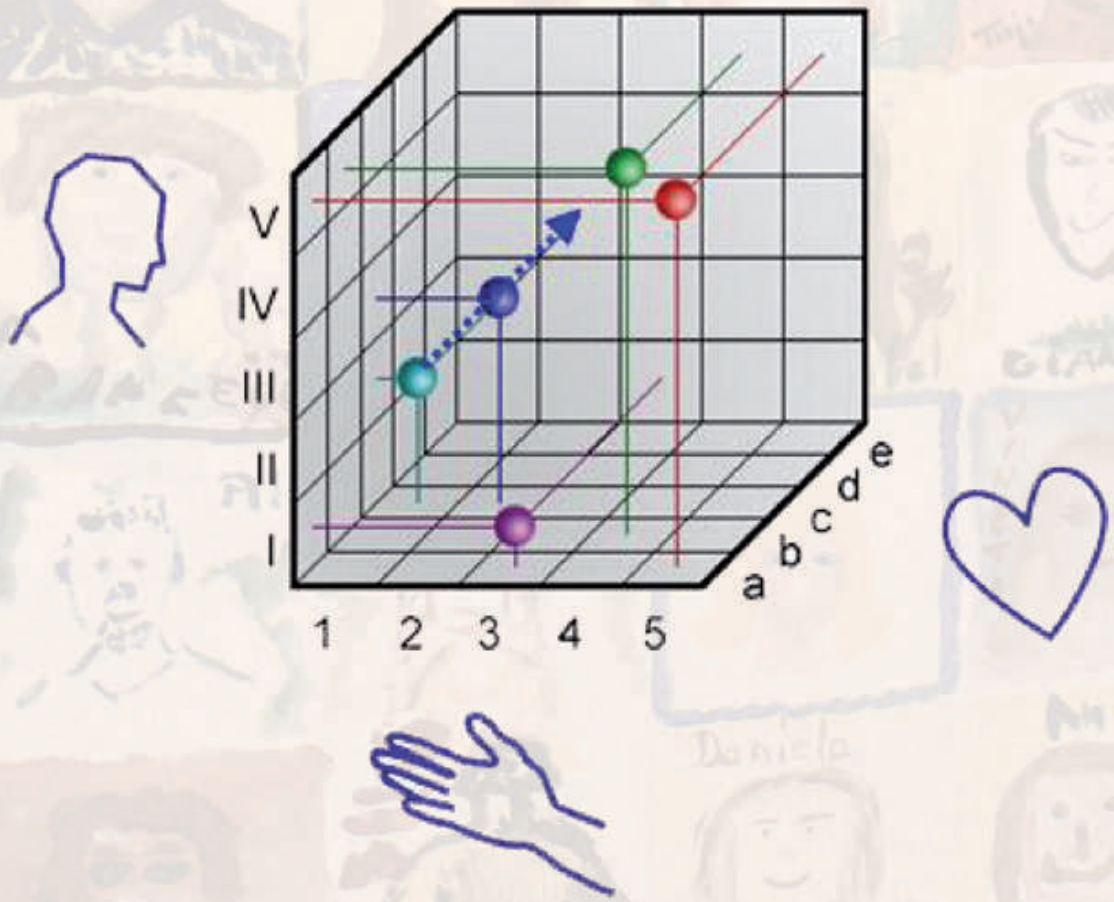
Tim Scholze

Evidencing the Impact of Informal Learning on Active Citizenship in European Projects



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Preliminary Remarks

The dissertation on hand is a reconstruction of a research-practice project titled “ACT - Active Citizenship Training”, which was carried out between 2005 and 2008.
Based on an action research approach the project aimed at developing an approach to evidence the impact of informal learning on active citizenship in European projects.

In the project lifetime the author found himself in a double role:
On the one hand, as rapporteur of the ACT-project, his task was the description of, analysis of and reflection on the devolution of the research-practice project.
On the other hand he was also developer and manager of the EU-funded project and producer of main content and theory parts.
In this dissertation, the author has mainly taken the perspective of an observer who reconstructed the development of the project, the stock-taking and examination of available means, planning, implementation, reconnaissance and further execution according to action research principles.
The second role as manager and producer was put in the background – instead, the main practical project outcomes were generally presented as results from a collaborative European team work. This team worked extraordinarily well in terms of committment, creativity and accuracy and contributed to a high extent to the success of the ACT project.

In this connection I would especially like to thank the following colleagues and friends for their outstanding contribution to the project:
Jikky Dincelek-Lettinga, Barbara Brodigan, Jacques Jansen and Chris Janssen from the Dutch team; Dr. Hanife Akar and Prof. Dr. Ali Yildirim from the Middle East Technical University, Ankara, for steering the Turkish team; Dr. Vineta Porina, Laura Tidrike and Sovita Metra from Latvia University, Riga, for the Latvian team; Alessandro Piludu and Giancarlo Zedda from Il Ghetto, our Italian partners from Sardinia; Stellan Hansson and his team from Sweden; Claudia Berjano from Portugal; Urszula Hadrych and Sylwia Knot for leading the Polish team in Sopot, Prof. Dr. Georgi Trendafilov from the Technical University Gabrovo in Bulgaria and Dr. Adela Dinu and her team from Timisoara, Romania.
The project and this dissertation would not have been possible without the contributions of my German team members– Prof. Dr. Hans-Dieter Haller, Leena Ferogh and Jutta List-Ivankovic (Pedagogic Seminar), Sabine Wiemann and Tanja Wehr (BUPNET) and Daniela Schwenke (blinc eG).
It is a pleasure to collaborate with all of you in our European projects!

I dedicate this dissertation to my family in Bielefeld for all your support (also for each other), especially to my father for long talks, understanding of the complex matter without visualisation and for new ideas and to my wife for being a critical friend, a supporter and wonderful companion.

Summary

This survey describes and analyses an innovative approach to evaluate the impact of informal learning in European countries on different, mainly citizenship related, competence.
It was developed in the framework of the project ACT funded by the European Commission from 2005 to 2008.
A comprehensive evaluation system was developed especially taking into account the demands of grass-root organisations that deliver citizenship competence to non-mainstreaming societal target groups. The developed approach is treading new trails since it rather relates to the required citizenship competence of the beneficiaries in their living context than to politically determined learning objectives concerning Active Citizenship.
On the basis of a comprehensive European stock-taking with regard to European citizenship education, an explanatory model was developed to visualise Active Citizenship competence (the so called ACT-Cube).
This model has been the foundation of a complete evaluation procedure that is on the one hand standardised, and on the other hand enables grass-root projects to establish an individualised reference system for assessing and evidencing[1] relevant competence of their beneficiaries in a process-orientated way. The function of the system allows users to evidence the impact of their work according to a standardised procedure while, at the same time, keeping up their individuality as informal learning projects in their specific contexts.
In the past, these opposing goals, i.e. standardisation vs. individuality, were the major obstacles with regard to a validation of informal learning: when evaluating competences in not-formalised learning contexts, the uncountable variety of learning offers, contents and very often a lack of specified learning objectives are limiting a traceable and transferable evaluation and validation.
In an intensive two year development process, an interdisciplinary team of experts from 9 countries developed a perfected evaluation procedure, which was successfully tested and applied in 23 grass-root projects throughout Europe.
On the basis of the model and the evaluation procedure, an interactive evaluation and evidencing software was programmed - the so-called ACT Impact Assessment System (IAS). With the help of the IAS, grass-root projects can self-evaluate and evidence the impact of their learning offers.

In addition to the analysis and interpretation of the development of the approach and the products the dissertation on hand describes and evaluates the project's collaborative transnational research and development activities (action research, visualisation and network theory).

[1] In the context of the micro-project evaluation in ACT the term "evidencing" was introduced to describe the stage of the evaluation procedure following the assessment. "Evidencing" is meant to justify and to prove an assessment result in a traceable, reproducible and comprehensible system.

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1 Introduction

1.1 Rationale

Until 2005, existing projects, networks and research studies on active citizenship rather concentrated on formal education in schools or on an academic level and mainly address to 'active citizens' belonging to mainstream groups in society[2].
They often only gave little space to NGOs, which are the main facilitators of informal learning for citizens in practice.
This led to research designs in which major stakeholders were not directly involved - for instance those organisations working with "difficult" target groups, those which do not have the resources (either financial or skills) to carry out intensive evaluation and those in which the "activity" of the educated citizens is very difficult to discover (e.g. in closed groups as socially disadvantaged youths, victims of violence, back warded communities etc.) but also self organised learning activities.
It can be concluded that despite multitudinous research activities on Active Citizenship in most of the cases the beneficiaries (learners) as well as "their" NGOs were not involved in research and thus being mainly regarded rather as research subjects than as research partners.
The subject of this survey, the ACT approach, aimed at offering an alternative approach to the issue by actively integrating grass-root projects in evaluation and research activities.

There are certain system built obstacles concerning the remit to evaluate the impact of informal learning on active citizenship because of a rather unclear terminology and understanding of central concepts like Active Citizenship and Informal Learning.
This was a rather unexpected discovery since Active Citizenship and the recognition of non-formal and informal learning are seen as vital in improving social inclusion and in increasing economic productivity and thus range at the top levels of the political agenda and in the programme documents of the Lifelong Learning Programme[3].
Consequently, an additional remit evolved to investigate relevant literature and local and regional projects to clarify the meanings and uses of the terms Active Citizenship and informal, non-formal and formal learning to clearly describe research design and its basic assumptions.

Active Citizenship
Having researched a large part of European literature about the issue, it must be stated that meaning and scope of definitions concerning Active Citizenship vary largely with the backgrounds and the motives of authors and the intentions of the awarding authority. They may be politically influenced, relate to formal or rather informal learning environments, follow utilitarian approaches (inclusion in working environments) and strongly depend on either communitarian or liberal positions of the authors.
For ACT, this instable explanatory model was a major problem since the large variability of meaning also limited a comprehensive description of citizenship competence. How can Active Citizenship Competence be evaluated if the concept varies to a large extent, especially in a not-formal learning environment?
In contextualised learning, in real life, beyond the walls of schools or universities, relevant citizenship competence can only be regarded in connection with the living context of the individual. From

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2 For instance in: University of Surrey 2001-2004: The ETGACE-Study.

3 Official Journal of the European Union (2006) Decision of the European Parliament and the Council establishing an action programme in the field of lifelong learning; (13): "adult education' means all forms of non-vocational adult learning, whether of a formal, non-formal or informal nature; There is a need to promote active citizenship (35); Leonardo da Vinci objective d: to improve the transparency and recognition of qualifications and competences, including those acquired through non-formal and informal learning; also mentioned in Article 33, Transversal programme".

a learning perspective this means that learning topics, objectives and reference systems have to be focused on the subject.
This has been a rather uncomfortable conclusion because an individualistic approach is not easy to handle and hampers the implementation of generally admitted citizenship competence.
On the other hand, only an individualised approach respects the demands of the singular citizen (learner). This is why, especially in respect to non-mainstreaming target groups, the research setting was designed in a way that examines citizenship competence rather from a demand-oriented (learner) approach than from a supply-oriented point of view (educational institution).
This consideration is also backed up by reality:
Non-mainstreaming groups, e.g. disadvantaged beneficiaries but also "mainstream learners" in other informal learning context like youth groups, folk high-schools and other citizens' initiative (like culture clubs etc.), are in most of the cases looked after by social or grass-root organisations that do not follow any fixed learning objectives. Staff members from these organisations are sometimes not even aware that they deliver learning.
For those stakeholders the main point of interest is the success of their service, the impact on their "beneficiaries". As they are targeting to improve relevant key competence (e.g. to work for a better integration of beneficiaries in society), it can be concluded that the work of these initiatives and grass-root organisations will lead to a development of specific, contextualised citizenship competence.
This setting[4] can be described as typical "informal learning for active citizenship".

Formal vs. Informal Learning
Also concerning these "categories of learning", some concept definitions had to be made to establish a sound basis for the ACT study.
Though many authors worked on the differentiation of modes of learning, a lack of agreement can be concluded about what constitutes informal, non-formal and formal learning, or what the boundaries between them might be.
As Colley (2003) stated it may be concluded that in practice the differentiation seems to be rather academic because all kinds of learning may have formal as well as informal elements.
Nevertheless, for ACT it was essential to create awareness about different learning categories and to deduce necessary conclusions serving to a comparable approach to describe the impact of citizenship learning.
There has been, for instance, a lack of descriptive patterns and models to characterise and describe informal learning. Even more difficult was the missing reference background for the evaluation of the effect of the intervention: in formal and non-formal[5] learning there are fixed topics and defined learning objectives that facilitate a standardised evaluation of learning success and competence[6]. In informal learning these references are missing; an evaluation against standardised criteria is therefore difficult and in many cases not even desired.
The resulting remit was to build a system, which is able to describe in a comparable way the competence development of individual citizens in various learning contexts.

Research – Practice
An additional challenge for research and development on the grass-root level was the acceptance of evaluation by the key stakeholders in grass-root organisations.
In many informal learning projects access by external researchers/evaluators to the research subject(s) (learners) is difficult to realise or simply impossible. This is why staff and leading persons from the organisations must actively collaborate in the evaluation process and take over the role of intermediates.

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4 There are other settings like extracurricular school activities that are to a large extent informal. Also mobility actions show utmost informality and a lack of a reference system that could facilitate an evaluation They should not be excluded here and were also evaluated in the course of the projects.
5 For instance in Vocational Training (VET) or other occupationally oriented learning offers.
6 For instance with marks.

There was no use in just persuading them to take part in an evaluation project. They had to be convinced by an additional value for their daily work when using the approach.
Consequently, ACT had to develop a systemic approach that would not only satisfy the scientific community but at the same time deliver a special benefit for the stakeholders in the field.

1.2 Methodology

Since ACT turned out to be a typical practice-research project, Action Research, enriched with elements and methodological principles of Grounded Theory, was chosen as a research method to match both scientific and practical demands. Practitioners were included in the research activities as experts and interdisciplinary, transnational workgroups were formed to carry out defined research and development activities in the framework of the project.
There was a constant change between inductive and deductive reasoning and major findings could only be envisaged and implemented with the help of this practice-research development process.

1.3 Partnership

ACT showed an equal distribution of partners from all orientations in Europe consisting of different generations of European accession states. With eleven partners from nine countries it has been a relatively large project in the SOCRATES programme.
As a consequence, different working, developing and learning traditions influenced the project and its work groups as well. The project consciously integrated partners with different professional and working backgrounds, four university partners (from different faculties: educational sciences, psychology and engineering), adult training institutes and grass-root organisations working in culture and the social care sector.

The leading partner, the Pedagogic Seminar at the University of Göttingen (DE) shows profound experiences in the field of evaluation and has been particularly focussing on subjects that aim at the extracurricular field of action of adult education/further training concentrating on formal but mainly on informal life-long learning processes.
Its main area of work in ACT has been the establishment of the evaluation approach, the inventory and informal learning patterns. Nine Active Citizenship micro-projects (in various areas such as environment, intercultural development etc.) were evaluated by its staff members.

BUPNET (DE) is a European training provider, mostly working in non-formal education, which has brought in a long term expertise related to didactic planning and course development in the European social sector. In the framework of ACT BUPNET focused on the development of country reports, computer based evaluation, website construction and the development and pre-testing of two informal learning projects in the fields of culture and youth exchange.

blinc eG (DE) is a cooperative of European training institutes, NGOs and university departments and acts as an umbrella organisation for ACT-networking activities. blinc contributed to ACT by bringing in profound experiences in didactic development for non-formal and informal learning, evaluation methodology, valorisation and networking. blinc externally evaluated competence development in a European blended learning project. blinc was responsible for online communication and designing of interactive web-based devices; it moderated the development processes and the compiled the explanatory and evaluation approach as well as the IAS (Impact Assessment Software).

Personnel from all German partners contributed to marketing, consulting and training activities.

Imago Mundi (IT), from Cagliari, Sardinia, is a cultural association providing consulting services and support activities for pedagogic institutes aiming at sensitising young people for their cultural patrimony through illustrations of principle phenomena and direct knowledge of museums, collec-

tions and monuments with the help of appropriate documentation, graphics and audio-visual material and organises regularly cultural events in different regions of the island. As leading personnel, Imago Mundi was responsible for Italian country reports on AC and evaluated two cultural learning projects for students and the public in the framework of the event ”Open Monuments“ (Monumenti Aperti) with more than 150,000 participants.

Centrum Kształcenia Ustawicznego (PL) – Centre of Continuing Education is an adult education provider. The Centre was established in 1980 and educates and trains people who are 17 years of age and older. It provides vocational education in economy and ICT fields for those who failed to get secondary education on time or do not have any vocational training and those who want to update their qualifications. CKU team members were collaborating with regional grass-root organisations, and evaluated two informal micro-projects for disadvantaged youngsters.
Their commitment specially focused on the development of country reports, definition works on learning systems and the development of procedural steps when creating the reference and evidencing system.

The Technical University of Gabrovo (BG) is a higher education facility in the centre of Bulgaria having long term experiences in European projects. In the framework of ACT, the University evaluated a project from the Union of the Blind in Bulgaria, the “Daily Centre for Rehabilitation of Visually Impaired People” promoting the successful rehabilitation and integration of visually impaired people and the project “Socialisation of Long-term Unemployed Adults through Adaptive Sport Games and Physical Activities”. The Bulgarian team focused on the establishment of country studies, contributions in the development of the cube model in respect to mathematical considerations regarding the scaling and intensive European dissemination activities.

AFIG (SE), Labour Movement Folk High School in Gothenburg, is an adult education centre established by the state of Sweden in 1991. Main areas of activity are courses for adults, especially for people with low formal education, women and immigrants.
AFIG has been working in the field of adult education since 1975 and as an independent adult education centre since 1990. Every year more than 100 adult students participate in full time courses and about 20 students follow a part time course. AFIG evaluated a project dealing with disadvantaged learners that are long term unemployed and have writing and reading disabilities. AFIG delivered pivotal development contributions in the pre-test phase, namely concerning the scaling of the cube, participated in the consulting work group and in developing training modules.

Asociatia pentru Promovarea Femeii din Romania, Association for the Promotion of Women in Romania, ApoWer is a non-governmental, non-profit and apolitical organisation, whose mission is the education of the society through the promotion of affirmative, non-discriminatory policies for increasing the life quality of women in Romania. The Romanian team evaluated two micro-projects in the field of combating domestic violence. ApoWer’s work concentrated on country studies, development of the consulting approach and the establishment of the training modules.

Orta Doğu Teknik Üniversitesi, ODTÜ (TR), Middle East Technical University (METU): the department of Educational Sciences offers graduate courses leading to an M.S. degree in Educational Sciences, a non-thesis M.A. degree in Human Resource Development in Education, and a Ph.D. degree in Educational Sciences.
Team members from METU have been evaluating curricular and extracurricular projects on “democratic education in the classroom”. The Turkish project rather concentrated on formal education and the assessment part of evaluation. Their main area of work was the development of evaluation approach and methodology, the assessment toolbox and the preparation of guidelines for evaluators.

The Centre for European Studies and Training (NL) is a non-profit association dealing with counselling in European programmes (until 2002 external expert of two big regional training centres in Maastricht and Heerlen). Main areas: education, training, schooling, ICT in education and SMEs, information society, European citizenship and gender mainstreaming. The Dutch team evaluated

two micro-projects in disadvantaged town areas and for “difficult” youth groups. CESO focused on the development of the ACT explanatory approach to AC and the establishment (formulation) of reference models, was one leading partner in the marketing group, and contributed to the training and consulting approach.

Latvijas Universitātes Pedagoăijas un psiholoăijas fakultāte (LV) - The Faculty of Pedagogy and Psychology belongs to the largest higher education establishment in Latvia: the University of Latvia. The Centre of Multicultural Education at the faculty is organised as a structural unit for the following purposes: to provide academic and professional education in multicultural and bilingual education, to develop research in multicultural and bilingual education, to train pre-staff and staff-teachers, scholars and policy makers or expert advisors in issues on ethnic groups in Latvia, to make publicity of the multicultural education in Latvia. Latvian team members evaluated two projects: the first to promote the ability of women in rural areas of Latvia in project planning and elaboration and the second for bilingual education as a part of multicultural education.
Apart from country studies their activities focused on contributions in relation to the development and the pre-testing of evaluation procedures and the establishment of training modules.

Dissemination and training activities were carried out by all partners over the project lifetime. Each partner evaluated at least two projects, established scientific posters and delivered a comprehensive experience report that led to an in depth analysis about the feasibility of the ACT-evaluation system and its central components.

In the framework of the ACT project a procedure to measure the impact of informal learning on citizenship competence was developed. For the first time a comprehensive approach evolved enabling the delivery of *comparable* results though respecting the *individuality* of the grass-root micro-projects. An advanced breed of software was developed to offer a usable IT-system and a web-based impact assessment and documentation system. The approach proved well in terms of feasibility, usability, input-output ratio, acceptance and transferability as shown in extensive evaluations.
The ACT approach was developed in European collaboration of scientific and practice partners and will be systematically valorised by European wide consulting, training and networking from 2009 onwards.
This dissertation will therefore also highlight European aspects in terms of collaboration and networking in respect to perspectives and potentials of the approach.

