

YES, I CAN! ICT AND ICT-AT SKILLS DEVELOPMENT FOR ALL FINAL SYMPOSIUM OF THE VIPI & ATLEC PROJECTS – 04/12/2013



THE ATLEC CURRICULUM

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(ON BEHALF OF THE ATLEC CONSORTIUM
PARTNERS)

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With the support of:



ATLEC PROJECT - OVERVIEW

Aim:

to facilitate the development of **ICT-AT skills** of **persons with disabilities** by making available a **unified and validated** curriculum, courseware, a trainers handbook and an **ICT-AT Trainer job profile**.

Partnership:

Time frame

Oakfield School and Sports College (UK)-**Applicant**

PhoenixKM BVBA (B)-**Coordination**

University of Athens (GR)

AIAS Bologna onlus (I)

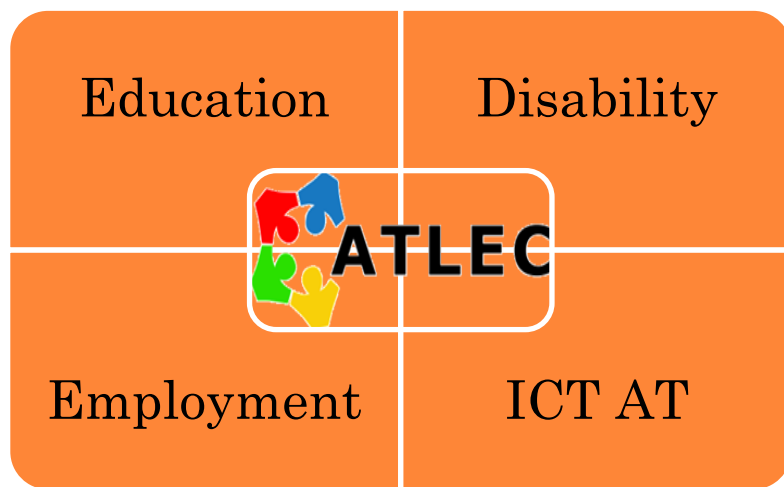
Greenhat Interactive Ltd (UK)

Disability Now (GR)

01.01.2012-
28.02.2014



○ Stakeholders and gatekeepers



THEIR
OBJECTIVES &
NEEDS

Strategies to facilitate uptake
of project outputs:

- Appropriate communication
- Aim at usability in different contexts
- Flexibility and adaptability

ICT-AT SKILLS DEVELOPMENT (IN LLL PERSPECTIVE)

Learning takes place at different moments in life and is supported by different stakeholders.

The person and his/her needs-wishes are at the centre

Aims of learning:

