using digital storytelling in the curriculum can afford real educational advantages (Roby 2010). Firstly, the multi-media nature makes the content of the digital narrative more accessible to technology-centric students, many of whom are alienated from traditional textual forms. (Gunter and Kenny 2008). Secondly, as researchers such as Burmark (2004, cited in Robin 2008) have shown, the combination of text integrated with visual images enhances student understanding. The visual component, especially where of a personal nature, helps situate the story within a recognisable context. According to Bruner's theory of situated cognition, this increases the time that students are able to retain and understand information (Kenny 2007) as well as enabling students to better organise information into manageable chunks. Thirdly, the multimedia nature of digital stories encourages active listening.

The stronger educational benefits arise when students become involved as active learners in the authorship of digital stories. Creating their own digital stories, whether personal, informative or imaginative, requires the student to engage with the structure of storytelling. In developing the story, students must understand the basics of narrative structure as well as grammar. For example, students will need to consider dramatic tension, pacing and narrative flow. Further, in the case of digital book trailers, students will need to understand what makes a story engaging, what to include in a trailer and how to ensure the absence of plot spoilers. Further, as Ohler (2005) advocates, authoring of digital stories provides a powerful opportunity for students to develop critical media skills. This is evident in the inner-city high school class on digital media analysis and production of personal documentary films. In this class, the fact that at the end of the school year the students would show their documentary films to an audience of family, peers and the local community encouraged students to be rigorous in their approach. Students critically analysed texts and their own stories to explore how the different elements of the media encourage viewers to believe, feel or think in a certain way. Similarly, developing digital book trailers helps students to think critically about their purpose and group discussion of digital stories can explore the impact of differing media and communications channels.

Furthermore, both the personal and non-personal storytelling form can be used to explore theoretical concepts. For example, by asking students to examine the development of their own identity in digital stories as Benmayor (2008) does in her Latina Life Stories class, Benmayor argues that digital storytelling provides a meeting point for creative and analytical processes.

This in turn allows students to develop deeper understanding of theoretical concepts, develop intellectual discourse and critique skills as well as transforming and empowering themselves. The educational use of non-personal digital narratives such as digital book trailers are primarily focussed on engagement and development of subject understanding as well as digital skills. However, the analysis which students need to undertake in order to decide what to include and how to design their trailer also affords real opportunities for personal and learning community development. For example, students need to examine their own preferences and beliefs and those of their peers to understand what it is that makes the book worth reading and how best to reflect that interest.

Digital storytelling and digital book trailers are arguably of most pedagogical value when they are part of a project-based learning approach, where active learning strategies are adopted as part of a learning community. Listening to others' digital stories and providing feedback to help refine stories helps develop critical listening and communication skills.

Ref: [www.readitproject.eu](http://www.readitproject.eu)

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The projects on the outcomes of which the present report is based are:

## **AQUEDUCT**

### **Acquiring key competences through heritage education**

<http://the-aqueduct.eu/>

The project aimed to improve the acquisition of the Lifelong Learning transversal key competences in schools through heritage education and to build teacher capacity for competence oriented education in a heritage context.

The heritage education is viewed as a complex asset offering great potential in developing transversal key competences such as learning to learn, social and civic competences, sense of initiative and entrepreneurship and cultural awareness and expression. The project developed guidelines and criteria to assess the transversal key competence acquisition through cultural heritage education initiatives. The AQUEDUCT partners collected, described and assessed good practices, piloted local, national and international heritage initiatives and produced a set of publications in English and in each partner languages' to be used by teachers, trainers and teacher trainers. The target groups of the project comprise teacher trainers, initial teacher training students and teachers in schools reaching 6–14 age groups (primary and lower secondary education).

## **IDIAL**

### **Intercompetency and Dialogue through Literature**

<http://idial.iccfound.org>

The aims of the IDiaL project implementers was to provide school teachers with support to deal

with the challenges of the modern life and education by supplying them with creative methods, teaching materials and in-service training that would help them to develop and improve learners' key competencies for lifelong learning in a complex (simultaneous) way. The project stepped on the literature as main instrument of impact. The project focused primarily on the composite developing of the so called transversal key competences: learning to learn, social and civic competencies, cultural awareness and expression, communication in mother tongue and in foreign languages. A Teachers' Handbook was produced. It consists of 2 parts – methodological framework and activities, ready to be implemented in the educational practice. A teacher training course program was prepared and tested in international context. The project addressed teachers and students at the secondary school education.

## **KEYTTT**

### **Teamwork, Training and Technology for development of Key Competencies**

<http://www.keyttcd.cct.bg>

The aim of the project was to equip teachers with tools that help them to support students' creativity and develop their key competencies for lifelong learning, enhancing their competencies in science, maths and technology, use of digital resources, learning to learn, sense of initiative and entrepreneurship, and not the least – their communication skills. The project stepped on various practices created in school and out of school environment from five partner countries (BG, IT, TR, NO, PL). These practices were assessed and modified. After a test in real educational practice these were put together into a collection of teaching strategies and practical activities addressed at teachers (Teachers' Guidelines Book). The project produced also a Qualification Teacher Course addressed at teachers in natural sciences and mathematics who work in the course of the lower secondary education. An overview of suitable teaching methodologies that allow educational process oriented at learning as problem-solving or research-in-action was also prepared. The partnership launched a multilingual web-site with educational recourses and teaching materials. The project outcomes are addressed in particular at teachers from the lower secondary stage of education.

## **READ IT**

### **Training teachers to make READing fun through digITal storytelling**

[www.readitproject.eu](http://www.readitproject.eu)

The READ IT project aimed to identify, implement and test a didactic methodology that can help teachers acquire new skills through video production using Digital Storytelling and help motivate new generations of young readers through book trailer production. The innovative aspect of the READ IT didactic methodology is to combine the technology of Digital Storytelling and book trailer production with writing techniques such as narrative and screenplay to reinforce teaching of reading and writing in an interactive, creative and authentic way. The READ IT project addressed European high school teachers and students through the following key actions: Bringing new digital tools into the classroom to empower teachers to experiment with new technology and render teaching and learning more up-to-date and interesting; Encouraging teachers to work together with their students to create and produce book trailers, allowing them to discover new ways to approach digital education.

## **SUSTAIN**

### **Sustaining Development in Early School Education**

<http://www.sustain-project.eu/>

The aim of the project was to equip the primary and pre-primary school teachers with methodological support, teaching tools and good practices samples that would enable them to educate the pupils with the knowledge, skills and attitudes to make conscious choices to deal with the challenges of the sustainable development. The activities and products of the project aim to provide solutions for supporting the development of key competences for lifelong learning relevant to the social and environmental aspects at an early school age. The project collects, creates and shares good practices in teaching which support the key competences of young learners in classroom applications among the partner countries. This encourages the best use of results, innovative products and processes and improves the quality of education and training through local workshops and online classroom implementations. A web-based platform is prepared to allow sharing materials and resources, lessons and educational activities among teachers and to encourage the international cooperation