1.4 Structure of the Survey on Hand

As basic definition work had to be carried out to get the full picture on Active Citizenship and different modes of learning the study starts with a chapter *"Groundworks" (2).* In addition to the explanations of basic terms the author presents the results of country studies on AC in different learning systems.

Being situated in the European social sector ACT was a typical practice-research project – it was explicitly designed to bridge the gap between science and practice. The envisaged outputs were not intended to be restricted to scientific reports but were intended to lead to an improvement of self-evaluation instruments and approaches for those working in the field. The relevant research approach and methods that supported these goals (Action Research) will be described in chapter 3: *"Methodology".*

The central project outcomes will be described in their evolutionary process. Chapter 4: "*Process description"* starts with an excursus about collaboration in European projects and networks, describes the project progression and highlights the major results of the project, the evaluation approach and the Impact Assessment System.

In a pre-test phase twenty-three micro-projects were evaluated. In chapter 5, "*Results and Experiences*", nine exemplary projects will be summarised, taking into consideration their experiences when applying the ACT-evaluation approach, methodology and instruments. A subchapter (5.2) describes the results of the concluding quantitative and qualitative experience reports delivered by the partners in the last project phases reporting about the lessons learnt in the evaluation process. It is followed by the description and analysis of development and collaboration processes within the transnational project network.

(6) The final chapter 6 "*Reflection, Impact and Perspectives*" is discussing and interpreting the results in its first subchapters. It will also highlight the specific collaboration and research methodology in the framework of ACT as it can be used as exemplary project for future European Research-Practice projects. The exploitation of the outcomes, namely validation, consulting and training will be described presenting the full potential and future perspective of the ACT-approach. The development of the ACT network as an umbrella organisation for a European community for entities working in this field will be described in the last part of this chapter.

2. Groundwork/Fundamental Considerations

2.1 The Concept of Active Citizenship

Prior to the research activities the term Active Citizenship (AC) and its meaning had to be defined and explained to enable identification, description and evaluation of AC-relevant learning processes, competence in different target groups and learning environments at a later stage.
An explanatory model of Active Citizenship was developed to serve as an explanatory basis to compare AC-relevant pre-conditions (e.g. the status quo of a given group situation concerning AC), activities (learning processes) and outcomes (effects on the target groups).
A first, rather rough explanatory approach was further developed in the course of the project. It was focused on the issue of citizenship competence and thus served to create a visual 3-dimensional system that enables stakeholders in the field to evidence the progression or transformation of citizenship competence in a learning context.

Concerning the theoretical groundings, the ACT research project had to face various challenges on the theoretical and practical level:
As a working basis a fundamental and comprehensive explanatory approach to AC was required to

1. Develop a common understanding of the meaning of Active Citizenship in the transnational workgroup,
2. To elaborate evaluation approaches to describe, analyse and compare AC,
3. To apply the approaches in different learning contexts and environments and, finally, to
4. Evidence the effects and impacts of (informal) learning on active citizenship.

The approach had to be suitable for:

- Different countries,
- Different cultures/different learning traditions and
- Different target (beneficiary) groups and contexts.

This is why ACT had to develop a common base of thinking first of all.

Definition Work:
Explanatory work started on the basis of the Council of Europe's definition (Pererva, 2006):
"Learning Active Citizenship is aiming at the promotion of a culture of democracy and human rights, a culture that enables individuals to develop the collective project of building communities. Thus, it seeks to strengthen social cohesion, mutual understanding and solidarity.
It shall empower people to participate actively (in the decision-making processes) in their communities."
It focuses on providing lifelong learning opportunities for acquiring, applying and disseminating knowledge, values and skills linked to democratic principles and procedures in a broad range of formal and non-formal teaching and learning environments.

The Workgroup "Open learning environment, AC and social inclusion" of the European Commission (Directorate General Education and Culture (DG EAC)), states that Citizenship Education should become more like a "method of social inclusion in the course of which people together create experience of becoming architects of their own lives. Opportunities to learn and practice autonomy, cooperation, responsibility and creativity enable the sense of personal worth and of expertise in confronting and tolerating ambiguities and oppositions"(Weerd et al, 2006).
In this scientific debate, there is criticism that this interpretation is very broad and refers mainly to personal development and interpersonal respect. This critique pinpoints the dilemma in explaining Active Citizenship (especially in informal learning contexts): one needs very broad and general interpretations if one is looking at very different individuals in their different life-contexts because a more focused definition might exclude large parts of the population who are only concerned with certain traits of citizenship competence.

The problem may be highlighted by one example:
The Regioplan study on “Indicators for Monitoring AC and AC Education” (de Weerd et al, 2005) states that the central element of AC is “participation”. Everybody can agree on the general meaning, but in the definition the authors become more specific:
“AC is identified as political participation and participation in associational life characterised by tolerance and non-violence and acknowledgement of the rule of law and human rights”.
In the context of ACT the project, this (still quite open) definition is critical due to its being linked to organisational impact (“associational life”).
The critical element of this definition for AC is the very narrow understanding of participation in civic contexts that is based on an organised “association”-like participation.
It is focusing on participation in political and associational (organised) life – tolerance, non-violence and the rule of law and human rights are somewhat general descriptors giving the stage to the “organised” participation approach.

- As this definition reflects a communitarian (Regioplan) point of view, it may neglect the individual civic activities reflected in very small (when is an organisation an organisation? - family) and individual activities.
- Even more critical in our context is the fact that it does not include those citizens and those activities contributing to the society without being organised – such as individual or professional helpers or individual talks, treatments etc.

In other words:
The fundamental understanding may to some extend lead to one of the problems because citizens in modern societies are much more individualised than they used to be. If we expect them to organise to become active citizens, they may become reluctant because of the expectations and the values that are transported implicitly.

Even the authors state that the definitions in the Regioplan study are reflecting the EU-policy and are thus clearly related to political goals. Consequently, this study is supporting a rather top-down than an individualised bottom-up approach.
ACT had to be developed the other way round: following a bottom-up approach, the project teams first had to identify the needs of the beneficiaries concerning AC before developing a theory.

In this respect ACT corresponds to a large extent to the key conclusions stated by the ETGACE consortium in 2003. The 6 most fitting conclusions for ACT shall be highlighted in the following:

- The sense of citizenship is embedded in each individual’s unique life history and formed through relationships with others (individually and in groups) (3), and learning citizenship is unlike many more formal kinds of learning. It is interactive and deeply embedded in specific contexts (10).
- This is why all of the twenty-three evaluated micro-projects (in nine countries) were situated in real life contexts with one project as control group using the same ACT-methodology in formal learning environments.
- National differences in individuals’ understanding of citizenship appear to mirror the differing historical experiences of citizenship and democratic politics in countries (6).
  In the stock-taking phase of the project all project partners developed country reports highlighting similarities and differences in national approaches.
- Work to develop citizenship skills in civil society tends to be short term, less systematic and less sustainable. Those who suffer most from this are those who are already most vulnerable to social exclusion and least likely to become active citizens in any context.
- There is a danger that citizenship becomes yet another area of exclusion for those who have previously been less successful in education, and who are already more prone to exclusion.

Responding to all those key statements ACT decided to focus on target groups and final beneficiaries that do not belong to ”normal/mainstreaming“ population groups.
ACT is explicitly geared towards “difficult or non-mainstreaming” target groups that are disadvantaged or disabled, hurt, mistreated and paralysed and have a different cultural or social background than the majority of the population.

The relation of these disadvantaged groups to the topic of Active Citizenship is to a high extend ambivalent:
On the one hand one cannot expect much civic commitment from them - on the other hand it is them who can profit from it to a high extend. As the ETGACE study stated: “Those who become active despite low levels of initial education often re-engage with formal education as a result.”
Researching AC in those vulnerable target groups is an ambivalent matter because it is both opportunity and threat: One can expect

- A positive impact of community activities on the wellbeing of the target groups
- As well as a more or less strong reluctance towards “Active Citizenship”.

Furthermore we can expect that the community related behaviour as well as the degree of activity might, to a large extent, differ from that of other groups.

Regarding some of the most sensitive and vulnerable target groups in ACT (e.g. victims of domestic violence, certain less educated and rather shy individuals) the research work had to be done or at least catalysed by intermediates. These persons were mainly responsible for their target groups and had a trustful relation, and their roles were that of trainers, coaches, helpers, group leaders or other kinds of facilitating persons.
They had to be convinced to take part in ACT by receiving an additional value for their daily work. Thus, the concept of ACT is not only related to research on AC and learning, but it also aims at developing instruments and solutions to help the stakeholders in the field to better cope with their important societal tasks.
This is why the approach somewhat moved away from the rather abstract general AC approach that was only of minor relevance for the daily work in grass-root projects.

Consequently, a crucial question evolved:
How can Active Citizenship be described in an appropriate, implementation-oriented way that enables the project team to compare the different empowerment approaches of a broad scope of supporting organisations such as NGOs, welfare and self-help organisations, societies and associations?
As there is no reference system for AC, there are no fixed criteria matching all groups, minorities, disadvantaged individuals etc.

Putting together all the different approaches, theories and ideas, all project members agreed that a project setting had to be designed which described the situation of the grass-root projects in a satisfying way opening a perspective to European stakeholders from the field.
The findings and crucial questions evolved in the preliminary project phase and can be concluded in the following:

Reference System

- Citizenship means something different in different national, cultural, social systems.
- One must be aware of misuse and should avoid any kind of biased notion (e.g. “religious” values, national/patriotic values etc.).
- The partners agreed on taking only the UN Human Rights Charta as a reference point to avoid any political and national value.

The Citizens

- Active Citizenship is an individual competence
- Citizenship is to a high extent dependent and interconnected with the living context of a person.

From this point of view it is logical to regard the development of AC competencies primarily on an individual level, especially when analysing the civic behaviour of “non-mainstreaming” and disadvantaged target groups.

2.2 AC Learning in Different Learning Contexts

The survey on hand examines the impact of non-formal/informal learning on Active Citizenship of various (mainly non-mainstreaming) target groups.
Additional to the fundamental approach to the topic of "Active Citizenship", there was the necessity to gather definitions and explanations about the terms formal/non-formal and informal education.
Whereas the definition of formal education seems to be relatively distinct, there is a large range of variation in how authors describe non-formal and informal learning environments.
Since clear working hypothesis and working frames especially for evaluation purposes were required for the understanding of the working context, different educational systems shall be highlighted in the following.

2.2.1 Defining Formal and Non-Formal/Informal Education

The differentiation of all possible human learning activities in the categories:

- Formal education,
- Non-Formal education,
- Informal education and
- Incidental learning

was only systematically introduced in the early 1980s (Sandhaas, in Haller 1986).
Evans (1981) differentiated the four categories in the following way:

Formal education is tied to schools and (higher) education institutions, delivering education on the basis of a standardised curriculum with specifically trained teachers. Pupils and students are grouped in age-related classes.

Non-formal education comprises all learning activities outside school in which both learner and educational personnel[7] have the intention to learn or to deliver learning.

Informal education is characterised by the fact that either the learner or the educational personnel/the information source intend to initiate a learning process – but not both of them at once.

Evans characterised the term "incidental education" as learning which is not intended, neither from the learner nor from the information source.

The four educational categories are differentiated against the following criteria:

- Localisation of learning (institutionalisation),
- Degree of organisation and
- Degree of intention of learning.

In contrast to this four-level differentiation the European Commission in its "Memorandum of Lifelong Learning" (2000) blended informal and incidental learning and created the following definitions[8].

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[7] In this context "teacher" substitutes all educational personnel, e.g. trainer/facilitator, learning helper and/or the information source.

[8] For German readers it is important to point out that the definitions of the educational categories are based on the "International Council for Educational Development" (Coombs/Ahmed, 1974) that used "education" and "learning" with the same meaning. They should not be translated with the German terms "Erziehung" or "Bildung" (in the sense of a normative concept) as this would hamper the understanding of the concept (Sandhaas, 1986).

2.2.1.1 Formal Learning

"Formal learning takes place in education and training institutions, leading to recognised diplomas and qualifications (European Commission, 2000).

Additions/Descriptions and Combination with the Active Citizenship Concept

Formal learning is generally understood as the planned, organised, and officially recognised (certified/accredited) learning that takes part in (public) educational institutions that are differentiated from other parts of the environment (BMBF, German Ministry of Education and Research , 2001)[9].

Bunesco (1999) differentiates between explicit and implicit formal education/socialisation:
"Explicit and formal socialisation is represented by teaching civic and political norms and values as well as by giving their meaning and importance within the systematic schema at school".
"Implicit and yet formal political socialisation takes place in situations such as the following: when an open climate is consciously created; when non-authoritative, democratic relations between teachers and students are initiated, free discussions and debates about disputed aspects of social and political life."
This means that "explicit" citizenship education (CE) is following objectives and a "plan" (curriculum with aspired competencies) whereas implicit formal CE would be more or less unplanned in detail but nevertheless focused on the issue CE.

As Active Citizenship is not only referring to the cognitive dimension (knowledge) but also to the affective-experiential one, it is therefore evident that young citizens (students in schools and higher education institutions) are empowered to participate in democratic processes (e.g. in school governments and students associations).
According to the authors of the most comprehensive country specific study on Active Citizenship, the IEA Civic Education Study (Lehmann et al, 2003), this participatory aspect seems to be one of the major weak points in formal civic education.

The absence of real participatory learning is a system-based problem as formal learning takes place in de-contextualised learning environments, which is also reflected in the definition by the BMBF-study[10].
On the other hand, in formal learning situations, there is a clear consciousness of the educational agenda and related roles: students recognise themselves as students and whether or not they are fulfilling this adequately, they have the feeling of their institutional roles.
School education is seldom linked to the "normal" life of students and their families; in some countries students do not have the right and the power to build up participative structures and thus influence their school life – this is why reality and citizenship happen outside school.

Nevertheless, it was of high value also to include formal learning in the evaluation framework because

- It gives some systematic background as for the topics and competencies of Learning Active Citizenship or Citizenship Education and
- It contributes a formal reference point, comparable target groups and learning arrangements and thus additional value to our project.

Therefore two formal learning courses in Turkey and Latvia were also evaluated.

B. Not-Formal Education (Non-Formal and Informal Education)

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9 Cf.: BMBF, 2001, German Ministry of Education and Research, Bonn, Germany: „Das Informelle Lernen: Dabei wird im allgemeinen das planmäßig organisierte, gesellschaftlich anerkannte Lernen im Rahmen eines von der übrigen Umwelt abgegrenzten öffentlichen Bildungssystems als „formal learning" bezeichnet.",

10 "learning in a specific public education system with clear boundaries to the environment".

2.2.1.2 Non-Formal Learning

"Non-formal learning takes place alongside the mainstream systems of education and training and does not typically lead to formalised certificates. Non-formal learning may be provided in the workplace and through the activities of civil society organisations and groups (such as in youth organisations, trade unions and political parties). It can also be provided through organisations or services that have been set up to complement formal systems (such as arts, music and sports classes or private tutoring to prepare for examinations)." (European Commission, 2000).

Obviously the European Commission did not consider Evans' criterion of non-intentional learning/provision and rather concentrated on learning location (non-formal learning providers, e.g. in vocational training, training on the job etc.).
It introduced the criterion of certificates to display the degree of formalisation[11].

2.2.1.3 Informal Learning

"Informal learning is a natural accompaniment to everyday life. Unlike formal and non-formal learning, informal learning is not necessarily intentional learning, and so may well not be recognised even by individuals themselves as contributing to their knowledge and skills." European Commission (2000):

Watkins and Marsick proposed the following explanations and differentiations in their "Theory of Informal and Incidental Learning in Organisations" in 1992:
"Non-formal learning" is the collective name for all forms of learning, happening in the entire environment out of the formalised education system. There is a wide range of partly varying definitions for the term "informal learning".
This ranges from a characterisation as unplanned, casual, implicit and often unconscious learning to learning activities as they are developed by the learners themselves without any educational support and up to the equation with "non-formal learning", i.e. the definition for all learning as it is (consciously or unconsciously) practiced out of the formal educational system.
This means: informal learning is a form of instrumental learning, a means to an end. The end is not – in contrast to formal learning – the learning itself, but the better solution to an extracurricular exercise, a situation request, a life problem by means of learning.
Informal learning is the generic term, which also comprises this casual and unconscious learning as well as a conscious deliberate learning out of schools – whereupon the transition between both ways is smooth in practice.
As formal education is largely context-free learning, informal learning is bound to a specific context; it mostly means enacting within a reality context which leads to concrete challenges or tasks and to feedback proceedings that are natural ("situated learning").

In an action-theoretical context this leads to more precise definitions:

Normal Form of Informal Learning
According to this a reflected learning activity in an environment outside school ("*action with reflection*") is the normal form of informal learning.

Special Form of Informal Learning
A non-reflected learning activity in this environment outside school ("*action without reflection*") is the special form of the casual informal learning.

The idea of action with/without reflection is also reflected in Bunesco's differentiation:

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[11] This criterion is also introduced by Dohmen (2001).

"*Explicit and informal political socialisation* is at work when civic norms and values are conveyed in a (quasi) explicit and deliberate way in parents' talks or by radio and TV broadcasts which do not belong to specially formulated programmes of civic education."
"*Implicit and informal political socialisation* takes place in situations as follows:
When children casually and informally listen to opinions about politics expressed by parents or other adults who are not intending to convey those opinions to the children…."

Consequences for the ACT-Project:
The project was aiming at the measurement of the impact of informal learning on Active Citizenship.
To measure the impact of "non-intentional" learning or "incidental learning" on Active Citizenship is impossible since:

- an aim, objective or aspired competence is missing,
- there is no learning process in the sense of guided instruction and
- there may not even be a measurable output because one cannot evidence it.

Referring to the European Commission's definition one could add that informal learning is not necessarily intentional learning but the impact of informal learning can only be measured in intentional (learning) arrangements[12].

2.2.1.4 The Development of the Concept of Informal Learning

As this study is focusing on evidencing *informal learning* it is important to describe the construct of "informal" learning in terms of its development, different structural levels and different understandings and traditions in the European context.
In contrast to English speaking countries, in Germany the term "informal learning" was only discussed (Overwien, 2005) recently, evolving from the terminology of "development education" of the early seventies that was mainly funded by international organisations like the World Bank or UNESCO (Sandhaas, 1986).
Recent societal developments, especially the development of the Information Society and its influence in working life, led to a development that put more emphasis and consideration on informal learning processes[13]. Non-formal and informal learning have become increasingly important for the working life in our societies - Kirchhöfer (2001) for instance stated that learning as an integral part of the working context is an important constituent of value and profit development.
However, in most of the cases informal learning is still regarded as a part of vocational learning though it often takes part in very different contexts, e.g. during leisure time or in the family. Knowledge and competence from non-vocational spheres are in most cases still interpreted against the background of their "usability" in vocational life.

This utilitarian view becomes obvious in the large scale ECOTEC studies (2005-2007) investigating the validation of informal learning in Europe. Validation of "pure" non-vocational learning is still the exception in most European countries. Against the studies' results one could suspect that informal learning becomes another time "vocationalised" and thus "economised" and that civic learning in informal learning context could be shifted in the background (Welton, 1995).

The Development of the Concept

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[12] Cf.: Overwien 2003: „Das inzidentelle oder implizite, also eher unbewusste Lernen aus dem informellen Lernen herauszunehmen ist aus analytischen Gründen sinnvoll. Unter dem Aspekt der Planbarkeit von Lernen erscheint es auch am wenigsten beeinflussbar. Wenn es allerdings um die Gestaltung von Lernumgebungen geht, ist es wiederum in entsprechende Überlegungen aufzunehmen, da es als Lernpotential nicht unterschätzt werden sollte."

[13] Cf. European Commission: Lifelong Learning Programme, General call 2008-2010, Update 2009, Strategic Priorities, Priority 4: Improving validation of non-formal and informal learning, p 25.

At the beginning of the 20th century John Dewey already accentuated the term informal learning in contrast to formal learning. For him informal education was the basis for formally organised learning processes necessary in an increasingly complex world.
The discussion evolved as the educational systems are subjected to processes of change due to societal change. At the beginning of the 40s, with the beginning of development policies, educational development was thoroughly aiming at the development of schools. The movement of educational activities in sectors outside school (e.g. the development sector) led to the differentiation presented in the previous chapter.
The origins of not-formal education can be located in the 1950s and 60s in connection with the independence of former colonies and international organisations started to deliver "educational aid" together with "development aid".
This referred among others for instance to "literacy", "farmer education", "agricultural education", "family planning" and other "self-help activities" and also included international mobility actions. Sandhaas (1986) concludes that not-formal education was practised even before the term was invented and that there had been diverse concepts and a rich experience in informal and non-formal education.
The discussion on and the development of not-formal education was stimulated by the report: "The World's Educational Crises: A System's Analysis" (Coombs, 1968) that for the first time doubted the function of formal education and the paradigm:

More schools -> more education -> more development.