-To become a skilled ICT-AT user → success in education and employment

-To become an ICT-AT expert → ICT-AT as a discipline

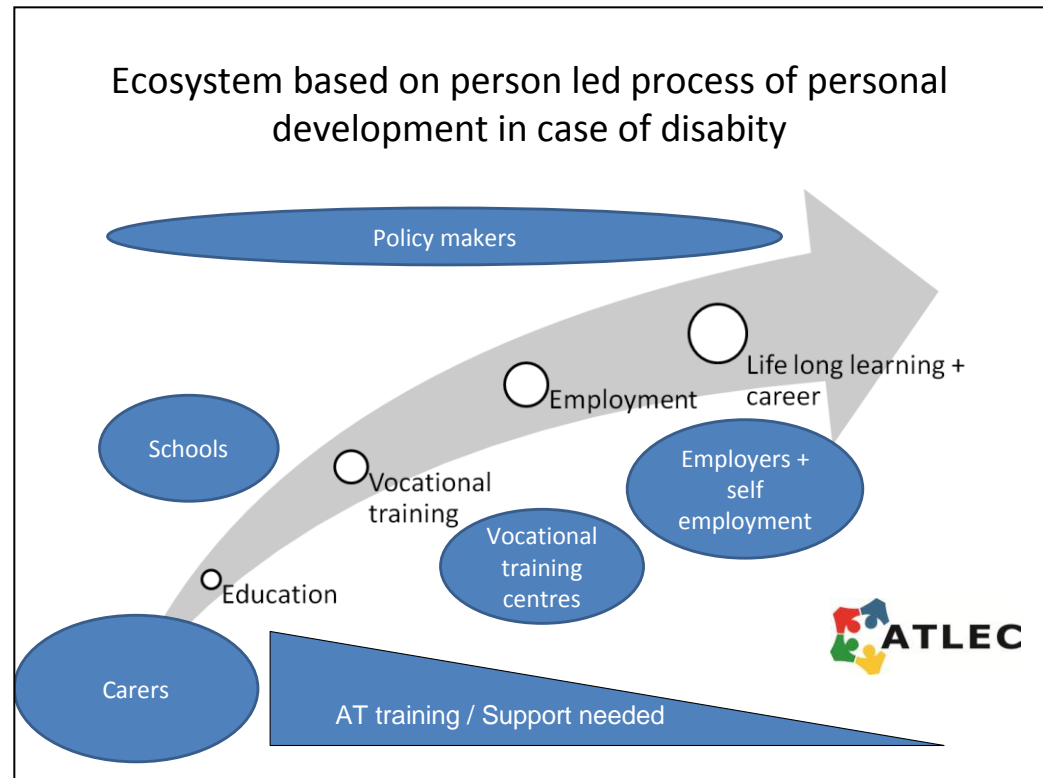


Fig. 1 Disability and personal development

TOWARDS A UNIFIED CURRICULUM

Variables to consider and where possible to include:

- Individual learning needs and prior learning
- Levels of learning
- Motivation and interest
- Context where the learning takes place
 - Formal education – schools, vocational training centres, etc.
 - Non-formal education – daycare centres, AT centres, workplace
 - Informal learning– community, friends, peers, families
- Different ways of learning: face to face, self directed learning, distance learning, learning by doing, etc.

LEVELS IN LEARNING

ICT AT learning	Knowledge	Skills	Personal Outcomes
ACCESS	Awareness of personal AT solution	Very basic skills	Use with support
FOUNDATION	Basic knowledge of personal ICT AT solution	Adequate skills for proficient use	Use with little or no support
INTERMEDIATE	In-depth knowledge of personal ICT-AT solutions, including critical awareness	Proficient skills to increase one's level of activity and participation	Independent use
ADVANCED	Wider knowledge of ICT AT solutions for different users	Peer support, mentoring skills	Support others

Table 1. ATLEC levels of learning

UNITS & SUBUNITS

Units
delivered at
different
levels:

Access:
1&2&3

Foundation:
1&2&3

Intermediate:
1&2&3

Advanced:
3

1. ICT – the digital society

- ICT is everywhere
- ICT makes life easier

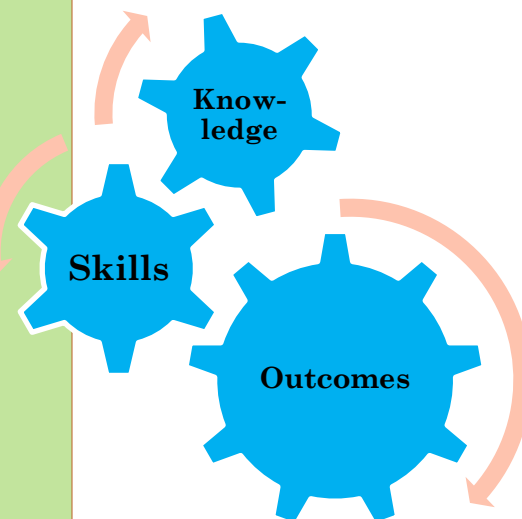
2. ICT AT

- Assessment
-
- What is ICT AT?
- What is the impact of ICT AT?
- How is ICT AT acquired?
-
- Using ICT AT – How to use ICT AT
- Social and personal skills
-
- Participation in the ICT society
- Become a critical consumer

3. Peer support – mentoring

- ICT & ICT AT (in-depth)
- Mentoring
- Teaching ICT AT

Each unit and sub-unit lists learning outcomes, content and learning activities



COMPETENCE




Competence in ICT AT has been systematically described in a framework, in order to be able ...