In the early 70s the FAURE Commission of the UNESCO estimated in a large scale publication that 70% of the learning processes take place in informal learning (Faure, 1972). Faure was explicitly pointing at interconnecting informal and formal learning processes against the scientific and technological revolution and increasing flows of information.
Another movement that supported the increasing importance of not-formal education was initiated in the 70s by Illich (1973) who generally doubted the relevance of school education for development processes. He stated that "learning is not the result from manipulation but of participation in a meaningful learning environment".
Freire (1973), in a variation of the "learning funnel"-metaphor, compared school education with the banker's principle, filling learners (as objects of pedagogic efforts (Overwien, 2003)) with knowledge as if they were empty cages. He formulated his "Pedagogy of Freedom" as a counter-concept that should merely create consciousness among the learners and enable them to act as subject.
Learning is seen as a continuous process taking place in the environment and context of the individual. The resulting changes do not only refer to the learner but also to the context.

In the following years informal learning was discussed mainly in the context of development aid and is by now a fixed term among education experts on the international level.

In 1996 the ideas of the FAURE Commission were revitalised by the Delors-Commission and the OECD to mobilize inactive competence of citizens (Overwien, 2005).
Since the late 1990s informal learning has been increasingly discussed in connection with vocational training and adult education, some years later the issue was internalized by pedagogues from youth research, social and environmental pedagogic.

Development of the Definitions and Explanation Models of Informal Learning:
Definition of informal learning has always been a complex and challenging process since it has been evolving from different contexts during the last decades.
Informal learning developed some derivates, for instance the concept of "situated learning" (lay people learning with experts in vocational contexts – often applied in development aid) and certain properties were included from some authors while others focused on others:
Watkins and Marsik for instance included incidental learning in the definition while Livingston (1999) pointed at other aspects like self-learning as a major trait in informal learning.

Furthermore it was modified according to the societal situation - during the years the focus of research work and explanatory models shifted; in their early work Watkins und Marsick, Volpe and Atkins, for instance, pointed at emancipation aspects of informal learning while later (in 1999) they put the learning context and the conditions for learning in the foreground.

According to their revised model informal and incidental learning is characterized by the following factors:

- Integration in work and daily routine
- Internal and external impulse
- Not a conscious process
- Often introduced by coincidence
- Contains an inductive process of reflection and action
- Often interconnected with learning from others (group learning)

Informal learning can be supported by different means:

- To deliver room and space for learning
- To check the environment in respect to learning opportunities
- To link the attention to learning processes
- To strengthen ability to reflect
- To create a climate of cooperation and trust

Another perspective is delivered by Dehnbostel (2000), who describes informal learning in vocational contexts.
In "training on the job" situations[14] he differentiates between "organized (formal)" and "informal" learning. In its organised form learning is intended with fixed learning contents and objectives. It delivers theory and delivers acting competence and acting knowledge.
In contrast, the informal learning strand is not intended; there is no explicit learning objective.
Dehnbostel (2002) further differentiates informal learning in "reflective" (experience driven) learning and implicit (unconscious) learning whereas both modalities are influencing each other.

The missing of an explicit learning objective is a criterion that could be found in most of the informal learning situations evaluated in the micro-projects by the transnational AC -partners.

Overwien (2005) states that generally, when reflecting informal learning processes, at least 2 perspectives have to be considered:

1. The learning subject takes initiative in learning and discovers new contents and circumstances – or seen from a different angle - tries to explain own questions arising from its (everyday life or specific) context
2. The second aspect is related to the learning environment and context that decisively influence the learning process[15]:

With regard to the definitions invented by the European commission Overwien doubts that the triple differentiation in formal – non-formal – informal will be of much use in practice since especially in the non-formal area certified/accredited and non-accredited courses are combined under the same heading. Thus he favours a continuum model between formal and informal education and meets the position of a team of researchers having worked at the Study of the Lifelong Learning Institute, University of Leeds, in 2003: "Formal, non-formal and informal learning are not discrete categories, and to think that they are is to misunderstand the nature of learning. It is more accurate to conceive 'formality' and 'informality' as attributes present in all circumstances of learning" (Colley, 2003).

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[14] "Betriebliches Lernen".
[15] See also Lewin's Field Theory in chapter "Action Research" (3.1.1.).

To back up with these arguments, the researched micro projects were mainly situated in informal learning contexts on the grass-root level but consciously integrated projects in the evaluation with rather non-formal (European instructors' training on Blended Learning) and formal (curricular, TR) backgrounds.

With regard to informal learning the following hypothesis was formulated:
As *only a reflected activity* can be measured and evaluated against certain criteria, the pure incidental, non-reflected informal learning activity was excluded from the scope of the observations.

Consequently, evaluation of non-formal and informal learning activities needs the following requirements:

1. An aim or objective (in contrast to formal or non-formal learning not a learning objective (competence) but an activity-related objective)
2. There must be a process with describable activities
3. There should be a recordable output

2.2.2. Catalogue of Patterns for Informal Learning Activities

To forge a bod between a system for description of instructional models and patterns of informal learning, a so-called "catalogue of informal learning patterns" was developed and is attached in the appendix to this dissertation.
Instructional or didactical models are basic forms of organised teaching and learning as it has been developed for at least about two and a half thousand years in institutions like schools, universities and centres for professional training.
At all times human beings learned (and are still learning) outside such institutions as well, in the sense of incidental learning in everyday-life situations.
For more than 30 years now, in societies with a profound and widespread system of formalised education, there has been increased attention for and interest in informal ways of learning and teaching. This leads to a continuous specific attention for and interest in the methodological questions of these ways: what are the new devices, media, resources, and explanations etc. that lead to fruitful results of informal learning?
The Göttingen Catalogue of Didactic Models described didactic ground models in formal and non-formal education (Haller, 1997). As counterpart for informal learning, the catalogue of informal learning patterns can be used as an inventory to recognise learning arrangements in informal contexts. At the end of the project, it consisted of 42 ground-patterns collected and defined in the framework of ACT to describe typical informal learning modalities.
The inventory can be used either for evaluation or for planning purposes.

No.	Pattern	Description	Stakeholders	Learning activities	Your project? Pease give a short description	Evaluation of learning effects
12a	ePortfolio 	Establishing an own profile and giving information Presenting own skills	learners	The conscious development of the profile is the learning activity Interlinking persons with same interests Writing contributions in the blog	ABCD: ePortfolios were used to bring the group together and to enable the participants to present themselves	observation of profiles
21	Performance (theatre, cinema, concert) 	Seeing a complex situation as play, often with a clarifying intention (epic theatre, e.g.)	Participants coaches (films, critical incidents, integration	When producing multimedia learning materials the participants	ABCD: On the basis of a project called "INTEGRATION" the participants received a very short introduction and some exemplary films. They were asked to build up their own film sequence in the team	essay, discussion, observation, questions
24	Teamwork 	Learning in a situation with common production processes	Participants Coaches give tasks according to the development process	Participants formed a team of developers and construct their course in a period of nearly 1 year	ABCD: Teamwork was one of the 3 major modalities in the non-formal course	essay, discussion, observation, questions

Table 1: Excerpt from the catalogue of informal learning patterns in one German project (ABCD)

The complete catalogue is added in the appendix of this dissertation.

2.3 Comparison of National Educational Activities on AC in Europe

2.3.1 "Learning AC" in Formal Education in Europe

In the framework of ACT, national approaches of the partners' countries with regard to the topic "learning active citizenship" with special regard to non-formal and informal learning environments were compared. However, to present a fundamental comparative approach the question how Active Citizenship is learnt in formal education, namely in schools, could not be neglected as the approaches and applied concepts are necessary to understand the national background concerning Active Citizenship.
Therefore, basic inquiries about formal education on Active Citizenship were carried out, mainly on the basis of the IEA study and on country reports compiled by the council of Europe.
As far as AC and educational science is concerned, the main sources for scientific research on AC and education are the Civic Education Study by the IEA (International Education Association, Lehmann et al. 1999, 2003) and the Eurydice report on Citizenship education (2005). The studies mainly stated the differences in national approaches and ideas. Eurydyce, at least, stated some similarities between the countries such as "democracy and human rights, equality and tolerance, active participation, social responsibility, solidarity and social justice".

In the first project phase a work group of ACT partners described the general systems and characteristics of each country. For this purpose a template was developed and filled. The resulting catalogue was placed on an interactive website with editing tools to enable new partners to continue the work on the descriptions of the developing country profiles concerning Active Citizenship.

Comparing the different countries with regard to AC, one has to take into account special historic, cultural, socioeconomic and European aspects.
Four European countries that accessed the EU at an early stage (SE, DE, NL and IT), four relatively new members (PL, LV and BG, RO) and one candidate country (TR) show significant differences concerning the development of the idea of democratic citizenship.
There have been massive societal changes since the end of communist times, but the "old" European states have also been challenged by citizenship-issues like unemployment, changes of the social systems as well as a growing number of immigration. Italy, for instance, is facing the relatively new phenomenon of immigrants from former communist countries and from poor African countries as well as federal tendencies in northern provinces
Especially, in former communist countries civic education had been an official school subject for partly more than 20 years (PL and BG), serving mainly the indoctrination and stabilisation of the political system. Therefore, there is a development from obedience to free thinking, from pretending to be democratic to dialogue, cooperation and tolerance.
Changing governments influence the development of the idea of "Democratic Citizenship" in Turkey as there were national committees on the issue in 1997, 2001 and 2004.
Only Sweden and Turkey have national curricula on civic education, in other countries CE is part of other subjects like history, politics, social sciences and religion. In Latvia CE shall be integrated in history, geography, sports and household and in 2005/2006 it was also implemented as a new subject in the programs of compulsory education in social studies.
Germany has a federal system and therefore no national curriculum as educational affaires are issues of the "Länder" (the federal states).
The National Ministry of Education in the Netherlands develops the key issues, the so-called "key goals". The Ministry and the Parliament base their policy on an advisory committee, the National Education Board (Onderwijsraad), which published an Explanatory Memorandum (2003) with recommendations and statements about citizenship education. In the Netherlands, CE recently became a special subject only in secondary education after a study conducted in the mid 1990s showed that many of the secondary students did not meet minimal requirements for a sufficient and satisfying democratic citizenship.
Authors of the IEA study state that the "young" democracies are still suffering from communism – rejected old values have not yet been replaced by new ones, which leads to a vacuum of values. Romania and Bulgaria are (unlike Poland) still in the reforming process, but CE are priority issues in the educational development.
In Italy, the authors are complaining about a severe lack of reforms in the public sector and catholic churches. Extracurricular projects on AC themes are carried out autonomously (e.g. in environmental and peace education).
Concerning the contents most of the countries have similar subjects: democratic values and skills, promotion of equality and counteracting discrimination, solidarity, national identity (which is particularly emphasised in studies of post-communist countries), social cohesiveness and diversity, local and environmental issues. National and European citizenship are emphasised in NL and PL.
In Poland, there was a high American influence in the development of civic education; there were several US-funded projects and the development of materials and media was primarily sponsored and supported by US-donors and partners.
In Turkey, civic education is integrated into the courses of "Life Studies" in the 1st to 3rd grades and "Social Sciences" in the 4th to 8th grades. In the 9th to 11th grades, beside Democracy and Human Rights lessons as an elective course, civics education is part of other subjects such as sociology, geography, traffic and first aid, public sciences, human relations, national security. Some private schools are also developing additional programs such as Tolerance and Diversity Program.
In Italy, lower and upper secondary schools have a specific subject called CE in conjunction with history, but there seems to be a lack of affective-experiential approaches to learn citizenship.

In former communist countries, civic education was directed towards loyalty to the state, aiming at a high level of patriotism. In Romania, there was one compulsory period of CE per week.
Now the main goal of CE in all countries mentioned is to bring forth responsible, aware citizens with an open mind who have the capacity to think freely.
It seems that there is a North-South divide regarding participatory aspects. In DE, NL, SE, and PL, there is a goal to include students and parents in decisive processes. Students and staff should be empowered to act in schoolwork. Here, also informal (outside school) activities are mentioned.
In Italy, the authors reported that, missing real curricular reforms, there are several "cross-curricular" projects in which NGOs, municipalities as well as the church also play a role, e.g. in the fields of environment, multicultural issues and of peace projects.
Except for the Netherlands, there is no assessment of knowledge and skills (output targets are stated and exams in higher secondary education are held).
In most of the countries, there is no explicit study subject Active Citizenship in institutions of higher education in the reported countries but the theme is embedded in various subjects, such as sociology, psychology, philosophy, anthropology, politics, social work (RO, BG), social pedagogy, law, journalism, international relations (TR) and European integration (BG).
Bulgaria puts special emphasis on the Roma minority and there is a subject in primary school pedagogy in the Roma language showing also CA-related topics that should lead to a better understanding.
In Timisoara, Romania, there is a master course of studies called "Master Human Rights and Democratisation"; the University of Bologna (IT) offers a course of study on "Culture and Human Rights", and at the University of Siena (IT) there is a "Master Human Rights and Humanitarian Action". The University of Florence (IT) offers a Master in "Gender Citizenship and Cultural Pluralism".
The contents in these subjects are ethics, social behaviour, social identity, human rights, environmental subjects, cultural minorities, gender related subjects etc.
In the new European countries and the candidate countries, there seems to be a higher impact of European integration themes.
To some extend there are special courses for AC (e.g. in Latvia provided by political science), lectures and trainings about local government, citizens society (the so-called "Garner Meetings" in PL).
In Turkey, a NGO training centre offers courses, publications and a repository of funding opportunities. In Germany, there are special trainings and consulting offers for NGOs mainly on the non-formal education level.
In each country it is reported that the teachers' training contains elements and courses on AC.

As far as research is concerned there are various projects at educational research institutes in different faculties (e.g. education, psychology, social sciences).
There are several studies and projects on the political interest and political participation of children, young people and also lower population levels because large numbers of citizens have more and more difficulty to identify with the results and ways of conventional politics.
These studies have been carried out partly on the national but to some extend also on the European cooperative level.
Other AC-relevant courses can be found in training institutions of the forces or the civil service (DE).

More detailed information was gathered by the ACT partners in a so-called "AC-template of formal education", which can be found in the appendix to this dissertation.

2.3.2 "Learning AC" in Informal Learning Contexts in Europe

Quotation from Jacques Jansen, CESO, Partner NL:
"Of course informal citizenship learning takes place everyday, everywhere: thousands of local associations in the field of women emancipation, workers' organisations, arts and leisure time ac-

tivities, and sports do their job. Without explicit goals the thousands of volunteers within these associations transmit social and civic ideas, values and attitudes!"
On the basis of national reports on Active Citizenship prepared by ACT partners in the stock-taking phase of the project examples of non-formal/informal education will be clustered in state level, educational institutes and non-governmental organisations:

State Level
Generally, in all European countries there are various national and European programmes to support initiatives contributing to citizenship aspects on a local and national level.
Additionally there are different foundations supporting projects and studies such as the Volkswagen-Stiftung (DE), the Soros' foundation (PL) the History Foundation (TR) offering support and information to NGO.
There is a big value of volunteers' organisations (e.g. Laienhilfe "laymen help-organisations", DE; Turkish Educational Volunteers Foundation etc.) and an unmanageable amount of self-help societies and grass-root organisations, not to forget confessional organisations and initiatives.
All these foundations, projects, volunteers and self-help-organisations follow a wide range of goals such as democratic participation (European integration), combating xenophobia and discrimination, self-empowerment of disadvantaged groups (such as victims of violence, disabled persons) and promoting the environmental and saving the cultural heritage (e.g. "Legambientale" and Camù (IT)).
In Latvia, there are several projects related to AC either as research or educational projects, mainly financed by the European Union (PHARE).
"The Forum for Plock" (Plock is the name of a city) is the first agreement in Poland according to the co-operation of the public and private sector in a large scale offering education, counselling and funds for NGOs for AC issues such as public participation and sub-objectives such as environmental protection etc.
Local authorities are supporting school and community activities.
Projects for civic culture in non-formal education for school children in school and children's clubs are funded by the Romanian State.
In Italy there are projects especially designed and state-funded like "The City of Children" and prices and awards are sponsored by national ministries.

Non-formal and Informal AC-learning in the Environment of Educational Institutions:

More and more projects in European schools go beyond the school curricula and courtyards and try to integrate "real-life stakeholders". This aim has been followed by the SOCRATES "Joint-Action" programme[16] and there is an extensive number of interesting examples for non-formal civic education around schools. There are lots of volunteers' organisations educating children in AC matters on an extracurricular basis (TR).
Universities in DE and NL offer opportunities for political participation on the university level as far as students' parliaments are concerned. The real participation seems to be very low, for instance only 33.4% of the students in Göttingen voted for the students' parliament in 2008[17] and the number of candidates is relatively small.
Students' clubs and voluntary organisations also deal with Active Citizenship issues in an informal way.
In Bulgaria the University of Gabrovo collaborates with the municipality and self-help organisation (such as the Union for the Blind) in the framework of funded projects to improve and facilitate the participation of disadvantaged groups.

AC in Non-Governmental Societies:
Trade unions play an important role in the non-formal education of Active Citizenship.

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16 For instance in the project: "JEM - Joint Environmental Management"; www.jem-eu.org.
17 Source: Göttinger Stadtinfo, Online magazin, http://www.goest.de/asta_wahlen.htm.

Polish and Romanian partners also named public-private partnerships funded by multinational companies. Non-governmental organisations (mainly non-profit) are the driving force of applied active citizenship.
NGOs have various functions:
They are meeting points and interest groups for citizens, provide a wide range of information about practical law, rights of disabled and disadvantaged people for free, and offer expertise on legal regulations. Concerning AC, they are preparing young people for the participation in a local unit's life, giving them knowledge and abilities needed for working in a local government (PL). They may direct the ideas and intentions of their beneficiaries to the representatives of the (local) governments and they often are the product of self-organisation.
In Romania, there are local citizenship projects coordinated by NGOs and associations that work intensively on the grass-root level. In Latvia, many NGOs include AC in their statutes such as the Latvian Adult Education Association (LAEA) carrying out various large scale projects on civic education, mainly funded by the EC, dealing with topics like CE for ethnic integration, participation of youth and democratic development.

In the Netherlands, non-formal educational institutions like residential adult education centres (the Grundtvig idea), open universities and local adult educational associations have almost completely disappeared. "Political education" (civic education) used to be offered by these institutions. The state withdrew the financial support. These "learning for life" courses were seen as luxury in the 1980s.

2.4 Evaluating Active Citizenship

2.4.1 Cognitive, Activity Related and Affective Dimension

Chapter 2.1 presented different understandings, definitions and explanatory models of Active Citizenship. The interpretation of "what is Active Citizenship" is of course influenced by the political and societal perspective: a political party or a governing body will look at AC from a different angle than grass-root organisations, and they will most probably have different ideas than the individual (be it as citizen or as "final beneficiary").
Consequently, as the whole concept of AC is rather vague and context-dependent, the aspired competences must also vary to a large extent.
According to Cecchini (2003) AC aims at developing knowledge, understanding, critical thinking (cognitive) and it *implies action,* empowerment, i.e. acquiring knowledge and skills being able and willing to use them, make decisions, take action individually and collectively. "AC is based *on values*: human rights, pluralist democracy, the rule of law, respect for diversity, solidarity, responsibility". Cecchini described the value aspect (social and moral responsibility, Crick 1998) as an affective dimension.

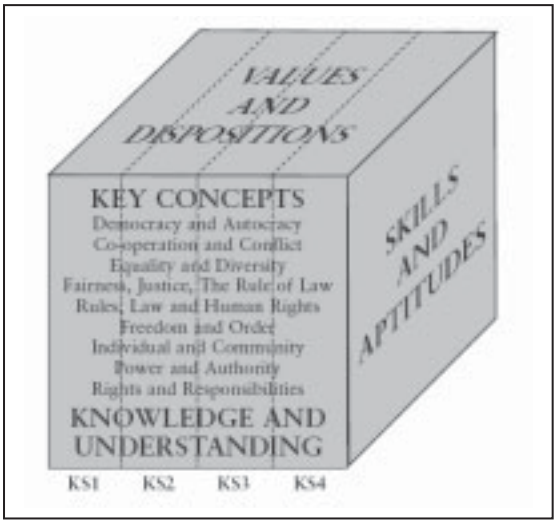

Figure 1: Crick's citizen education cube

Referring to formal education a cube model was developed by Crick in 1998. The AC construct is based on three levels, a cognitive, a pragmatic (skills) and a level of values and dispositions. The interdependence of the three aspects is illustrated by the English citizenship education cube.

The author generally agrees with the Crick approach which shows similarities or roots to Benjamin Bloom's taxonomy and even Pestalozzi's (1747-1827) ideas of intellectual education (HEAD), physical education (HAND) and moral education (HEART). Pestalozzi strove to develop an educational model that enables the human being to "help himself", an approach which is very near to major traits of a liberal interpretation of citizenship competence.