- to facilitate the design of learning paths within the curriculum
- to identify and pinpoint learning objectives in relation to other LOs
- to map and monitor progress in learning
- to lay the basis for the certification of competences in a lifelong learning perspective (outside the scope of this project)

Competences/ personal outcomes	Skills	Knowledge and understanding
Activity and participation	ICT AT skills	Knowledge about ICT AT
Independence	Other skills: Social and communication skills	Other areas of knowledge or understanding

Table 2. Overview of the ambits in the ATLEC “ICT AT Competence framework”


COMPETENCE FRAMEWORK – EXAMPLE (UNIT 2 – FOUNDATION LEVEL)

Competences/outcomes	Skills	Knowledge
Activity and participation	ICT AT skills	ICT AT factual knowledge and understanding
<ul style="list-style-type: none"> ➤ To demonstrate that I can perform tasks in learning and work environments with some or no support. ➤ To demonstrate that I can communicate with others using my ICT AT device. ➤ To demonstrate that I can play games on my ICT AT device. ➤ To demonstrate that I can participate in social discussion forums and online discussion groups with facilitation and support. ➤ To demonstrate that I can enjoy more positive relationships. ➤ Etc. 	<ul style="list-style-type: none"> ➤ To demonstrate that I can perform small maintenance tasks related to the personal ICT AT solution. ➤ To demonstrate that I can recognise a malfunction on my ICT AT device. ➤ To demonstrate self assessment skills with some support. ➤ To demonstrate the different ways of using social media. ➤ Etc. 	<ul style="list-style-type: none"> ➤ To describe in own terms the concept of ICT-AT and how it relates to mainstream ICT. ➤ To list some categories of assistive technologies relevant for oneself. ➤ To describe the main features of one's assistive solution using appropriate technical terms. ➤ To demonstrate knowledge and understanding of the different ways in which the device can be used. ➤ To demonstrate knowledge and understanding about potential dangers when using the internet and social media. ➤ To know who to contact when my ICT AT device has a malfunction or requires an update. ➤ Etc.



THE COURSE CONTENT

- Detailed description of the content issues addressed in the various units
- Activities and suggestions for active elaboration.

To be adapted on the basis of the learning needs, learning level, way of learning, etc. !



ATLEC Project – WP3


Contract No: 518229-LLP-1-2011-UK-LEONARDO-LMP

ATLEC



Assistive Technology Learning Through A Unified Curriculum

"ATLEC Training course"

WP number	WP3
Deliverable number	3.2
WP title	Development of curriculum, preparation of training courses and production of training materials



ATLEC Project – WP3

Contract No: 518229-LLP-1-2011-UK-LEONARDO-LMP




Figure 3: Example of how a mobile device can interact with various other environments and devices via NFC.*

- **Augmented Reality:** Augmented reality (AR) is a live, direct or indirect, view of a physical, real-world environment whose elements are augmented (or supplemented) by computer-generated sensory input such as sound, video, graphics or GPS data.*







Figure 4: Viewing a scene through the smartphone brings up additional elements about what you see.*



ATLEC Project – WP3

Contract No: 518229-LLP-1-2011-UK-LEONARDO-LMP

- **Ambient intelligence:** In computing, ambient intelligence (AmI) refers to electronic environments that are sensitive and responsive to the presence of people. Ambient intelligence is a vision on the future of consumer electronics, telecommunications and computing that was originally developed in the late 1990s for the time frame 2010-2020. In an ambient intelligence world, devices work in concert to support people in carrying out their everyday life activities, tasks and rituals in an easy, natural way using information and intelligence that is hidden in the network connecting these devices. As these devices grow smaller, more connected and more integrated into our environment, the technology disappears into our surroundings until only the user interface remains perceivable by users.*

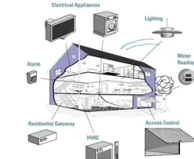


Figure 5: House equipped with ambient intelligence so that different devices communicate among them. Eg. when a window is open and the heating is on, then the window is closed to limit the loss of energy.*

- **Radio frequency identification:** Radio-frequency identification (RFID) is the wireless non-contact use of radio-frequency electromagnetic fields to transfer data, for the purposes of automatically identifying and tracking tags attached to objects.* Think for example of the chip that is implanted in house pets to identify them in case they run away.
- **Natural user interfaces (language, touch, gesture):** In computing, a natural user interface, or NUI, or Natural Interface is the common parlance used by designers and developers of human-machine interfaces to refer to a user interface that is (1) effectively invisible, or becomes invisible with successive learned interactions; to its users; and (2) is based on nature or natural elements. The word natural is used because most computer interfaces use artificial control.