Pestalozzi's famous tripartite division is a reflection of ancient ideas of the nature of man, such as Aristotle's distinction between mind, ambition and sensuality, for example. From these three stratifications (mind-body-soul) has also resulted in the basic expression of human beings: Thinking - Acting - Feeling. Besides the tripartite division itself, the development potentials of the three dimensions are of major importance: according to Pestalozzi, the intellectual upbringing of the child leads it from a "dark view" to a concrete view, and finally to a clear concept. Physical education stretches from simple to complex movement skills.
Moral education begins with the feelings of love, trust and appreciation, deals with the skill of obedience and leads in an uninterrupted sequence level to "fear God and inner obedience".
That may sound antiquated, but the concept can also be found without Christian fixation in countless depictions of modern development theories again, such as the "Über-Ich" (Freud), the "significant other" (G.H. Mead), or "internalisation" (Parsons) and others.
Pestalozzi's formulation is a milestone in the development of educational concepts and education science: firstly, because he describes those areas or dimensions ("forces") as stage concepts and develops the understanding that it is a hierarchy in a logical and regular sequence, which is a necessary condition for the following. On the other hand, he determined that the three areas are not disjoint but connected with each other and therefore form a holistic model.
In 1956 a work group led by Benjamin Bloom's "Taxonomy of Educational Objectives. The Classification of Educational Goals. Handbook: Cognitive Domain" developed another milestone. Later followed, edited and co-authored by David Krathwohl (1964), the first manual, including a comparatively elaborate version to the psychomotor domain Various other approaches have been proposed, including the one of L. Resnick.

The six levels of the cognitive domain (with examples of operations) are displayed in the following:

1. ***Knowledge***: arrange, define, duplicate, label, list, memorise, name, order, recognise, relate, recall, repeat, reproduce state.
2. ***Comprehension***: classify, describe, discuss, explain, express, identify, indicate, locate, recognise, report, restate, review, select, translate,
3. ***Application***: apply, choose, demonstrate, dramatise, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write.
4. ***Analysis***: analyse, appraise, calculate, categorise, compare, contrast, criticise, differentiate, discriminate, distinguish, examine, experiment, question, test.
5. ***Synthesis***: arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organise, plan, prepare, propose, set up, write.
6. ***Evaluation***: appraise, argue, assess, attach, choose, compare, defend, estimate, judge, predict, rate, core, select, support, value, evaluate.

For the affective domain the following stages were later formulated:

1. ***Receiving*** is being aware of or sensitive to the existence of certain ideas, material, or phenomena and being willing to tolerate them. Examples include: to differentiate, to accept, to listen (for), and to respond to.
2. ***Responding*** is committed in some small measure to the ideas, materials, or phenomena involved by actively responding to them. Examples are: to comply with, to follow, to commend, to volunteer, to spend leisure time in, and to acclaim.
3. ***Valuing*** is willing to be perceived by others as valuing certain ideas, materials, or phenomena. Examples include: to increase measured proficiency in, to relinquish, to subsidise, to support, and to debate.

4. ***Organising*** is to relate the value to those already held and bring it into a harmonious and internally consistent philosophy. Examples are: to discuss, to theorise, to formulate, to balance, and to examine.
5. ***Characterising*** by value or value set is to act consistently in accordance with the values one has internalised. Examples include: to revise, to require, to be rated high in the value, to avoid, to resist, to manage, and to resolve.

For describing the psychomotor domain, the following four examples of different authors (groups) are cited: R. H. Dave (1967), E. J. Simpson (1972), A. J. Harrow (1972), and A. Romiszowski. Dave's proposal is said to be the simplest domain and easy to apply in a corporate environment. The Psychomotor Domains defined by Harrow and Simpson are said to be better suited for certain adult training and for teaching young adults and children.

Dave	Simpson	Harrow	Romiszowski
Imitation (copy)	Perception (awareness)	Reflex Movement	Acquiring Knowledge
Manipulation	Set	Basic Fundamental Movements	Executing Actions
Develop Precision	Guided Response	Perceptual Abilities	Transfer
Articulation	Mechanism	Physical Abilities	Automation
Naturalisation	Complex Overt Response	Skilled Movements	Generalisation
none	Adaptation	Non-Discursive	none
none	Origination	none	none

Table 2: Four different approaches to characterise the psychomotor domain

According to Bloom, the cognitive domain deals with a person's ability to process and utilise (as a measure) information in a meaningful way. The hierarchical order is organised according to the complexity of the cognitive process. The affective domain relates to the attitudes and feelings that result from the learning process and is ordered according to the internalisation. Whereas the psychomotor domains involve manipulative or physical skills (principle for ordering is "coordination"), ACT partners modified this dimension, and introduced the activity related competence dimension displaying the activity levels of a person in respect to the evaluated AC topic.

Another model of development of human abilities and skills that had a certain impact to the reflections and arguing within the ACT project was the Hoopes model of intercultural understanding (1981) because it implicates social communication in intercultural encounters.

7. Intercultural Acculturation
6. Selective Adoption of Certain Elements
5. Evaluation and Rating of Different Aspects
4. Accepting Other Cultures (as they are)
3. Understanding
2. Attentiveness for diversity
1. Ethnocentrism

In the course of study and the project a modified cube model was developed and the grades with regard to the cognitive, activity-related and affective dimension were renamed.

2.4.2 Structure Models for Describing Human Characteristics

The Citizen Education cube of Crick et al. (1998) has been mentioned previously. As in many scientific theories, various structural models exist that visualise components of learning and teaching like the relevant variables and factors within that specific theory with regard to their relationships towards each other. These relationships are numerous: there may be coincidence, causality, ambiguity, orthogonally, etc. The visualisation of such relationships is firstly to be seen as a help for imagination and understanding of such often highly abstract models. Arrows symbolise consecutiveness, for example; axes show dimensionality, and if they are crossed we see a twofold combination with four fields or quadrants.
The three-dimensional models are something like a barrier for human's imagination or capacity of visualisation. The most famous of these surely is the "Guilford cube", which shows that structural models may also be a scheme for discovering new elements. In Guilford's "Structure of Intellect" theory, intelligence is viewed as comprising operations, contents, and products. There are five kinds of operations (cognition, memory, divergent production, convergent production, evaluation), six kinds of products (units, classes, relations, systems, transformations, and implications), and five kinds of contents (visual, auditory, symbolic, semantic, behavioural). Each of these dimensions is independent, so there are theoretically 150 different components of intelligence. In various versions this model had been changed which is quite understandable: these models are more or less helpful constructs to imagine and understand reality, they are not reality itself. So, they underlay individual reflections and collective decisions. This is shown by the experiences with the Guilford cube after its first presentation in 1946 with 120 elements up to a later version with even 180 elements.

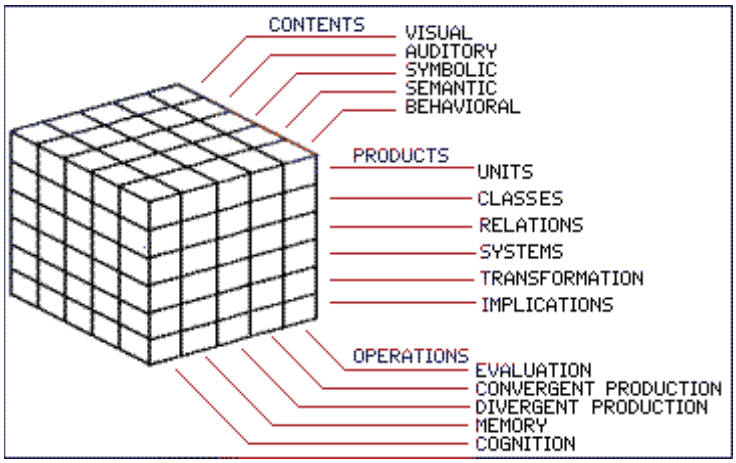

Figure 2: The Guilford cube (1967)

A central question in the construction and usage of such models is concerned to the standard for scaling each dimension. Theoretically, each of the usual levels for scaling may be regarded, provided that the variables or objects are convenient to that level. Guilford chose a nominal scale for each dimension. For the ACT-project. long discussions led to the decision for an ordinal scale. This means a hierarchy within each dimension, starting from a lower level and describing development to higher levels.

2.4.3 Active Citizenship - An Assortment of Sub-Competences

The term "competence" has been used in the context of learning and teaching, especially in theories and discussions on curriculum development, since the 1970s. It can be understood as an opposition to the widespread use of the term "learning objectives" and shows a more molecular concept to describe intended abilities and skills in educational contexts.

The term refers to ideas and associations regarding expected results of educational processes on:

- General skills and knowledge stocks of learners,
- Culturally meaningful units,
- Requirements, operating levels and knowledge related elements and on
- Situational availability.

It is useful to distinguish skills into

- Expertise (general and specific professional qualifications),
- Social Competence ("Partners" - groups and public relations skills)
- Self competence (learning, self-control and the ability to reflect).

In the Germany of the early 1970s, a discussion about so-called “key skills” emerged; interestingly enough, it emerged in the context of the concepts of professional education. This may remind one of the fact that Pestalozzi already followed the idea of skills not being restricted to specific application areas but being of superior and integral importance. There are fundamental attitudes and basic skills relevant in every profession, and their absence was perceived as a diminished professional suitability.
In today's discussion "key qualifications" and "soft skills" are often mixed.

For the preparation of the competence descriptions and, in particular, the review of developments in the ACT literacy project, it is also important to note that the notion of competence is a bridge between

- Requirements (formulated in a professional field such as management or administration, in the case of the ACT partners, but often the societal expectations of the clientele compared),
- Goal performances (can be formulated mostly by teachers, coaches or trainers),
- Abilities and skills (which are mostly of learning or can be formulated by test psychologists) and
- Knowledge areas (mostly formulated of "specialist"-people or experts).

Skills are describable according to at least four of the following characteristics:

- To their request reference (requirement levels, working system, work tasks and requirement areas),
- To their competence class (skills, social skills and self skills),
- To their operation level (assignment to taxonomy domains and intensity of achievement, degree of mastery of a skill),
- By their knowledge reference (orientation knowledge, a knowledge of action, explaining knowledge, source information).

What are the topics that are relevant for Active Citizens, what are the fields of competence for Active Citizens? There are various studies that try to shape out what citizenship competence can be: debating skills, writing skills, tolerance, non-violence, acknowledgement of rule of law, acknowledgement of human rights, critical reading skills etc.

In formal learning environments, these different aspects of competence may be delivered and assessed though most of the authors are well aware that AC competence, skills, values, dispositions and aptitudes cannot be entirely formed in the classroom. Regarding non-mainstreaming target groups the relevance of competence and the skills mentioned above is dependent on the context:
Certain topics may be very relevant for some groups (human rights and non-violence for victims of violence), whereas others may be irrelevant (e.g. acknowledgement of the rule of law for some groups of disabled persons).
There is one aspect of competence often mentioned which is recognised in a critical way in the ACT framework: “*Leadership*”:
If leadership is an aspired AC-related competence the organisers of voluntary work (NGOs) would be, of course, “active citizens” but the final beneficiaries would only be regarded as objects of a learning situation, not striving for leadership and only remaining passive. This may be interpreted

as revealing elitist thinking but leads at least to an exclusion of the non-leading group members. It is also contradictory (or at least not very helpful) with regard to informal group learning. Instead of leadership it may be more relevant to include management, moderation or mediation competence.
Following the paradigm of Lifelong Learning, AC education means that a person has to become an Active Citizen in his/her living context. This may predominantly happen via informal, contextualised learning.
In a more generalised view, one can state that a citizen has to cope with his/her life in the living context to be able to contribute to the community/society. There may be many different competencies relevant for the citizen to cope with this challenge.
Following this idea, the ACT partners identified five different fields (clusters) of AC competencies being relevant for every citizen and, consequently, being of interest for evaluation:

1. Knowledge about relevant societal issues in the individual living context
2. Key competencies to cope with life and to learn in community/society
3. Self-related attitudes to localise oneself in community/society
4. Attitudes towards other community/society members
5. Activities to be carried out for the sake of the community/society.

2.4.4 Quantitative Research on Civic Competencies

AC competence must be related to the subject and may differ in content and extent to one's specific living situation.
Example: a teenager in a youth club has different interests and pre-dispositions than a recently traumatised victim or survivor of violence.
They are both citizens and according to von Hentig (2003)[18]. they have to find their places and tasks in their civic community ("civitas"). From a societal point of view one could state that through the help and guidance of the grass-root organisation especially disadvantaged citizens are enabled to play a more "valuable" role as citizens.
Following this idea, it is obvious that we need more than just evidencing the cognitive performance of a subject for an explanatory approach. We also have to display the feelings and the activities of a person to be able to create a full picture. Exactly at this point the quantitative research on AC competence reaches a limit.
Kirlin (2003) states that there is a vast number of highly elaborated research projects evaluating certain citizenship competencies. However, it is remarkable that only very few researches on Active Citizenship have specified which civic skills are important, and even less authors have operationalised some of these skills. Kirlin states in his overview that there are four main skill categories: organisation skills, communicative skills, decision-making skills and critical-thinking skills.
Regioplan criticises that in most of the cases the line of reasoning of the researches seems to be when people perform these skills they can do them.
Furthermore, they only found one study – Verba et al. (1995) – that tried to give evidence of the impact of civic skills. They clearly state that research has "elaborated on the subject from a normative and theoretical perspective, but (that) there has been no empirical inquiry about the role of education in the development of participatory civic skills" (Kirlin, 2003).

The existing research on civic skills or active citizenship competence should be seen with these statements and results in mind, and it is questionable whether these approaches are useful to

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[18] Mit von Hentig könnte diese Beziehung so betrachtet werden: „Was für ein Volk die Kultur ist – das Leben nach bedachten und gewollten Prinzipien und das Schaffen der hierfür bekömmlichen Ordnungen -, ist für den einzelnen die Bildung. Sie ermöglicht ihm, in seiner *civitas* zu leben, sie weist ihm seine Aufgabe in ihr an"(2003, S. 206)…. Bloßes" Wissen und „nackte" Kompetenzen können aus dieser Perspektive auch dem „Ungebildeten"zugebilligt werden. Bildung als Prozess des Geistes verweist jedoch vielmehr auf eine *Seinsweise*, eine *Existenzform* und kann sich aus diesem Grund nicht in Wissensinhalten erschöpfen.

document a “crisis of democracy” and “missing citizens’ participation” and a fatigue of “communitarian engagement”.

As a rather broad definition/explanation to approach Active Citizenship is applied, it is not astonishing that the portfolios of citizenship competence in different studies also vary to a large extend.
In this connection the question arises whether there are “natural limits” of empirical research on active citizenship and whether standardised comparative research really makes sense.
However, the comprehensive literature research carried out in the stock-taking phase of the project revealed that in many studies the researched competencies are limited to formal learning and to a large extend coupled with an exclusive assessment of cognitive competencies.

From a more philosophical point of view one can raise the question if this way of research meets our own democratic ideas because the research design, the questions and the interpretation reflect the thinking of the political and administrative stakeholders and it may at least be questioned if this is also the opinion of the research subjects – the citizens and the NGOs that take care of them.
In regard to disadvantaged target groups neither standardised “citizenship competencies” nor predominantly quantitative research methods can be applied.

2.4.5 ACT Working Hypothesis

On the basis of the elaborations in chapter 2.1-2.4.4, notwithstanding political and philosophical opinions, the following statements were derived as a working hypothesis for the ACT thesis and the project:

Active Citizenship Competencies

- Are not standardised competencies and skills but flexible with regard to the subject and state of societies;
- Are related to the context of the subject:
    - They may vary according to the living situation. This is why in normal living contexts (outside formal learning locations) competence cannot be seen as independent of the living situation of the subject;
- Are an assortment of sub-competencies (topics):
    - AC is a composition of different competencies such as civic knowledge, civic key competence (soft skills), attitudes and activity related competencies,
    - The evaluation of AC competence must be related to the different contexts in which the subjects live,
    - Not every sub-competence is necessarily relevant for each individual;

- Are influenced by:
    - Socialisation (-> the society context),
    - Education (-> formation, training),
    - Learning experiences (-> formal, non formal or informal learning),
- May vary:
    - In content (-> topic),
    - In dimension (-> cognitive/affective/activity related),
    - In degree (-> learning process, gradation);
- Should be displayed in a process-orientated way:
    - For highlighting the impact of learning on AC we need a dynamic model that is able to display the change in certain stages (referring to ETGACE’s key recommendation 5: Organisations funding informal learning in civil society organisations need to recognise the ‘process’ character of citizenship learning, and develop funding regimes in which civil society organisations are more long-term and equal partners).

3 Methodology

3.1 Research Design

The ACT challenge - A multivariable research approach with a transnational team of practice and scientific stakeholders

The following chapter deals with the choice and development of methodology and instruments that was determined by the following factors:

- The general setting of ACT and the requirements arising through practical-oriented research and in particular by the large variability of different micro-projects, settings, target groups and objectives,
- The disposition of the evaluating teams and
- Considerations concerning transnational collaboration.

ACT is situated in the European social sector. It is a typical practice-research project. The envisaged outputs should not only be restricted to scientific reports but should also lead to an improvement of self-evaluation instruments and approaches for the actors in the field.
From the beginning the research-practice project faced the challenge to find develop theory and practical solutions for certain contradictory targets:

- A transferable approach should be developed to describe and evaluate processes that are purely individual and cannot be standardised.
- Consequently, the outputs should be flexible (to adapt to different groups) but at the same time transferable,
- The outputs should show positive effects (“extra value”) for individual organisations but should be at the same time comparable,
- They should be usable in practice and somewhat easy to handle (in the field), and at the same time delivering new theory that could be fed in European research.

An additional obstacle was the rather uncertain topic “Active Citizenship” that offered a lot of different interpretations.

As described in chapter 2, the setting of the research-practice project shows a large variability concerning:

- Analysed micro-projects in terms of:
  - Activity area,
  - Target groups,
  - Objectives of the social projects,
  - Learning activities,
  - Roles and pre-knowledge of the experts who are the interfaces between research and practice.
- Evaluating teams in terms of:
  - Roles and pre-knowledge (scientific and professional background, counselling competences) of the evaluators,
  - Area of work and expertise (formal/non-formal/informal contexts),
  - Pedagogic background and evaluation approaches (different scientific disciplines from social sciences to engineering),
  - Cultural background and traditions concerning Citizenship (9 European countries).
- Transnational collaboration:
  - European transnational collaboration of different stakeholders is a relatively new phenomenon, especially with regard to the “new” European countries BG, RO, LV and PL and to Turkey as a candidate country.
  - This means that ACT has been facing an evaluation setting which is characterised by a lack of activity references. Transnational collaboration in the evaluation of informal learning is rather unknown territory in the scientific community.
  - These general ideas led consequently to a qualitative research approach.

3.1 Qualitative Research

Taking into account all the considerations mentioned above, an open methodology had to be chosen. A qualitative research design was applied, aiming at investigating the why and how of decision-making, as compared to the what, where, and when of quantitative research.
Quantitative research, being rather conclusive, did not meet the requirements as an explorative approach was applied to discover new findings from European grass-root projects and to combine them to create new theories.

Qualitative methodology had to be employed because:

- There was no clear cut theory that had to be verified/falsified
- Contributions of the actors themselves had to be taken into account[19]
- Flexibility in the research process was necessary and interim results changed the research process
- Interaction with research subjects was needed
- Quantitative methods cannot consider the specific properties of the research groups, following the approach mentioned in chapter 2, the research approach has to consider in an utmost way the individual context and properties of the research subjects
- The envisaged research topics (AC-competences cannot be evaluated with quantitative methods, e.g. questionnaires -> Feasibility of the evaluation)
- Due to the variability of contexts, the assessment methodology must also be flexible. For some groups quantitative methods were feasible; others used interviews or observations (flexibility in assessment).
- The project is aimed at producing patterns to create a kind of typology. These interpretative patterns cannot be established by quantitative means – they have to be discussed and further developed, related to different contexts – thus an ideal setting or qualitative research as it categorises data into patterns as the primary basis for organising and reporting results (data interpretation).
- Research takes place in informal learning contexts. Whereas quantitative methods can be applied in de-contextualised (school) environments with an emphasis on cognitive competence, the informal learning situations afford flexible and comprehensive research methods that also take into consideration affective and activity related competence dimensions.

The qualitative methodological approach ACT can be further specified. It is based on the methods of a further developed Action Research (DE: “Handlungsforschung”) and the Grounded Theory approach.

3.1.1 Action Research

„In der Handlungsforschung sind jene Menschen und Menschengruppen,
welche von den Wissenschaftlern untersucht werden, nicht mehr bloße Informationsquelle des Forschers, sondern Individuen, mit denen sich der Forscher gemeinsam auf den Weg der Erkenntnis zu machen versucht.“
Kurt Lewin, 1890-1947

Against the background of diverging definitions and attitudes towards action research as research method the author favours a fairly broad definition which is widely approached in the social and welfare sector:

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[19] This is especially the case in respect to informal learning since, according to Overwien (2005), informal learning always has to acknowledge the learner’s perspective.

Action Research is “based on the systematic collection of information that is designed to bring about social change” (Bogdan and Biklen, 1992). Practitioners and researchers shape evidence from data to expose unjust practices or environmental dangers and recommend actions for change.
In many respects it is linked into traditions of citizens’ action and community organizing.
The practitioner is actively involved in the cause for which the research is conducted.

With regard to the research strategy the researcher is actively participating in a social (relation) system, cooperating with the research objects. On the basis of the first analysis researchers introduce processes of change which are described, controlled and validated in relation to their efficiency.

In contrast to traditional research approaches and settings the researcher becomes part of the evidencing process and consciously influences the research objects for the sake of improvement of practice.

Thus, Action Research is heading for an impact which shows concrete effects, changes and meaningful improvements in the practical field.

Action Research is based on the central principle of social change which, for the researcher, means to “dive” in the social reality with the goal to modify it for the sake of the people.

It functions according to the following claims:

1. Researchers leave their passive role (which meant a fundamental paradigm change in social science these days
2. The researchers are not independent witnesses anymore but may even take over an influencing role
3. The selection of research topics and themes will rather be determined by social demands than by pure epistemological (theoretical) research objectives
4. The collected data will not be interpreted in an isolated way but as parts of a real process
5. Thus the problem/research situation will not be regarded as an isolated variable but as a research “field”
6. Finally the Role of the “researched persons” will change from “objects” to “subjects” in the research process

Action Research Procedure:
A typical Action Research procedure shows a circular (or better a spiral) sequence.
It is based on development circles or feed-back loops that are typical for a large part of current management systems like Quality Management[20] (ISO, EFQM, KTQ) or Environmental Management Systems (EMAS[21]).
The first step is to set goals based on a profound examination of the idea in the light of the available means. Frequently it is required to find more facts concerning the situation and to collect more data in order to secure and back up the initial thesis.
If this first period of planning is successful, two items emerge: namely, “an overall plan” of how to reach the objective and, secondly, a decision with regard to the first step of action. Usually this planning has also somewhat modified the original idea.

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[20] QM-Systems: International Standard Organisation, European Foundation for Quality management, KTQ = German Hospital Quality Management System.

[21] EMAS = Environmental Management Auditing System.

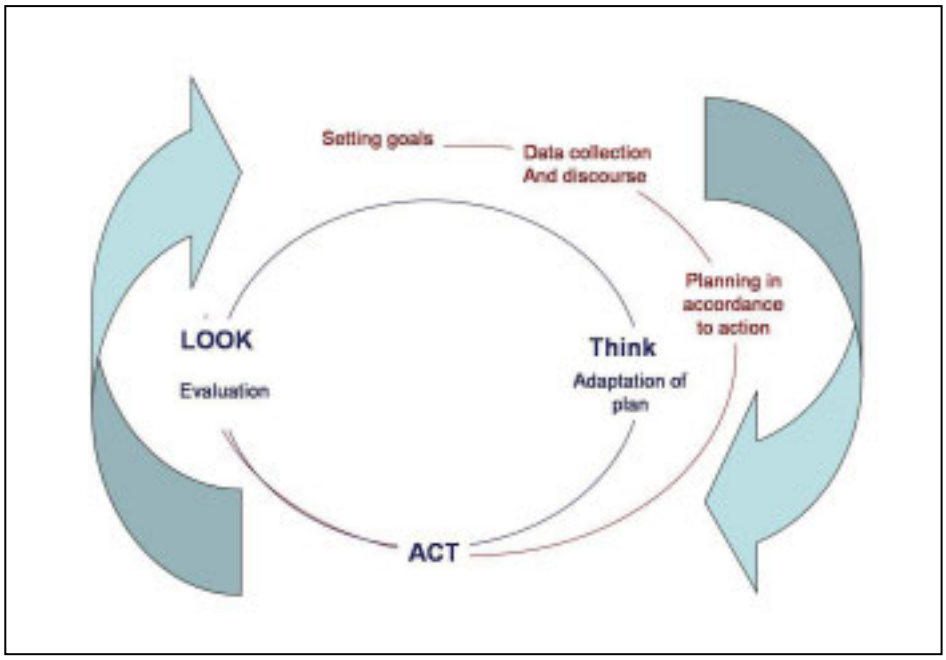

Figure 3: Action research circle (spiral)

The next step is composed of a circle of planning, executing, and reconnaissance or fact finding for the purpose of evaluating the results of the second step, and preparing the rational basis for planning the third step, and if need be, to modifying the overall plan again.

The History of Action Research

In terms of setting, research procedure, outputs and valorisation the research-practice project was developed and executed on the basis of Action Research methodology thereby considering the fundamental principles of this research method to a large extend.

Action research was developed by Kurt Lewin (1890-1947) who was a pioneer of modern social psychology and the founder of group dynamics.
Originally coming from the Berlin School of Gestalt-Theory with Wertheimer, Köhler and Kottka he migrated to the US in 1933.
While at the University of Berlin, Lewin "found many of the department's courses in the grand tradition of Wundtian psychology irrelevant and dull. His thinking was changing to emphasize social psychological problems" (Hothersall, 1995).

He wanted to establish a centre for the research group dynamics – this was realized with the founding of the Research Center for Group Dynamics at MIT in 1944.
Lewin's model of action research (research directed toward the solving of social problems) was used in a number of significant studies into religious and racial prejudice. Later his ideas found their way into marketing and organisational development.

The research needed for social practice can best be characterised as research for social management or social engineering. It is a type of action-research, a comparative research on the conditions and effects of various forms of social action, and research leading to social action. Research that produces nothing but books will not suffice (Lewin, 1948).

The origins of Action Research are rooted in Gestalt Theory. Based on the Aristotle principle that "a whole is more than the sum of its elements" a gestalt is a coherent whole. It has its own laws, and is a construct of the individual mind rather than 'reality'.

Basic considerations of Gestalt Theory were developed by Christian von Ehrenfels stating that Gestalt is a transposable whole[22].
It was developed as an alternative to structuralism und classic behaviourism as it connected phenomenological and experimental research actions.

Lewin integrated the psychological component in Gestalt Theory stating that behaviour was determined by the totality of an individual's situation, environment and needs. He developed his Field Theory, which is sometimes called the "Second generation of Gestalt theory", in which a 'field' is defined as 'the totality of coexisting facts which are conceived of as mutually interdependent'.
The whole psychological field, or 'life space', within which people act, has to be viewed, in order to understand behaviour.
Individuals participate in a series of life spaces (such as family, work, school and church), and these are constructed under the influence of various force vectors (Lewin 1952).

The individual in a distinctive situation can be represented mathematically in a vector model as Kurt Lewin drew together insights from topology (e.g. life space), psychology (need, aspiration etc.), and sociology (e.g. force fields – motives clearly being dependent on group pressures).
Thus, behaviour is a function of the field that exists at the time the behaviour occurs:
(B = f(P,E))
And it is thus a function of personal (internal) and environmental (external) factors.

Action research did suffer a decline during the 1960s due to its association with radical political activism (Stringer 2007).
Action research has gained a significant foothold both within the realm of community-based and participatory action research as well as as a form of practice geared towards the improvement of educative encounters (Carr and Kemmis, 1986).

In Germany the methodology "Handlungsforschung" (action research) was revitalised in the 1970s, especially in the researchers group at the University of Bielefeld.
Action research was originally developed by Lewin and exported to the USA where it was mainly used as a form of effective intervention in organisations.
Among others (Klafki (1973), Moser (1975)), the Bielefeld work group around the sociologist Heinze (1975) was most important for the development works on the concept of action research in Germany.
In the 70s, the German term "Handlungsforschung" had a slightly different connotation than the American term "action research". The approach has three fundamental dimensions: an epistemological, a political, and an ethical one:
From the epistemological point of view one can state that all relevant stakeholders should be included in the process of cognition. This of course has a strong link to the paradigm of Lifelong Learning and also conveys the concept of the active learning citizen.
The research object should influence the research process himself/herself thus being located on the same (societal) level as the researcher. So, in a more ethical interpretation we can state that the researched subject should become a research partner rather than a research object.
In the case of ACT, the setting is also consisting of a 3rd intermediate group between researchers and researched subjects – these are the group leaders, organisers, consultants and other facilitators. This intermediate group has a strong influence on the evaluation process because only these stakeholders are able to build up the reference systems, to evaluate the groups or test persons and interpret the results.

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[22] „Es gibt Zusammenhänge, bei denen nicht, was im Ganzen geschieht, sich daraus herleitet, wie die einzelnen Stücke sind und sich zusammensetzen, sondern umgekehrt, wo – im prägnanten Fall – sich das, was an einem Teil dieses Ganzen geschieht, bestimmt von inneren Strukturgesetzen dieses seines Ganzen. …"

Also in terms of reliability the gap between researcher and research subject had to be minimised. External persons and standardised quantitative methodology are simply overstrained in this situation.
Due to this setting an action research approach, namely in the further developed German interpretation is the only feasible research design in ACT.
This description also meets another objective of action research: Consolidated findings should lead to a direct influence in practice. This goal is identical with the ACT objectives: the project was supposed to lead to an improvement of the evidencing of learning effects in social organisations thus enhancing the emancipation of researched groups. One could go so far to state that the research itself leads to active citizenship because it serves the self-determination of the grass-root stakeholders.

In some of Lewin's earlier works on action research[23] there was a tension between providing a rational basis for change through research, and the recognition that individuals are constrained in their ability to change by their cultural and social perceptions and the systems of which they are a part.
Having 'correct knowledge' does not of in itself lead to change, attention also needs to be paid to the 'matrix of cultural and psychic forces' through which the subject is constituted (Winter, 1987). This momentum is to a large extent considered by the ACT approach since all relevant factors and topics should be included in the contextualisation of the informal learning situation (see chapters 3.3.1 and 4.4.3).

In contrast to Action Research, empirical approaches very often just bring forth arguments for (and thus serving the) political and administrative top-down approaches, not taking into account the intentions, needs (and, if you want, the will) of the researched groups.
Especially in sensitive research areas, the trustful relation between researcher/facilitator and research subject is evident – this is why action research methodology is especially suitable. Of course the connection between the scientific (delivering objectivity, neutrality and methodological (evaluation and assessment) competence) and practical stakeholders (proximity to the target group, contacts, inside knowledge) bears many advantages. The practical transfer of gained knowledge may serve as a validity test (Reason & Heron, 1995).

From a critical point of view, it is very often mentioned that theoretical foundations in action research are missing. There is a systematic conflict between the practical claims (practicability, fast results) and properties related with profound research practice (quality criteria such as validity, reliability, objectivity). This contradiction is one of the major threats in research-practice projects (Hopf 1984). In practice, there is no need of comprehensive justifications and explanatory statements – the functioning itself is the validation. Stakeholders in practical projects normally focus on finding innovative solutions which can be better achieved by testing and moderation than by profound research activities. As a consequence, the research part of the project was sometimes under pressure by these practical requirements[24].

Apart from that one cannot expect that stakeholders from the field are always acquainted with professional research skills. In the project we agreed that the social research part in ACT was not supposed to be only a means to produce acting recommendations. It shall lead to a new type of knowledge, i.e. theoretical statements that have been grounded in intensive research that contribute to a critical and productive discussion in society. In the case of ACT, this contribution should lead to a development of a theoretical and practical approach to measure and to evidence active citizenship competence in informal learning contexts.

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[23] E.g. Lewin and Grabbe 1945.
[24] E.g. stakeholders had to be convinced to elaborate their reference systems carefully; interview questions had to be elaborated more intensively than used by practitioners.

According to McTaggart (1996) “Action research is not a ‘method’ for research but a series of commitments to observe and problematize through practice a series of principles for conducting social enquiry[25]”.

There have been questions concerning the scientific rigour of Action Research, and the training of those undertaking it.
There is a fundamental scepticism that classical research principles (scientific rigour) is neglected in the framework of action research projects.
Other critiques argue that the scientific discourse is completely different from pedagogic practice by nature and that Action Research is thus simply not a scientific method[26] but that it is teaching and counselling.

On the other hand research is, as Smith (1996) states, a frame of mind – ‘a perspective that people take towards objects and activities’. Once we have satisfied ourselves that the collection of information is systematic, and that any interpretations made have a proper regard for satisfying truth claims, then much of the critique aimed at action research disappears.

The criticism seems less profound against the background that Action Research was developed as a means to create more proximity between social sciences and social reality.

It was and is an antipode to a research without social impact[27] and as such is an answer to “laboratory research carried out in classical behaviourism and structuralism” (Lewin 1946).

In comparison to rigorous empirical research action research yields less reliable results that are, on the other hadn, in context of societal reality probably more valid since action research examines and constantly feeds back assumptions and results from the field in the planning, action and checking process.

For the research-practice project ACT the principles of Action Research formed the basic traits of research and transfer into societal reality as it was situated in the triangle of research, societal practice and individual properties and demands:

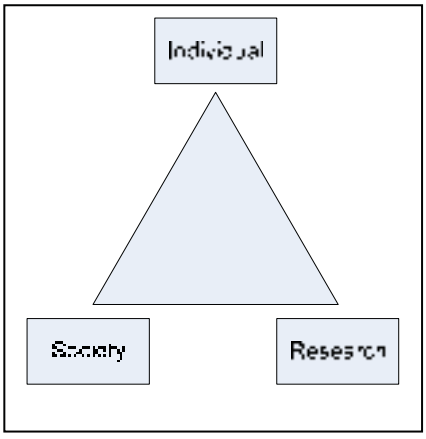

Figure 4: Action research context triangle

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[25] Concerning the procedure he states: “The notion of a spiral may be a useful teaching (or counselling) device – but it is all too easily to slip into using it as the template for practice” (McTaggart, 1996).

[26] For example, Carr and Kemmis provide a classic definition:
“Action research is simply a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out” (Carr and Kemmis, 1986).

[27] “Research that produces only books is not sufficient” (Lewin, 1946).

The following arguments formed the background to apply Action Research (AR) in connection with the research design in relation to the research, the individual and the societal dimension:

Research Dimension

- AR delivers new impulses for research actions in social sciences
- AR interconnects of research and practice
- AR integrates dynamic (process-oriented) elements
- AR invents dialogic elements

Individual (Human) Dimension

- AR recognises the human being
- AR considers emotions
- AR reduces doubts and fears
- AR brings in the emancipatory dimension
- AR considers cognitive, activity-related and affective states of mind

Societal Dimension

- AR works in societal contexts
- AR is democratic
- AR contributes to conflict solving
- AR is changing
- AR reduces the concentration of power.

The Action Research approach is oriented to problem-solving in social and organisational settings and therefore has a form that parallels Dewey's conception of learning from experience (Smith, 2007).
Both, Dewey and Lewin, argue that democracy must be learned anew in each generation and that it is far mor e difficult to attain and maintain democracy out of a social structure than it is out of autocracy.
Obviously there is a close connection in theory building and research between the two pioneers of educational science, and major traits of their spirit of thinking can be found in the ACT-project on Active Citizenship.

3.1.2. Grounded Theory

A suitable approach to combine open explorative approaches with theory development is Grounded Theory (GT), which was invented by Barney Glaser and Anselm Strauss in 1967.
GT is a systematic generation of theory from data that contains both inductive and deductive thinking. One goal of GT is to formulate hypotheses based on conceptual ideas.
In comparison to pure inductive (reasoning that makes generalisations based on individual instances) and deductive thinking (reasoning that proceeds from general principles or premises to derive particular information) GT also contains as a new category abductive reasoning in which one chooses the hypothesis that would, if true, best explain the relevant evidence.
In GT the researcher does not pretend to have formulated the hypotheses in advance as preformed hypotheses are prohibited (Glaser & Strauss 1967). Consequently, GT is aiming at generating theory in a certain practical field (in our case active citizenship in informal learning contexts).

Another goal of GT is to discover the participants' main concern and how they continually try to resolve it which is fitting to the philosophy of the project to discover the contextualised meaning of active citizenship in real life situations. On this basis an innovative approach to evidence the impact of the corresponding learning situation should be developed.
According to Strauss and Glaser, "Theory" is consisting of a set of concepts that are connected by hypothesis. The concepts as well as the hypothesis must be developed in Grounded Theory which is characterised through a parallel workflow of data collection and interpretation.

As stated by Bulmer (1979) the research process normally starts with a very general question and a series of sensitising concepts leading to general assumptions, definitions and explanatory models (stock-taking phase of ACT). It is evident that the research teams are aware of the temporariness of their approach at that stage of the project, thus permanently questioning and reassessing the developed concepts.
The method of *theoretical sampling* is applied to verify the assumptions through the constant research for additional data that support the developed theory. This was done in ACT, for instance on the European level by a transnational research for approaches and examples for active citizenship elements in formal, non-formal and informal learning. The results were constantly discussed and condensed in the first project phases.
During the whole process, there was a constant change from inductive and deductive reasoning.

3.2. Evaluation Approach

3.2.1 Preliminary Remark

Since the research approach had to be understood and accepted by the European partners and match with their needs and requirements it had to be explained and discussed carefully taking into account the partners' contexts and requirements in their fields.
A first draft of the research and evaluation concept was elaborated in February 2006 and presented to European and practice partners during the first transnational meetings.
The evaluation included two wings:

- one concerning the evaluation dealing with the collection and valuation of the activities of the partner network and within the partner projects themselves,
- the second concerned the elaboration of specific criteria regarding the particular character of active citizenship training, i.e. a kind of catalogue of different elements in civic learning and the experiences involved.

3.2.2 Agreements

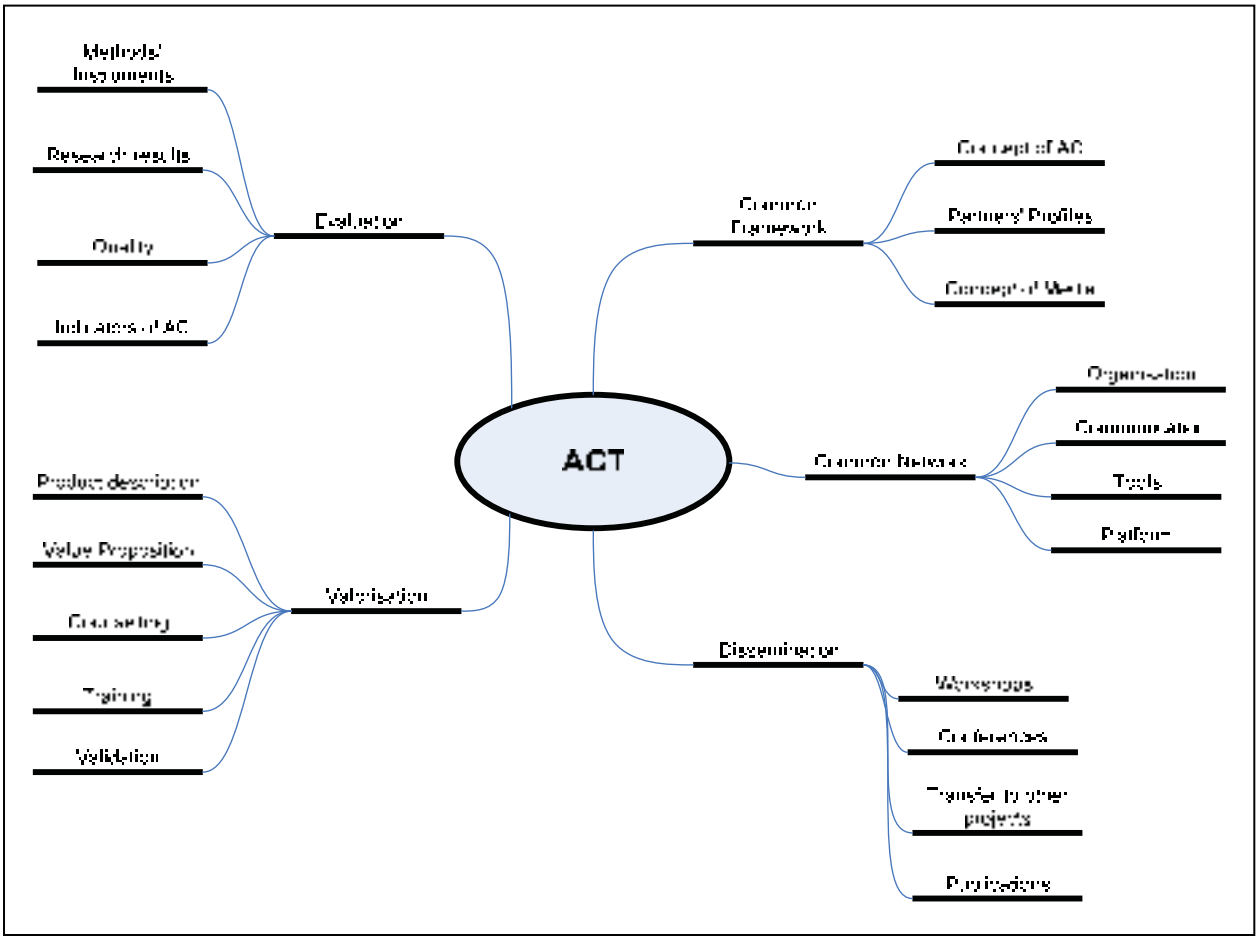

Figure 5: Mind-map: General work frame of ACT

A first mind map was developed during the first national meeting of the European partners in October 2005 during a preliminary meeting in Marseilles. On this basis expectations and demands of research practice partners could be harmonised. First clarifications regarding further procedures were made and led to first action plans in the course of the following meetings. Following Action Research the general work frame and the evaluation approach were further refined in the first project phase.