July, 2013

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ATLEC - website: <http://atlec-project.eu>

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ATLEC - website: <http://atlec-project.eu>

- In all countries involved pilots have been set up to test the curriculum (UK, Belgium, Greece, Italy)
 - Appropriateness learning outcomes/levels
 - Usefulness content
 - Flexibility in delivery
- Not all countries test the full curriculum
- Choice and adaptation on the basis of:
 - Target audience (incl. type of disability)
 - Learning needs and interests (incl. prior learning)
 - Type of education (formal, non-formal or informal)
 - Context (school, vocational training centre, AT centre, community setting)

PILOTS - UK

○ Target groups

There are three piloting groups:

1. **Oak Field School - 9**
2. **Former Oak Field School students (GHI led) - 6**
3. **Carlton Digby Special School – 5**



○ Parts/levels of the curriculum tested

- **Pre-Course Assessment**
- **ICT is everywhere**
- **ICT makes life easier**
- **What is ICT AT**
- **What is the impact of ICT AT**
- **How is ICT AT acquired**
- **Personalisation of ICT AT**

All above completed at Access Level

Example Lesson Evaluation

Group Reference: OFS User ID: 001 Date of session: 4.11.13 Session Number: 2 Subunit: ICT is everywhere

Key: 1 - Strongly agree, 2 - Agree, 3 - Disagree, 4 – Strongly disagree	1	2	3	4	
Statements					Comments
How well were the learning objectives met?	✓				Demonstrated good knowledge of ICT AT equipment in school.
How well did the participants engage in the lesson/activities?	✓				Engaged in the session and was able to identify objects that use ICT AT within a range of environments.
How suitable was the overall content to the participants?		✓			Had some difficulty matching ICT AT devices to their use
How well was the content personalised to the needs of individual learners?	✓				Personalise appropriately through the use of photographs and symbols and individualised ICT
How suitable were teaching methods/strategies and resources?		✓			Adequate for the session The lesson plan was clear and simple to follow Easily adaptable to meet individual learning needs Accessing ICT AT equipment in the community would have benefitted the session e.g. ATM machine
How well did the participants demonstrate knowledge/understanding from previous lessons?		✓			Learners built upon knowledge and understanding in order to meet the objectives in session 2.
Were concepts understood accurately?		✓			Some concepts were understood accurately and most learners were able to identify ICT AT equipment and key components of a computer.
What went well? (Content materials, lesson plans, timings etc.) Learners engaged in discussion and enjoyed using and looking at different ICT AT equipment / devices. Learners demonstrated understanding that ICT AT plays an important role in their life both in and out of school.					
Future improvements: Even better if... Practical application and access of ICT AT out in the community would have been beneficial to further learner understanding.					

PILOTS - UK

○ Feedback collected

Trainer feedback

- The content and lesson plans were clear, accessible and easy to follow
- Generally the pace and flow of sessions to date has been good and allowed each learner to work towards the learning objectives
- A wide range of resources were provided and easily adaptable to meet the needs of individual learners
- Adequate time for **differentiation** and **adaptation** for each learner
- **Access to a variety of ICT AT / personalised devices within school**
- **Additional staff support to meet the needs of individual learners**
- Lessons overlapped and sometimes impacted on clarity of learning objectives for individual sessions
- Some activities could be outside the classroom / community in the future

PILOTS - UK

Feedback collected

Learner Feedback

- Learners are **applying the knowledge** and **practical skills** gained within the piloting sessions in their everyday lives
- **Actively discussing ideas** related to ICT AT
- Piloting has contributed to learners **understanding** of ICT AT is available in the community e.g. ATM machine, chip and pin device
- Quantity of information can be overwhelming for some learners
- Learners are not only recognising the different forms of ICT AT they are also realising that ICT AT can make life easier in different situations and environments
- Highlighted learner **awareness** of Health and **Safety** and Safeguarding with the use of ICT AT