It was agreed not to foster any developments that would result in a uniform and standardised approach to measure the impact of learning on the target groups as contexts, objectives and requirements of the partners' micro projects had been too different.
Instead, the partners chose an approach based on inventories, which are open collections (pools) of measuring instruments or items, designed or configured according to the respective demands of the partners, thus serving as a stimulus for self-assessment as well as for mutual evaluation (and motivation). Here, different methods of an inspecting evaluation (evaluation by peering, by observing and dealing with the products, by experts and partners) became necessary. The partners also agreed not to do any superior data collections regarding characteristics of the learners but to give incentives by samples of different measuring instruments in the field of active citizenship and to allow the exchange of experience.

These considerations led to the following distinction of three evaluation levels:

- Level 1: Process evaluation of developing teams and partners
- Level 2: Evaluation within the projects on designs and activities for "learning active citizenship"
- Level 3: Evaluation of outcomes (Procedures and instruments)

3.2.3 Evaluation in the ACT-Partnership

Primary Goal:
Evaluation of the networking partners
Purpose of Evaluation:
To prove the usefulness of the network and accompanying activities and products in order to support the partners' projects.
This first evaluation level dealt with the kernel processes of the ACT-project, it was therefore called "process evaluation".

Leading questions:	
What is/has been done?	= How is the project ACT realised with its elements (platform, conferences, etc.)
What has been offered?	= What services were developed in the framework of the project ACT
What has been taken/used?	= How did the partners take on and realise these?
What will be sustainable?	= What are the sustainable effects (that can be expected)?
What will be transferable?	= What can be transferred to other areas?
What do the partners wish?	= How do you judge the services and activities?
What do the partners use?	= How and what do you use out of these services?

Activities:
The questionnaire on process evaluation was presented and discussed during the transnational meeting 1.
In general, it was administered after each transnational meeting, and the results were presented and discussed at the beginning of every following meeting.

The following questions were given to the partners:

1. How do you like the progression of the ACT-network?
2. Considered all in all are you satisfied with the ACT project?
3. What have you liked so far?
4. What have you disliked so far?
5. In your opinion what needs improvement?
6. What are possible solutions or ways for this improvement?
7. Which perspectives have you gained from the network which you can use or adopt for your own projects?
8. The working language in the network is English...how do you get along?
9. What do you expect or wish for the further work of the ACT-network?
10. After the last meeting do you know what your partners are doing and in what areas they work?
11. Do you want to have any more information?
12. Please indicate in brief additional critic, comments or opinions that you have with regard to the entire project.

After the Ankara meeting in autumn 2006, a regular system of online meetings was invented and the partners agreed to reduce the numbers of internal evaluations as the working atmosphere and the outcomes of the collaborative work were exceptionally positive. At the end of the project an extended process evaluation questionnaire also including output-oriented questions was distributed to analyse and interpret the internal collaboration processes in the partnership[28].

28 Questionnaires and detailed tables of results of the whole process evaluation are to be found in the appendix to this dissertation.

3.2.4 Evaluation in the Partners' Micro-Projects

Primary Goal:
Delivery and evaluation of learning events in various European informal learning contexts, testing ACT-methodology.
Purpose of Evaluation:
To verify the own processes, products, effects

a) for the partners themselves and their "trainers" (formative evaluation),
b) for purchasers/institutions, funding bodies, contributors, learners, public.

Leading Questions:

- What do the partners already evaluate?
- What are they preparing for their evaluation?
- What do they need for their evaluation?
- What can they learn from each other for their evaluation?
- What can they arrange as common standards for their evaluation?
- How do the evaluation instruments have to be provided to the partners (degree of interactivity)?
- How can developed theory (in respect to evidencing informal learning) be transferred in practice?

Intermediate Results/Working Hypothesis Stated already during the Design Process:

- there is no "best practice" only "best proven practice"
- due to the heterogeneous partnership, inventories for questions were developed to enable partners to select the relevant questions to compose their individual questionnaires.

Activities:

- Discussion groups on main topics of evaluation within a project
- Developing a complete evaluation procedure that was applied and fine-tuned in the course of 23 micro-projects as displayed in Figure 6:

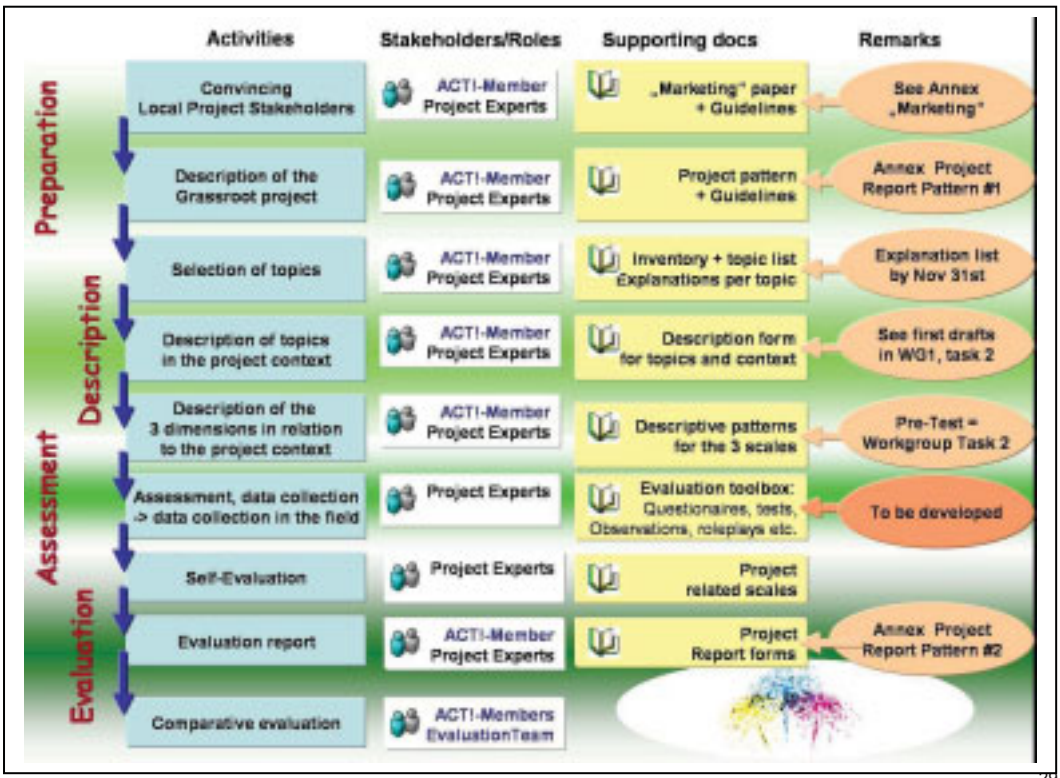

Figure 6: Evaluation procedure in ACT finalised in project month 12 (Ankara meeting[29])

[29] The procedure will be extensively described in the following chapters.

Excursus: Evaluation of Informal Learning

”Evaluation is the systematic exploration and judgement of working processes, experiences and outcomes. It pays special attention to aims, values, perceptions, needs and resources.” (Smith, 2006).

In this connection Smith emphasises that evaluation:

1. is a research process gathering, ordering and judging information in a methodical way,
2. is more than monitoring since it “involves making careful judgements about the worth, significance and meaning of phenomenon” and
3. also involves developing criteria or standards that are both meaningful and honour the work and of those involved
4. must look at the people involved, the processes and any outcomes that can be identified (in a dialogical way)
5. has both a proving and an improving dimension[30]

Since the ACT evaluation approach was rather geared towards the enhancement of work undertaken with particular individuals (and partly also groups) and to the development of participants (including the informal educator) one can speak of a *Practice Evaluation* in contrast to a rather work (and output) oriented *Programme or project evaluation*.
As ACT evaluated informal learning projects through the identifying learners’ knowledge, attitudes and skills, and to understand the changes that have occurred in these the approach is a *formative evaluation*.

3.2.5 Evaluation of Outcomes (Procedures and Instruments)

As described above, a certain part of observations and analyses had to be carried out by practice partners and intermediates.
They received support and instruction regarding the utilisation of the evaluation approach by descriptions and links on a web-based ACT-portal. After consultation the decisions about the applied specific procedures were finally taken by the practice partners themselves in equivalence to their own project aims and their possibilities and resources. A knowledge base on these topics was put on the ACT web-portal (www.act-eu.org[31]).
In the final project phase the partners and informal evaluators were asked to comment on the main procedural elements and the instruments applied in the ACT approach.
For this purpose a quantitative questionnaire was combined with qualitative evaluators’ reports that were guided by open questions.
Both instruments tackled the following topics:

- Usability and feasibility,
- Effort and acceptance,
- Pre-knowledge and skills of staff and
- Transferability

of procedures and instruments.
The results were analysed and interpreted in chapter 5.2.2.1.

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[30] Which points at the value in practice, see also Action Research History, chapter 3.1.1, page 42 ff.
[31] later to be transferred in www.ice-eu.org

3.3. Development of Instruments

3.3.1 Development of Inventories

3.3.1.1 Introduction

During the first evaluation planning workshops in February 2006 it turned out in transnational discussions that the originally planned questionnaires[32] were not appropriate assessment tools suitable for most of the informal learning environments. It also became obvious that, due to the large variety of projects, contexts, target groups and activities, an off-the-shelf evaluation approach was impossible to apply.
Thus, a system had to be developed that could be used by all relevant stakeholders in the field taking in regard a wide range of individual settings and individual needs.
Consequently the idea evolved to set up inventories as growing pools of relevant topics to enable all partners to evaluate their different micro projects and AC approaches. In the course of the project the inventories were pre-tested before they were employed as standard evaluation instruments at later project stages.
The idea to use inventories had already been developed by the German partners in a preliminary project funded by the European eLearning initiative in 2003-2005 (eL3[33]) that has been thoroughly described in a parallel dissertation by List-Ivankovic.

3.3.1.2 Basic Ideas

Basic ideas on constructing and using inventories in the evaluation of instructional designs and instructional settings
In a sociometric, psychometric and didacometric context inventories are methods and instruments for the registration and documentation of characteristics of systems or personality traits.

In the general language use of these disciplines they are directed to complex criteria, which means that they do not normally refer to only one variable.

The word comes from the Latin ”invenire” (“to go inside” – “to invent”, “inventory” is the “given”), and it was used in the Middle Ages in the sense of “inventory” or “stock-taking” related to the registration of the holding/stock and equipment (nowadays an “inventory” is still done, that means for example the registration of all goods in the stock of a store).

The general definition[34] primarily picks up this meaning, out of the various uses in psychometry, sociometry and didacometry only a certain use remains related to the registration of moral characteristics, an information technology-related meaning is newly inserted.

In business management inventories consist of a list of goods and materials held available in stock. An inventory can also mean a self-examination, a moral inventory.

In human sciences, inventories have been used for a long time, like for the registration of interests, characteristics of the personality, learning styles. The ”Dictionary of Behavioural Sciences“ edited by Benjamin B. Wolman defines for example:
“Inventory: A questionnaire or checklist which is usually answered by an individual about himself. It generally consists of numerous statements about personal characteristics to which the individual

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[32] As written in the original application in 2005.
[33] http://www.blinc-eu.org/445/?L=2
[34] http://en.wikipedia.org/wiki/Inventory

must respond, indicating whether they apply to him or not with ‘yes’, ‘no’ or ‘doubtful’. Norms based on large representative samples are used in interpreting and comparing results” (Wolmann, 1989).

3.3.1.3 The Research-Practice Dilemma

There are different ways of thinking in research and in practice, which cannot really be reduced to a common denominator. Even more: research and practice are affected by different functions and conditions in view of evaluation measures and, as a consequence, also in view of evaluation concepts and requirements. This train of thought plays a major role for the following remarks:
In the sense of research, evaluation is a series of complex and often very laborious procedures in order to check effects or side-effects of measures in education and to prepare and make decisions. There is no doubt any more that, in the context of a didactic development research, the system evaluation should be favoured over the evaluation of the receiver.

But for practical requirements, as they are given in training institutions and social organisations that are exposed to the permanent claims for a performance evaluation, there arose procedures and measurement practices, which could not meet the scientific demands of a standardised test construction: this is where the home-made small test for the practice came up.
In fact, tests are control samples of performances, i.e. of apparent behaviours of the statements of persons, who are induced for the evaluation purpose: If, for example, the fitness of a passenger car driver to drive was to be checked, we would have to define typical requirements regarding a fit car driver, like parking the car in a parking space, the knowledge of the colours of a traffic light, the ability to coordinate the clutch, accelerator and gear change etc. Doing the test the person concerned would be exposed to such typical requirements situations or performance control tests; but it is not always necessary to go back to real behaviour, as some things could be simulated or found out by simple interrogations.
Not all persons involved would have to be led into the streets and to be put in front of traffic lights; they could be given a picture or a film and be asked for the meaning of the different colours. Their performances, i.e. what they do and say or express in any way as a reaction to these control tests, would be a hint regarding their respective competencies and readiness to act. It would be necessary to elaborate an evaluation key in order to determine the number of performances which limits the criterion if someone is able or unable to drive.
In the theory of tests, two ways developed how to set this criterion: either its content is determined in advance (certainly not without having consulted an expert or, for example, based on the experience from accident reports) or the decision is due to the standards of comparison which is based on the data of a given number of persons who did this test. In the fields of education, formation and profession, there are quite a number of tests of this kind, which developed, this way or another, but in general after very laborious procedures. To give an example: the elaboration and testing of a school performance test, covering about the work quota of a subject for one year, needs a time frame of one to two years and a team of about three people until this test is available and can be generally used.
The problem is even bigger in cases where expectations, contentment etc. of learners are supposed to be measured, for example, in order to provide a basis for the identification of attitudes towards specific learning procedures, environments or other. But these are fundamental variables of evaluation measures. Similar to what has been presented about the development regarding the performance measurement; self-made measurement instruments were normally developed and used in the framework of evaluation measures.
It is only in the context of more extensive projects, which either explicitly concentrate on comparing evaluation (like the PISA survey) or which work with such a high number of test persons that there are sufficient internal possibilities of comparison within the population (like the studies by Geert Hofstede about the cultural dimensions), that this problem does not necessarily exist.

3.3.1.4 Elaboration of a Valuation Standard in Evaluation Measures

This does not lead to the possibility to classify the results according to their value: if, for example, 30 % of the interviewees are very content with active citizenship training and 35 % content, but 25 % not content and 10% not content at all, an objective and standardised scaling is missing as the reference is missing. Is this a good or a bad result for the appraisal of the course or even an insignificant result?
As far as opinion researches in the field of psychology or market research are concerned, the polling institutions therefore have long since gained their own accumulation of experience values; based on previous data they are able to judge the significance of changes, e.g. regarding the appreciation of parties or politicians and to refer this to social groups.
Such an accumulation of data which is aiming at a longer period is also needed in view of evaluation measures of educational projects.
Especially in these contexts evaluation should not come from distinct "expert knowledge" hidden in the basements of only one institution, but should develop and offer an "open source" model to create a common growing knowledge base.
This view is closely linked to the idea of inventories. This term has been used in psychological and social-psychological research for a long time in order to underline the completing character (comprehensive measuring of certain characteristics or traits, e.g. fear, preferred ways of learning) of measurement instruments, which allow sums or percentiles as grading value.

3.3.2 Ratings for Levels of Competence

Measurements of abilities, skills, attitudes, etc., are usually based on individual items, which will then be combined scores.
A performance is spread over a certain amount of tasks; the total value of correct solutions is understood as an indicator for the performance.

Similarly, in case of attitude measurements (usually based on the model of a Likert scale) a certain set of statements with a view to a singular statement (e.g. value of an object or situation) is given. According to this set of statements, staged consents or rejections can be rated. By adding up, a more complex value can be generated from the singular ratings; e.g. in the case of the inventories.

Joseph Mayer Rice (1857–1934) is said to be the first researcher who developed an achievement test (in his case for spelling skills) and to have administered it to a great amount of students (about 33 000) in 1895.

This procedure assumes that the development of precise measuring instruments to be tested is based on knowledge of the possible behaviours and that the responses shown by the test persons under various aspects can be examined statistically.
The measurements are somewhat singular and atomistic performances. When added, ratings or reviews can be established from these singular performances. They are also used as samples of behavioural categories.

In the case of the ACT research-practice project, this procedure was not only impossible; it would have been even undesirable because it needs a positivist approach as a precondition.
The project group had discussed these questions and opted for a *molar* approach, as it has been applied for about 15 years in international and national school comparisons (TIMMS, PISA, IGLU, VERA, etc.) for selected questions and practice areas, namely assessment of performances observed in terms of a model for graduated skills.
Presumably, these models have been influenced by the grading of competence levels that had already been practiced for foreign language certificates for a long time.

For language certificates competence, stage models have been invented in different countries and institutions (such as language teaching institutes as the Goethe-Institutes, for example) since the 1960s.

This also clarifies the purpose of these stage models: they were invented either for the admission of foreign persons (for example, for a language test at a University or for an immigration) or for the assessment of existing skills to assign participants to courses with different levels of performance.
Regarding the relationship between "atomistic" to "molar" approaches, it should be noted that the (molar) classifications are normally carried out by persons (teachers, parents, youth leaders, etc.) who themselves assess persons on the basis of their atomistic experience of whether these experiences were made in the natural context or test-induced.
As basis for discussion on the method of classification of competence, Helmke and Hosenfeld (2003) demonstrated that the usual aspects of the quality criteria (objectivity, reliability and validity) and reference standards (normal group distribution, criteria-oriented, individually or sequence oriented) must be determined in a different way.
The authors made clear that competence levels are not "somehow existing", "to be named, just discovered or to be found ", but must be constructed, which is a "lengthy and exhaustive process".
This discussion paper also shows that the notion of stage (in the sense of a plateau) has to be clarified more closely; it is not a deterministic but a probabilistic model.

An example of a stage-related ability was the so-called “object permanence“ by Piaget: an object is also still regarded as existing if it is not visible anymore. This ability is arbitrary; a child has it or has not yet adopted it in its development. But most skills are obviously more continuous, e.g. the vocabulary in a foreign language. The authors argue for a "liberal solution", to proceed in an appropriate and applicable way.
Complementing this is the idea that vocabulary knowledge in a foreign language rather develops in a continuous view, whereas the verbal ability of expression (verbal fluency) will perform rather in a plateau model.
In a retrospective view the question of the development of competences (continuum vs. plateau) played a major role in the course of discussions, planning and deliberations of the ACT project, and can still be considered to be a relatively open issue.

3.4 Visualisation of Results

Visualisation was consciously introduced not only as a means to display scientific results but as a research instrument itself since the research practice project focused rather on the evidencing than on the assessment part of the evaluation.
Taking into account that the ACT network consisted of international partners who collaborated in the English language, which was not their mother tongue, the importance of visualisation of results in the development processes can not be underestimated.
Besides its important role in theory development and knowledge management in transnational collaboration, visualisation is one of the scientific pillars in network analysis (see 4.5.4.2).
In the following chapter basic principles of visualisation of (scientific) results will be presented to deliver a methodological basis for the presentation and interpretation of results in chapters 5 and 6.

3.4.1 Introduction

Visualisation in general means the conversion of abstract data or relations in a visually perceptive form. The concept of visualisation shows both scientific dimensions (data and process visualisation) and practical dimensions and thus offers an ideal pool of instruments for action research projects.

More specifically, visualisation describes the process to transform data and relationships that are difficult to describe from the logical or verbal point of view in visual media to make them understandable.

With the emerging “new media” and information technologies visualisation has become increasingly important to describe properties and relations of large data sets, e.g. in connection with the presentation of complex systems.

In *Information Technology* sciences visualisation means:

- (generally) to render information visible or
- the transformation of abstract and/or huge data sets in graphical images or
- the graphical representation of real objects or procedures, which cannot be observed directly.

Visualisation is a means of making complex information easily/quickly accessible to human understanding or replacing an elaborate description by an intuitively accessible image; it is also a means to put a focus on important features of information and therefore serves as a language for information condensation (Heiden, 2007).
Visualisation shall contribute to a correct and extensive perception of data patterns.
The form (Gestalt) of the visualisation emphasises both the meaning of a message and the meaning of the phenomenon in the context.
However one has to bear in mind that, as a matter of fact, visualisation is interpretative and can create biased statements. This may already be the case if certain details are left out to reduce complexity.