PILOTS - UK CONTINUED

Target group:

- GHI has run 6 piloting sessions so far
- User group is made up of 6 (soon to be 8) people with various physical and intellectual disabilities
- Aged from 23-37

Parts/levels of the curriculum tested:

- ICT is everywhere
- ICT makes our lives easier
- What is ICT AT?
- What impact does ICT AT have on people's lives?
- Atlec mobile app
- Becoming a critical consumer



PILOTS UK CONTINUED

The sessions have been a great success with all of our members expressing how much they enjoy coming.

- We have noted that **activities** within the sessions are vital to keep the learners engaged and to reinforce the content of the lesson.
- The content, resources and activities are at a level that is appropriate and relevant to our user group which helps to keep them interested and engaged throughout the session.
- **Adequate time** has to be spent ensuring that learning objectives are met.

“It’s interesting”

“I like doing the activities”

*“I have learned about
things to help people”*



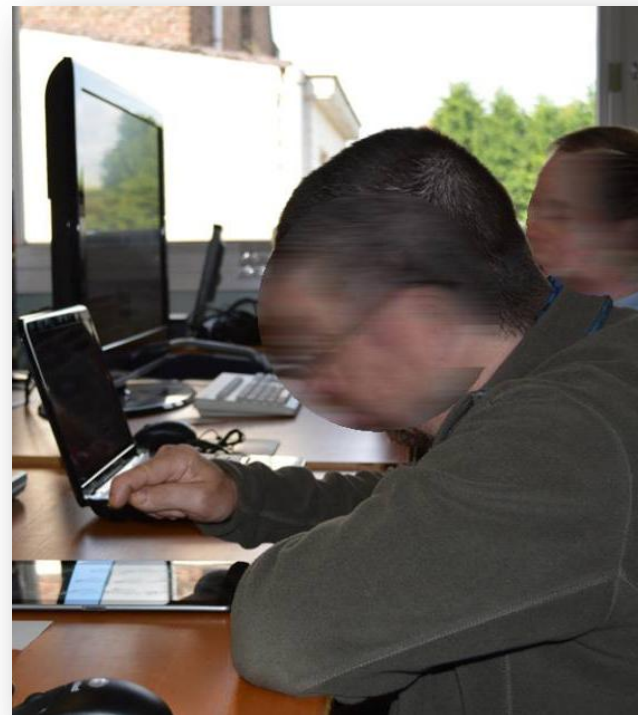
PILOTS - BELGIUM

○ Target group:

- Mainly people with severe/ moderate learning difficulties (17 in total) – F2F
 - Were involved also in ViPi and eMentoring as a basic level of ICT knowledge was required.
- Trainers and teachers in regular and special education (15 in total) - online

○ Parts/levels of the curriculum tested:

- Beneficiaries have been using the modules they indicated being interested in. Mainly:
 - Understanding their **rights** vis-à-vis employers
 - Understanding **relevant ICT based AT**, linked to their disability
 - More confidence in discussing needs and desires with friends, family and personal caregivers.



PILOTS - ITALY



Target group

Persons with various functional limitations, mostly clients of the local AT centre or members of the “Living Lab for innovation in AT”.

Access to individual or group based learning programmes.

Parts/levels of the curriculum tested

Defined together with the learners on an “**as needs basis**”.

Mobile platforms (smartphones, tablets), domotics, pc access

An ICT AT assessment is included and often the starting point.

Possibility of **individual learning portfolio's**.

All levels, not all parts of the curriculum are addressed.

Learning takes place: in the AT centre, at home/school/workplace and can involve formal and informal carers.

Feedback collected

Enthusiasm, satisfaction, curiosity, desire to proceed.



Intermediate/advanced level: Visit to Rehatech Fair, Milano



PILOTS - GREECE

○ Target group

20 people with **mobility disabilities** (para/tetraplegia) caused by spinal cord injuries, muscular dystrophy, MS and cerebral palsy - mainly wheelchair users. Also, **personal assistants and family members**.