3.4.2 Types of Visualisation

According to Olsen and Aviles (2007) visual representations have served a variety of functions, such as:

- *Recall:* the ability of a visualisation to convey content in a memorable way.
- *Overview:* the ability of a visualization to synthesise detail and provide a macro structure that organises many elements into a coherent whole.
- *Comprehension:* the ability of visualisation to foster understanding, learning, and sense making activities by showing relationships.
- *Discovery:* the potential of a visualisation to trigger new insights for its users/participants by highlighting meaningful, interesting patterns.
- *Emotion*: the ability of a visualisation to trigger functional emotional responses to it.
- *Coordination:* the ability of a visualisation to guide a group of people and provide common points of reference.

Based on the differentiations in “Knowledge visualisation” by Burkhard (2005) visualisation types can be structured into the following groups:

Sketches that visualise a concept or the main points and features to support reasoning and arguing (e.g. drawings on flip charts, and whiteboards; done very often in ACT virtual meetings).

Images are representations that can visualise impression, expression or realism. Images facilitate learning and support recall, lead to a-ha effects, and support reasoning and communication. A sub-type are *visual metaphors* which will be described further down in detail.

Diagrams explain causal relationships, reduce the complexity to key issues, structure, and display relationships. Diagramming is the precise, abstract and focused representation of numeric or non-numeric relationships. An example of a diagram is a 2 or 3 dimensional coordinate system, a management matrix or a network.

Conceptual Diagrams are schematic depictions of abstract ideas with the help of standardised shapes (such as arrows, circles, pyramids or cubes). They are used to structure information and illustrate relationships. As far as the transfer and creation of knowledge is concerned, conceptual diagrams help to make abstract concepts accessible, to reduce the complexity to the key issues, to amplify cognition and to discuss relationships.

Maps represent individual elements (such as roads) in a global context (such as a landscape). Maps illustrate overview and details, relationships among items; they structure information through spatial alignment. An example of a map used in the ACT project is the mind map that visualised the evaluation concept.

Objects exploit the third dimension and are haptic. They help attract the interested public, support learning through constant presence, and allow the integration of digital interfaces. An example of objects used in ACT is the ACT Cube and its visualisation in the IAS software.
Such a virtual three-dimensional model annotated with additional information can be used to simulate all kinds of information (e.g. levels of competence) or to simulate temporal data, such as potential future development scenarios. In this connection they can also be used as planning tools.

3.4.3 Visual Perception and Gestalt Laws

Visualisation is based on the human ability of perception: the immediate interpretation of visual information and the recombination to a meaningful construct.
According to Constructive Perception Theory an individual's perception is based on the combination of sensory information with prior knowledge and previous experience (Bertschi, Bubenhöfer, 2005). Hence, successful perception requires the combination of sensory information with previous experiences. Thus perception leads to a quick forming and testing of various hypotheses based on existing knowledge and experiences.

According to Clements-Croome (2000) perception is a set of processes by which we recognise, organise, and make sense of stimuli in our environment.
To explain perception with Gestalt Theory the sensory information is not the whole (the Gestalt) but the basis on which the mind must create mental representations of objects, properties, or spatial relationships.
Additionally the Gestalt as the “whole” is not constructed on a pure cognitive or rational basis. The emotional reaction and the rational interpretation are inextricably part of the same system[35]. This emotional aspect may be used and misused by means of visualisation as it applies the unconscious aspects of perception.

Gestalt Principles

The Gestalt School of Psychology was founded in 1912 when the group of Kurt Koffka, Max Wertheimer, and Wolfgang Kohler wanted to investigate the way form is perceived (Ellis, 1938, Koffka, 1935). Their findings and statements are still elemental for understanding how groups of objects or parts of objects are perceived.

Gestalt theory applies to all aspects of human learning, although it applies most directly to perception and problem-solving. The Gestalt laws and the work of the Gestalt psychologists is still important because it provides descriptive insights into form and pattern perception and a clear description of many basic perceptual phenomena that are called “Gestalt principles”:

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[35] This construct is also backed up from the neuronal point of view since the hippocampus does not only draw on the rational information the neuronal Gestalt provides, it also draws on the emotional information that is part of the Gestalt.

- **Proximity.** Elements tend to be grouped together according to their nearness.
- **Similarity.** Similar items tend to be grouped together.
- **Figure-ground.** Some objects (figure) seem prominent, and other aspects recede into the background (ground).
- **Continuity.** There is a tendency to construct visual elements that are smooth and continuous, rather than abrupt changes in direction.
- **Closure.** Items are grouped together if they tend to complete some entity.
- **Connectedness.** Items will be organised into simple figures according to symmetry, regularity, smoothness, and connectedness.

In the development and interpretation processes these Gestalt principles played an important role in the ACT project, e.g. during the creation of explanatory models (chapter 4.4.2), the cube development (4.5.1) and the network analysis (chapters 4.5.4.2 and 6.5.5).

3.4.4 Visualisation Process and Design Rules in Visualisation Research

Visualisation in the context of ICT (information visualisation)
To present abstract data in a graphical way they have to be transformed to geometric descriptions. Chi (2002) developed a ”Data-State-Reference Model” to illustrate the step by step procedure to modify abstract data via analytical and geometrical abstractions to illustrations.
An analogy to Chi’s model is the so-called “Visualization Pipeline”.
The pipeline describes the necessary steps to create a picture from the datasets.

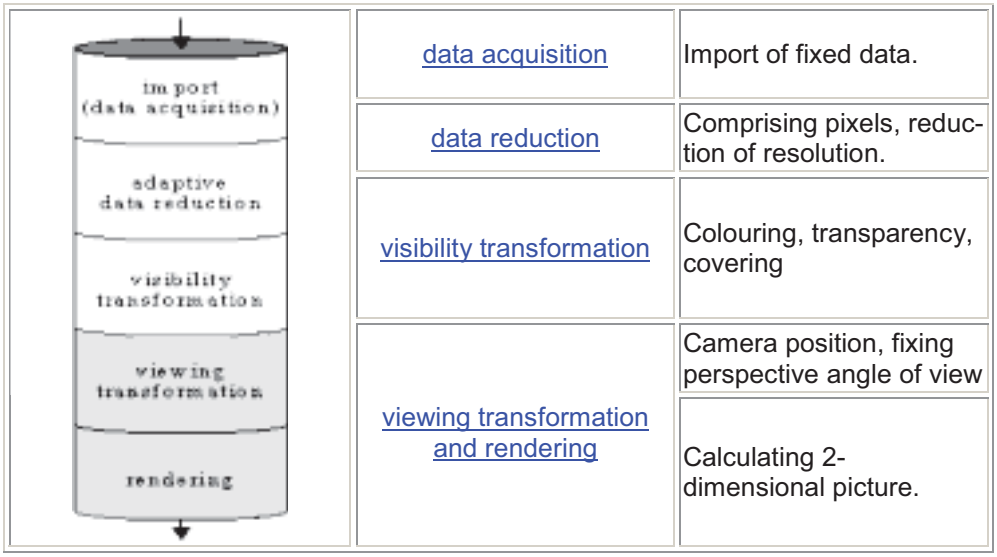

Figure 7: Visualization pipeline

Original datasets can be volume data information or geometric objects that will be channelled through the pipeline. On their way to the final picture complexity will be reduced by leaving out unnecessary data and adapting resolution. In a next step the visibility information will be shaped out by modifying form, colour and transparency. On the basis of the viewing angle the final picture will be rendered on a 2-dimensional level. To create “motion“ in a set of data (frame) (e.g. changing conditions of properties of a person in a trial at different points of time) the whole procedure must be applied for each frame.

Since the production of expressive and efficient visual representations of abstract data is a creative process (Ruth, 2003) many influencing factors must be considered.
In addition to Gestalt laws four general design rules from modern visualisation research should be mentioned:

Rule 1: "A Graphic is not drawn once and for all"
This rule stated first by Bertin (1981) means that different illustrations should be applied to explore large data sets since visualisation is an iterative and interactive process and it is not possible to convey every meaning of a large data set in just one picture. This means that several different visualisation techniques are required to present different aspects of data respectively to support different tasks or user groups.
It is also important to deliver different pictures with a different resolution to facilitate the exploration of details:

Rule 2: overview first, zoom and filter, then detail on demand (Schneidermann, 1996)
For this purpose in virtual visualisation intuitive interaction techniques are required. This fact should be considered when developing respective visualisation software. Or, as Burkhard (2005) states: "When it comes to the need of effective communication we have to think beyond PowerPoint".

Visualisation is not meant to create a distinct picture but to create different views on the data according to the Chi's Data-State-Reference Model.

Two other rules follow consequently:

Rule 3: provide a high level of interactivity

And

Rule 4: provide information only as detailed as necessary for the solution of a task.

These rules also comprise the necessity to reduce unnecessary (irrelevant) information, to skip certain picture levels, to create overviews and to include zoom-functionalities. In software programming and IT research those functionalities are developed with the help of certain operators.

3.4.5 Knowledge Visualisation

An important trait of visualisation research most relevant for practice research projects is *Knowledge Visualisation (KV)*:

The term Knowledge Visualisation seems to be paradox – at least provoking, as in most cases illustrations only serve to transport information. Nevertheless it is worth to differentiate between *information* and *knowledge* visualisation because KV is heading for more than just visualising facts or figures:

It shall serve to capture insights, experiences, and perspectives, even enable skill building by:

- visualising knowledge of team members
- showing how to acquire knowledge
- supporting team learning
- structuring thoughts and processes more clearly
- plugging into a team's collective wisdom.

Apart from knowledge about the central contents also knowledge about target groups and about didactic approaches to visualising knowledge is required for a substantial visualisation of knowledge.
All graphic means can be used to construct, assess, measure, convey or apply knowledge (i.e., complex insights, experiences, methods, etc.) to improve the management of knowledge on personal, interpersonal, team, organisational, inter-organisational, and societal levels. Thus, knowledge visualisation seems to be especially appropriate to deal with citizenship issues because,

beyond the mere transport of information or facts, knowledge visualisation aims to create, assess, reference or transfer insights, experiences, attitudes, values, expectations, perspectives, opinions and predictions. It is the aim of KV to enable viewers or team mates to re-construct, remember, find or apply the visualised insights correctly.

3.4.6.1 Knowledge Visualisation vs. Information Visualisation

Information visualisation is a rapidly advancing field of study both in terms of academic research and practical applications (Bertin (1974), Card et al. (1999) and Burkhard (2004).
In computer science information visualisation is defined, as *"... the use of computer-supported, interactive, visual representations of abstract data to amplify cognition*" Card et al. (1999).

Still, according to (Burkhard, 2004) “a systematic discussion on the potential of visualizations as a medium for the transfer of knowledge as well as the integration of non-computer based visualization methods, as architects, artists, and designers use them is still missing.”
Although they information visualisation and knowledge visualisation are based on the same principles as far as the processing of visual representations is concerned, different techniques are utilised in both domains:

- As described above (3.4.5) information visualisation aims at exploring large amounts of abstract (often numeric) data to derive new insights or simply make the stored data more accessible.
- Knowledge visualisation, in contrast, aims to improve the transfer and creation of knowledge among people by giving them richer means of expressing what they know.

Referring to Böhme (2005), knowledge visualisation resembles much more to the traditional type of illustration findings as information visualisation is a knowledge creation instrument in itself (an exploration instrument):

- Information visualisation improves information retrieval and presentation of large data sets – particularly in the interaction of humans and computers.
- Knowledge visualisation has, in the first place, a facilitating function – it shall support knowledge-intensive communication processes between individuals and societal groups. KV processes can be found for instance in visual metaphors when relating new insights to already understood concepts.

3.4.6.2 Application of Knowledge Visualisation

Knowledge visualisation can take over important tasks in knowledge management in modern “learning organisations” in collaborative projects and networks:
Its elemental functionality is supporting the processes of knowledge transfer and of knowledge creation itself.

One fundamental challenge of knowledge management is the question of how knowledge can be transferred and, therefore, of how the problem of an asymmetric distribution of knowledge can be overcome – or in other words: of how to improve the transfer of knowledge in respect to speed and quality. Knowledge visualisation can serve as a conceptual bridge by linking minds, communities, work groups, departments and societal groups.

One of the major findings of Gupta and Govindarajan (2000), who have examined knowledge transfer in organisations, is that the efficiency of KM increases with the application of knowledge in practice. From the behaviouristic point of view this is not astonishing, but applied in knowledge management and organisational development this finding is rather innovative as it says that one key issue is how recipients not only acquire and assimilate but also *use* knowledge (Cohen and Levinthal, 1990).

Again, to say it with the Gestalt laws: knowledge must be recreated in the mind of the receiver which is a process dependent on the recipient's cognitive capacity to process the incoming stimuli (Eppler and Burkhard, 2004). Thus, the "knowledge manager" not only needs to convey the relevant knowledge at the right time to the right person, but also in the right context and in a way that it can ultimately be used. To extend the issue, different learning styles of recipients should of course be considered, in any way the content should be conveyed in a way that enables persons with different learning preferences to understand, learn and to acquire and apply knowledge.
Modern media, text and IT-based methods can be employed for these purposes (e.g., whiteboards, discussion boards, databases, corporate directories, blogs, wikis, intelligent agent software, social software etc.).

Knowledge visualisation offers great potential for the *creation* of new knowledge, thus enabling innovation. Examples of these creativity tools are for instance collaborative structuring instruments like Metaplan tools. Interestingly enough, those instruments are still not well known all over Europe. This fact was observed by the author in various European projects with experts from the domains of educational sciences and psychology especially from southern Europe (FR, IT, ES, PT, BG, RO, GR).
Knowledge visualisation instruments offer methods to use the creative power of imagery and the possibility of structuring ideas and elements, fluid re-arrangements and changes. Work groups are enabled to create new (common) knowledge, for instance by use of heuristic sketches or rich graphic metaphors. Unlike text, these graphic formats can be quickly and collectively changed and thus propagate the rapid and joint improvement of ideas.

3.4.6.3 The Knowledge Visualisation Framework

An approach to plan knowledge visualisation and to consider required aspects is the so-called "Visualisation Framework", which is based on the works of Burkhard (2004) and Eppler and Burkhard (2005).
It describes the elements required for successful knowledge visualisation from 4 perspectives:

1. The benefit perspective
2. The content perspective
3. The participants perspectives and
4. The method perspective.

The **benefit perspective** reflects 7 cognitive, emotional, and social functions, namely:

- **Attention**: visualisation helps to attract, direct, and keep attention
- **Recall**: visualisation supports memorising content
- **Overview**: visualisation supplies a view on a complex issue that helps to recognise the whole picture
- **Comprehension**: visualisation supports comprehensive understanding by showing relations between elements of a whole
- **Discovery**: visualisations may highlight interesting elements of a picture and let the participant close the issue him/herself.
- **Emotion**: visualisations enable the creator to influence affective comprehension (ability of a visualisation to trigger functional emotional responses).
- **Coordination**: visualisation may guide and lead a group of people by providing common points of reference and create a common understanding.

The **contents perspective** highlights the fact that content is the key issue for the creation and communication of knowledge. It refers to different types of knowledge that are differentiated as follows:

1. **Know-what** as factual or declarative knowledge (e.g. about quantities or numbers, concepts or products)
2. **Know-how** is procedural knowledge; VK can, for instance, illustrate the steps of a procedure or be used to acquire a certain skill.
3. **Know-why** is experiential knowledge about causes and effects.
4. **Know-where** is orientation knowledge about where to find things, either geographically or conceptually.
5. **Know-who** is knowledge about people, e.g. about skills, abilities resources and other properties of partners in a network. In social network analysis, for example a network of peers can be visualised on the basis of their relationships to others.
6. **Know-when** is the temporal knowledge about sequences in time.
7. **Know-what-if** is the knowledge about hypothetical events or situations. It is knowledge about the implications of certain imagined scenarios.

The **participants' perspective** includes the involved participants. It characterises roles and communication of individuals and/or groups of participants that can be divided into seven types:

1. **Oneself**: visualisation helps the individual to organise thoughts and knowledge.
2. **Two people**: dialogical communication situation supported by visualisations.
3. **Small group**: Burkhard defines a small group as a setting where one could still comfortably hold a meeting. Small groups may range anywhere between three and twelve people. Examples of small groups are sub-project teams or executive management teams.
4. **Large group** by contrast assemble a number of participants that can no longer interact freely in a regular meeting context: a class meeting, a larger conference or a large scale research network[36].
5. **Organization**: an organisation is any kind of goal-oriented social system that has clear boundaries and an internal structure.
6. A **consortium** in contrast is an inter-organisational entity that co-ordinates the activities or interests of a group of individuals, groups or organisations.
7. **Public**: with the term "public" Burkhard refers to the sum of all external stakeholders of an organisation, for example the clients, the media, the government, citizens in general, etc.

Finally, the **method perspective** points to the key visualisation activities in the process of transfer (communicating) and creating of knowledge:

1. **Envisioning** is the focused creation, elaboration of a clear mental picture of a real-life or fictitious entity or process. An example of this form may be envisioning your self giving a presentation.
2. **Sketching** is the personal, real-time, ad-hoc, provisionary drawing by hand of concepts or things by one or several people on paper or on a tablet PC/interactive whiteboard.
3. **Expressing** is the concrete, vivid and illustrative representation of a real-life or imagined entity or process (object, person, place, idea). An example of such a format is a photo, the 3D rendering of a product prototype, or the visual metaphor of a temple to structure the main components of an IT-architecture.
4. **Diagramming** is the precise, abstract and focused representation of numeric or non-numeric relationships at times using pre-defined graphic formats and/or categories. An example of a diagram is a Cartesian coordinate system, a management matrix, or a network diagram.
5. **Mapping** is the positioning of many elements in one or many related layers on a common graphic structure.
6. **Materializing** is the physical, three-dimensional symbolic representation of content in one or several artefacts. An example of such an artefact is a cube or a medal.

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[36] In the European 6th Frame Programme certain transnational projects consisting of more than 50 partners were funded between 2003 and 2007.

7. **Exploring** is the use of computer-based interaction and simulation to discover new relationships and patterns.

3.4.6.4 Visual Metaphors in the Communication of Knowledge

The Potential of Visual Metaphors

Physical metaphors can be used to facilitate the understanding of complex ideas (Casakin (2007), Halstead (2007).
Popper used the bucket theory of experience to show the fallacies inherent in a subjectivist theory of knowledge. Wittgenstein used the image of a ladder to distinguish the realm of meaningful propositions from the mystic domain (Eppler, 2003).
Thinking and communication can profit from powerful metaphoric images, so called 'conceptual metaphors.

As Coyne (1995) states, the use of Information technology, namely visualisation tools, supports the exploitation of metaphors beyond verbal expression (in order to generate an instructive image in the reader's mind), which leads to an enhanced graphical representation to organise information in a meaningful way.

Visual metaphors help to (re-)transform documented ideas into personal knowledge because new thoughts and ideas (the expert's insights) can be (re-)related to the viewers basic understanding (the metaphor's main characteristic).
Visual metaphors support authors/presented to communicate their knowledge (e.g. their problem perspectives, decision rationales, experiences, procedures etc.) with the help of powerful templates. This "visual knowledge" applied in addition to the traditional scientific representation of ideas through propositional (or sometimes narrative) knowledge was called the "third format of knowledge" by Worren et al (2002).

The Functioning of Metaphors

Card et al. (1999) stated that the key research problem in the area of visualisation is to develop and apply *expressive and effective visual metaphors mapping abstract data to visual forms*.

A metaphor is an example of the use of words to indicate something *different from the literal meaning*[37].

Metaphors rely on analogies between the qualities of a sign and the comparable attributes of what is signified. A metaphor provides the path from the understanding of something familiar to something new by carrying elements of understanding from the mastered subject to a new domain[38] (Lakoff and Johnson, 1981). This is why Aristotle calls the metaphor a *tool of cognition*. According to Aristotle a metaphor is instructive to the highest degree; since it provides rapid information it facilitates the process of learning (Eco, 1984).

Visual metaphors offer effective and simple templates to convey complex insights.
"A variety of representations can be used as visual analogies/metaphors. Here certain properties of concepts are highlighted by juxtaposing the concepts in a way that *parallels a particular well-known relationship between concepts from another context*. So, for example, two sets of concepts may be depicted as on either side of a 'balance', or set of scales (Sparrow, 1998)".

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[37] Oxford Dictionary of Current English.
[38] The term 'metaphor' is derived from the Greek verb *metapherein* whose meaning can be translated as "carrying something somewhere else".

Metaphors can be based on natural objects such as mountains, icebergs or trees or on artificial, man-made artefacts (such as a house, a funnel, a chain, a ladder or a cube).
They relate new information to known pictures, structures and meanings.

To be more precise: they organise and structure information in a structurised and graphical way and they convey an insight about the meaning of an issue via the key characteristic of the employed metaphor.