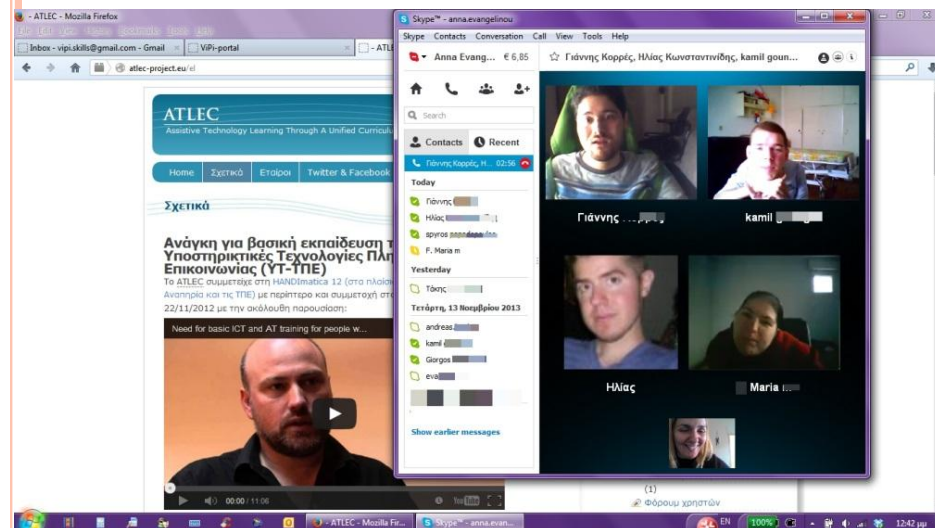
○ Parts/levels of the curriculum tested

- What is ICT-AT (Assistive Technology)
- Identifying **areas of need and wishes** relevant for the learner and **categories of AT solutions**.
- What are the opportunities offered by AT-ICT?
- Exploring what the learner can do autonomously, with the device or where help is still needed.
- What is a “**reasonable adjustment**” in the working space, at home, at school, etc.?

PILOTS - GREECE

Feedback collected

- Piloters are now able to identify and comment on the categories of AT relevant for oneself.
- They are now informed about what modifications, adjustments and ICT AT are needed in a work environment and in a training procedure.



ICT AT TRAINER – JOB PROFILE



The job profile of ICT AT trainer refers to the knowledge base developed in the framework of the ATLEC project.

It describes the professional requirements an individual has to meet to be able to deliver successfully the ATLEC curriculum.

Its applicability is wider and includes a list of:

- competences

(knowledge and skills) → *General*

- tasks

- functions

- responsibilities




Job specific



To reflect the variety of environments in which the ICT AT trainer might work, we have defined five types of job profiles.

Formal education - school
Voc. Training centre
Informal adult education
AT Centre
Association-Community

Ref. European Commission paper: The European Credit System for Vocational Education and Training ECVET. 2011.

	General	Technical	Specific
Knowledge	<ul style="list-style-type: none"> •Use broad theoretical and practical knowledge in the ICT and ICT AT field. •Demonstrate critical awareness of knowledge issues in the ICT AT field and at the interface between different disciplines. •Knowledge of the advantages of using the personal solution compared to non-using it. •Good understanding of national and local current legislation relevant to disabled people. •Knowledge of the rehabilitation, educational and social services that people with disabilities typically refer to, especially those relevant in the AT implementation process. 	<ul style="list-style-type: none"> •Working knowledge and comprehensive understanding of ICT AT including: hardware, software, and practices which allow persons with disabilities equal access and creates the most inclusive environment. •Knowledge of effective best practices and current issues in the field of accessibility and user centre approach, including adaptations and modifications that enable people to improve their quality of life. •Excellent knowledge of emerging mobile technology and social networks 	<ul style="list-style-type: none"> •Demonstrable knowledge of the application of ICT AT strategies pertinent to specific groups of persons with disabilities. •Demonstrate knowledge of assistive devices and be able to describe the personal assistive solutions in their context of use and their expected outcome. •Demonstrate knowledge of the AT market and ability to search and find information about ICT AT solutions at local and national level.
DRAFT OVERVIEW OF “ICT AT TRAINER” COMPETENCES			
Skills	<ul style="list-style-type: none"> •Excellent teaching skills •Experience in designing learning programmes that respond to training needs by integrating multidisciplinary knowledge elements from different sources. •Excellent interpersonal and communication skills •Good organisational and time management skills. 	<ul style="list-style-type: none"> •Mastery of methods and tools in many areas of AT. •Experience in setting up, maintenance and using ICT AT •Ability to transform emerging technologies (e.i. mobile applications, social networks, e-learning) in opportunities for learning. 	<ul style="list-style-type: none"> •Experience of working with disabled people, families, professionals and HRMs. •The ability to adapt learning programmes to the needs and wishes of the disabled learner. •The ability to identify critical issues during the training related to the training needs and the appropriateness of the solutions identified for the learner.
Wider personal outcomes	<ul style="list-style-type: none"> •Demonstrate autonomy in the direction of training and high level of understanding of education and learning processes. •Provide one to one support, developing individualised training programmes that are responsive to the needs identified. •Express a comprehensive, personalized viewpoint showing regard to the view of others. •Work effectively both independently and as part of a multi-disciplinary team, also during the assessment phase. •Demonstrate experience of operational interaction in multidisciplinary teams and within complex environments. 	<ul style="list-style-type: none"> •Demonstrate excellent knowledge of current and evolving trends in ICT and assistive technology. •Demonstrate working knowledge of specialist assistive software or hardware. •Demonstrate ability to interact with ICT-AT technicians for expert advice and the personalisation of devices and solutions. 	<ul style="list-style-type: none"> •Show initiative in the management of training processes to develop awareness in the benefit of using ICT AT in personal context. •Demonstrate empathy, involvement and motivation in dealing with learners with disabilities. •Make recommendations based on the integration of social and educational, issues.

BEYOND ATLEC



Mainstreaming of the results in our own organisations

Impact on existing practices in the field, f.i.....

Education practitioners

- The North of England Education Conference (Nottingham)
- Specialised schools and academies Trust - SEND network.
- Articles in popular educational journals such as The Journal of Special Education (practicioners)

Disability service providers

- GLIC - Italian network of ICT AT Centres
- The network of specialised service providers to persons with disabilities in the Province of Bologna

Impact on other projects:

-in particular ENTELIS that will place the ATLEC outcomes in a wider global perspective.

ENTELIS PROJECT AND NETWORK

Project ID

Programme. LLL – KA3

Period: 1/1/2014-31/12/2016

Partners: 10 (among which
AAATE, EASPD, EVBB, MPTI)

Associate partners: 25

Lead: AIAS Ausilioteca Bologna

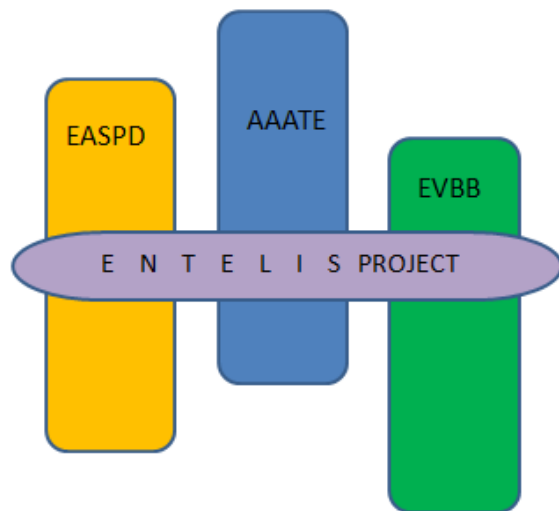
Aim: to create a sustainable network on the development of ICT and ICT-AT competences among persons with disabilities.

Main activities

- Annual seminar
- State of the art research
- Foresight scenarios and roadmaps

Assets

Strong global network of interested partners and associate partners (Europe, USA, Middle & Far East)



SIG – network – project incubator

JOIN ENTELIS !

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CONTACT DETAILS



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