Metaphors thus have a dual function – to organise information and to charge it with additional meaning. Additionally, as Worren (2002) has pointed out, they show a *mnemonic* (i.e. facilitating remembering) and cognitive *coordination* function (i.e. providing an area of mutual and explicit focus). These characteristics make them especially valuable for knowledge visualisation.

Levels of Metaphoric Diagrams

Blackwell and Green (1999) distinguish metaphor-based diagrams by five levels, ranging from low to high representational complexity:

1. **Conceptual diagrams** (or stripped metaphors): in these 'classic' visualisation formats the original metaphor is either hidden or only exists as a shape, for instance in pyramids, matrices, flow charts, system diagrams, Cartesian coordinate systems, concentric circles or spheres, etc.
2. **Metaphoric diagrams**: here, the main physical metaphor still exists, e.g. in case of the well known iceberg example. Metaphoric diagrams use a reality-based picture of a physical entity to organise information. Other examples are roads, funnels, ladders, stairs, trees, chains, rivers etc.
3. **Metaphoric templates** use a metaphoric picture or structure to organise information; they also go a step beyond by offering general pre-defined shapes to structure other contents and contexts in a similar way. The fishbone diagram, which utilises the skeleton form of a fish to organise problem knowledge, is an example for this category.
4. **Metaphoric Maps**: the map metaphor is used to deliver an overview of a domain and to structure and organise complex knowledge in a localised way (Eppler 2003).

3.4.7 Visualisation in a Historic Scientific Context

In the scientific context visualisation is nowadays used as a means for interpretation of the original data – sometimes added by (written) explanations to communicate a certain interpretation. Of course visualisation can also be used only as an illustration element without transporting an additional message – for instance to form a counterpart to long texts.

In the last 3 centuries scientific pictures were seen as illustrations - as a media to transport the results of the previous experiment. The experiment delivers data, identifies new findings, and secures repeatability and logical closures. From the epistemological point of view illustrations only played a minor role. They were just visualisations of the experiment – maybe a part of it – and they just served as an illustration of the observation and the findings. They were optical aids – and they were not constitutive for the research process and the generation of theory (Böhme, 2005).

Nowadays the continuum of observation and illustration has ceased to exist. In the past this continuum was still a principle functioning both on the macroscopic (Galilei and his telescope) and on the microscopic level. The coupling between the eye of the researcher and the research object is broken. Since research has overtaken the human visual sense by dimensions, the illustration and visualisation of scientific findings have also changed in function and meaning.

Due to the complexity of research objects, research instruments and the amount of collected data the findings (in the form of large data sets) cannot be presented in an understandable way anymore. They must be interpreted and prepared in order to be utilised. In very complex natural science research the main task of the researcher is not measurement anymore but the interpretation and visualisation of data.

This means in fact that findings are not generated from observations anymore but from the interpretation of visualised data patterns.
The illustrations are not only generated technically (passive) - they themselves actively generate findings and statements about reality.

Böhme generalises that:

- Nowadays natural sciences mainly operate in "trans-human spaces" – not accessible for human senses.
- There are neither direct illustrations nor pictures of the findings from theses spaces.
- The derived technical pictures do not reflect spatial-material aggregates from these research grounds but large datasets measured by machines and not by human beings.
- By modern visualisation techniques these enormously large datasets will be agglomerated to illustrations that are interpreted by the scientist.
- The scientists' ability for pattern recognition is essential for this process.
- Illustrations will be adapted to the (culturally influenced[39]) visual faculty in colour, form, Gestalt, contours etc.

In contrast to pictures in art the illustrations do not have a value in themselves but they have a concrete function in the process of cognition.

Especially against the background of today's importance of visualisation for epistemological processes one should be aware of the suggestive and persuasive impact of visualisation.
According to Böhme, scientific illustration has been heading for the clear defined observation of experiments, for objectivity and for the presentation of real phenomena since the 17th century. Medial processes generate phenomena, so-called "experimental systems".

With the introduction of intermediate technologies and the separation of research object from human visual sense also the scientific visualisation (scientific illustrations) separates from the area of visual arts.

Especially against the background that visualisation has become part of the evidencing process one should bear in mind that those experimental media that serve to "discover" unknown objects do not protect one from self-delusion.
Do we see the "real" object or is the illustration the effect of the imperfection of the instrument or even the product of the preliminary considerations of the viewer? Already in the 17th century there was a saying that with the microscope one could see all the things one wants to see.

Nowadays, states Böhme in 2005, sciences work in completely invisible worlds and create or fake an artificial visual sensitiveness. In an analogy he states that the permit of pictures for the invisible god ("deus absconditus") is today replaced by the faint idea that a picture of the world does not and can not exist.

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[39] E.g. with regard to colour (white stands for death in eastern cultures, black in the western countries etc).

4. Process Description/Development Process

The results presented in this chapter are the outcome of a development process that took 2.5 years. The developed models and procedures certainly show similarities to concepts that were developed a long time (even centuries) ago (Bloom, Pestalozzi). Nevertheless, they were not simply taken and modified to meet the requirements – in most of the development stages the reasoning was vice versa – first there was a common agreement on an outcome or interim stage, then it was tested, verified or falsified, thus being proved feasible or needing to be modified. In the following phases, these outcomes were underpinned by a fitting theory - following Glaser and Strauss' theoretical sampling approach to condense the results.
In this chapter, the collaborative working processes will be highlighted over the project's lifetime. It will start with a fundamental descriptive approach on collaboration and networking in European projects, present useful and transferable collaboration methodology, and describe the main project phases with activities and outcomes in detail.

4.1 The Challenge of Cooperation in European Development Projects

Before describing the major collaborative processes in the framework of ACT a more theoretical approach to terms and definitions of collaboration and networking shall open the topic to the reader.
As the development team consisted of eleven partners from nine countries, we can already talk about a development network, as there are blurred boundaries between cooperative teams and networks.
The idea of transnational collaboration is relatively new and mainly concerned with European development projects aimed at generating their products in transnational work groups.
There are good reasons to foster transnational collaboration:

- Possible synergies
- Distribution of certain tasks and
- In certain fields of research there may be expert knowledge and skills on the national levels that, if assembled in transnational teams, create an additional value and/or achieve results that could not be reached by a single partner
- Intercultural relation is a value in itself in a Europe that is growing together.

On the other hand, transnational collaboration may also show disadvantages and negative effects in relation to the envisaged outcomes.
Transnational collaboration must overcome obstacles created by different

- Pre-knowledge
- Expectations
- Languages and communication styles
- Experiences, backgrounds and traditions in relation to the central topic
- Working cultures of each of the partners.

One theoretical ambivalent effect concerning the project's main topic "Active Citizenship" is related to different socialisations: in case of partners from former communist countries and candidate countries, there might have been a critical attitude or even reluctance towards active citizenship because the idea was often misused for political reasons. On the other hand, it is exactly these experiences that can be a new impetus to partners from the "old and saturated" European countries as well.
If these collaborative processes are channelled into productive discussions and solution strategies, transnational cooperation will certainly have an advantage against small national development teams.
This is why some quality criteria for good collaboration and network management should be highlighted in the following.

Project Management:
A good and professional management is evident for the success of a transnational collaborative project or network:
According to Bienzle (2007) four functions of network control can be identified as follows:

1. Selection:
   This steering function relates to the partners in the network. In the case of ACT there had already been a selection during the time of proposal writing and a network forming around a kernel of well known partners who had already collaborated in a trustful way before. Trust is a means to reduce complexity in social systems like project networks (Luhmann, 1973). Moreover, trust is important for the attainment of objectives: trust is the expectation of a future satisfaction, which becomes the motive for one's own stipulated conduct.
2. Allocation:
   The assignment of tasks (and the related resources) and the distribution of responsibility to key partners is evident for the success of a network. This is especially relevant when sub-groups work parallel and envisaged results should be tight together in a later phase. The risk of failure is enormously high in transnational networks because misunderstandings are boosted through language and communication difficulties.
3. Regulation:
   Cooperation in the network requires rules between the organisation for development. In the case of ACT general rules of cooperation were already fixed in a memorandum in the preparatory meeting in project month 1 (November 2005).
4. Evaluation /Monitoring:
   Covers the complete network and delivers a constant feedback of the envisaged and achieved outcomes. In contrast to pure development projects the project monitoring method had to be modified in the practice-research project because an additional mechanism played an important role over the project lifetime: the constant reconciliation (adjustment) of theories and practical results. This led to a permanent fine-tuning of operative objectives and envisaged results following the principles of a blend of deductive, inductive and abductive mechanisms as stated in Grounded Theory.

Consequently, action guidelines for managing and moderating cooperative projects are

- obtaining a balance of competence and responsibility
- enhancing joint experiences and successes
- creation of order out of disorder
- managing conflicts
- keeping mutual expectations transparent
- gaining links outside the network

Trust as a Key Factor for Good Cooperation
Like some "soft" AC-competencies (tolerance or accepting diversity) trust is also related to soft (affective) factors, which are significant in the developing of sustainable cooperative outcomes.
Cooperative action is always risky because the actions of a trusting party are usually open and unprotected (Bienzle 2007). One will always find arguments to tackle the work of the cooperation partner. This is why cooperation cannot be described purely by cognitive or activity-related means. In a good and trustful cooperation a partner has to be in a position to rely on the fact that the other party will adhere to agreements, and accept the person and the position of the partner.
This is why trust cannot be replaced by means of management such as controlling and monitoring in collaborative projects. The project management was well aware of this fact. Due to the trustful atmosphere among the partners the ACT project could develop into a learning community and will continue its activities after the project funding period.

4.2 Procedure (Development Process)

4.2.1 Project Work Plan

The research-practice project was divided in five partly overlapping project phases:

Project Months	1	2	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Project Phases																											
Stock-taking Phase																											
Development of instruments and procedures																											
Pre-test Phase																											
Application Phase																											
Dissemination, Valorisation Internal Evaluation																											
Transnational Meetings																											
TM 1 Marseille Conference																											
TM 2 Göttingen																											
TM 3 Sopot																											
TM 4 Ankara																											
TM 5 Cagliari																											
TM 6 Alden Biesen																											
TM 7 Göttingen Conference																											

Figure 8: Gannt chart of the project

1 Stock-Taking (Project Months 1-8)

The stock-taking part was done in three work groups to analyse given definitions on AC, suitable pedagogic approaches on informal learning and evaluation and different approaches with regard to teaching AC in different European countries.

Used methodologies were large scale transnational internet and literature researches and cooperative modelling with the help of moderation and clustering techniques (Metaplan). The results were published on the website. In the intermediate phases asynchronous online communication was also introduced by a blogging system and a learning management system.

2 Development of Instruments and Procedures (PM 6-24)

On the basis of these findings and ground works the results of the three workgroups were blended to establish innovative models, procedures and instruments to reach the operative targets. Due to the nature of the development project formation and evolution activities were carried out until the end of the project and will be continued in future activities with the founded ACT network.

3 "Pre-Test" PM 12-18

Starting with the Ankara-meeting in project month 12, a six month pre-test phase was introduced to test some elements and instruments in local micro-projects. This phase was extremely important because it helped the partners to clarify crucial and fundamental questions referring to the affective dimension, general descriptions of the stages on the 3 dimensions and the scale of the dimensions. It was, for instance, intensively discussed whether a decimal scale was appropriate or if the differentiation should be restricted to an integer scale. The issue was decided after putting together the experiences of all partners in the subsequent meeting in Cagliari.

4 Application PM 15-27

The approach and the validated instruments were applied in more than 20 micro-projects. Simultaneously, the IAS software prototype was completed, and the delivered results were inte-

grated in the IT system. All results: the approach, the counselling concept, presentations and outcomes from micro-projects and the software were finalised after a three-month prolongation of the original project period and presented in project month 27.

5 Dissemination, Valorisation and Internal Evaluation
The projects' dissemination already started at the beginning, concretely during the preparatory meeting, which was held in the framework of a transnational conference in November 2005 in Marseille. This had the effect that an additional Portuguese stakeholder was constantly invited to contribute to the development and to transfer the results into their field of work (combating domestic violence). Various paper and web-based publications on local, national and transnational levels were released during the project lifetime and beyond. New partners were invited and integrated in the newly founded ACT-Network during the final conference in Göttingen with experts from 15 countries.
From the beginning, the level of contentment of the partners had been monitored via an internal process evaluation.

4.2.2. Meetings and Milestones

From the beginning, ACT was a very communicative project. The project partners already met in project month 1 during a networking conference in Marseille. This meeting was already very helpful for the creation of a common spirit and a trustful relation. During this meeting the general objectives were clarified.
Seven transnational meetings indicated the milestones of the project:

Milestones	Related activities and outputs
Milestone 1 (14 Nov. 2005 MARSEILLE)	- Partner presentations - Presentation and discussion of financial and administrative aspects - Detailed project presentation - Evaluation concept - Presentation of internal evaluation procedure - Setting up tasks for the next meeting - Dissemination: information of stakeholders in the framework of the blinc cooperative, radio podcasting
Milestone 2 (02-04 Feb. 2006, GÖTTINGEN)	- Report on partner activities since first meeting - Presentation and discussion of the further developed evaluation concept - Definition of partner tasks and workgroups - Forming 3 workgroups (developing idea of the AC cube) - Presentation and discussion of financial and administrative aspects (bookkeeping-system) - Introduction to the communication and information platform - Dissemination: integration of local German projects, radio broadcasting
Milestone 3 (June 2006, SOPOT)	- Report on partner activities since first meeting - Presentation of work group outputs -> explanatory model of AC -> inventories for evaluation purposes -> country reports -> definition approaches on learning arrangements -> literature database - Setting tasks for partners - Introduction to context analysis - Dissemination: visit to local youth initiatives - Clarification of financial and administrative aspects

Milestones	Related activities and outputs
Milestone 4 (25-29 Oct. 2006, ANKARA)	- Report on partner activities since previous meeting - Presentation of work group outputs and combination of the definition work group outputs with the evaluation group outputs -> 3-dimensional system (cube prototype and inventory of AC topics) - Introducing an affective dimension and presentation of the cube prototype - First sketch of an evaluation workflow for informal learning - Setting of tasks for partners -> defining stages for the dimension descriptions -> compiling the methodology tool box -> pre-test by partners - Dissemination: visit to university AC initiatives
Milestone 5 (16-20 June 2007, CAGLIARI)	- Report on partner activities since previous meeting - Presentation of partner projects because internal process evaluation revealed a whish of many partners to know more about the micro-projects - Presentation of pre-test results, here there were important discussions on the scaling and on the feasibility of the approach (SE-project with long-term unemployed and only very small development steps) - Presentation of the cube and the complete 3-dimensional system with all axis descriptions - First sketch of a consultation system (IAS) on the basis of preparatory works by GER and NL partners who met in a bilateral meeting - Presentation of the concept of a web-based evidencing system - Dissemination: visit to a Monumenti Aperti informal learning event in Sardinia
Milestone 6 (09-10 Sep. 2007, ALDEN BIESEN)	- Report on partner activities since previous meeting - presentation of pre-test results, stage 2, integration of other micro-projects, summing up to 20, discussions on the scaling and on the feasibility of the approach - Setting up experience report patterns - Discussion and adoption of the consultation system (IAS) on the basis of preparatory works by GER and NL partners who met in a bilateral meeting. - Presentation of some elements of a web-based evidencing system - Dissemination: presentation of ACT during the conference of SOCCER to an audience of 60 European experts
Milestone 7 (06-08 Dec. 2008, GÖTTINGEN)	- Final conference with 100 experts from 15 European countries, political and administrative stakeholders on the regional, national and European level - Presentation of the project - Adopting the IAS consulting approach - Presentation of the IAS software - Preparation of the final report and the publication - Foundation of an ACT network and integration of new partners - Setting up of a further development plan for the network - Report on partner activities since previous meeting

Table 3: ACT project milestones

4.3 Collaboration Methodology

The need for project or network coordination increases with the size, e.g. the number of collaborating partners and so does the demand for clear consultation, jointly defined standards and competencies. The flow of communication plays a central role in coordination and collaboration.

4.3.1 Web-Aided Communication

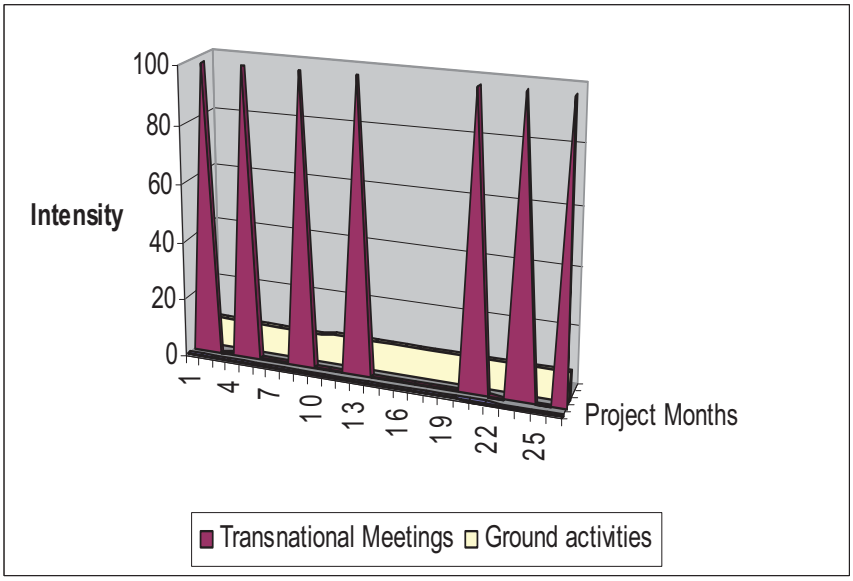
Online Conferences and Internet Services

From the beginning, ACT employed internet-based systems to support the transnational communication processes. One partner was responsible to coordinate the IT development works such as conceptualising, programming and web-designing.

The ACT web-portal is completely based on open source software; it consists of a Content Management System, a development environment for collaborative workshops, an asynchronous communication platform to exchange and fix ideas, and a synchronous online communication tool. In the last project phase, a large scale and powerful Impact Assessment System (IAS) was programmed.

4.3.2 Communication in Transnational Projects

Communication and development processes in transnational projects often suffer from the gaps between the transnational meetings.



A hypothetical but typical progression in transnational projects is displayed on the left:

Usually, the intensity of work, communication and collaboration increases dramatically shortly before the transnational meetings, reaches peaks during the conferences and workshops and decreases with the same gradient to the “normal” low level in the interim phase between the meetings.

Figure 9: Typical work peaks in transnational projects (hypothetical run)

This is also due to the “additional character” of EU-project tasks in daily life of partners. One of the main reasons for this inconstant workflow is the lack of instruments to overcome the obstacles in communication and collaboration.

From the beginning, so-called asynchronous online communication and collaboration tools were used in ACT. A *learning management system* (LMS) was installed on the project’s web portal serving as collaborative development environment.

In order to use the right methodology and instruments for the tasks set up in the framework of the project, this tool was used as working space for the 3 initial work groups (1. definition, 2. evaluation, 3. AC in education systems) in project months 1-9. These development works of the first phase were carried out in the protected area because partners did not want to present interim stages of their work to the public.

For open asynchronous communication a *blog* was integrated in the portal. This tool could be accessed openly and did not require a login. The blog was used as a quick exchange tool for devel-

opment impulses and new ideas. It has the advantage that thoughts and contributions could be documented and registered and at the same time discussed. The blog was used in the development phase from project month 9-21 (June 2006-June 2007).

In comparison to previous projects, *synchronous* online communication tools were used.
Being embedded in the blended learning institutions' cooperative the ACT project employed the blinc online conference room for the first time in project month 9 (from June 2006 onwards). It consists of a "voice over IP" (VoIP[40]) element that enables partners to have audio-conferences free of charge via internet. In smaller sub-work groups skype was also employed, for instance during the preparation of the Alden Biesen and the Göttingen conferences. Unlike skype the online conference room has a moderator-functionality that is helpful for groups of five persons and more to steer the line of discussion.
An additional tool is the chat, which was used to take notes, and the whiteboard, which is open to all partners. In the whiteboard, text and pictures can be pasted, and power point slides can be shown. It also has a "synchronised browsing" functionality which enables the moderator to browse websites together with the conference participants. This tool was especially helpful when presenting the developed web-based software and its user interface.
The main effect on collaboration is definitely generated by the online talk functionality, underpinned by moderation and parallel presentation of results on the screen.
Being aware that it is not only a matter of instruments but mainly dependent on clear and distinctive tasks, moderation and regularity the project developed a "culture" of communication, this means regular 1-2 hours meetings at fixed dates. It turned out to be important to have a fixed programme with certain focal discussion points or else the online meetings get uninteresting and inefficient.
Up to the end of the project, more than 25 online sessions were carried out, keeping the level of communication also during the interim phases at a relatively high level. There were even some development steps that were achieved and adopted during interim phases, for instance the elaboration of the third (affective) dimension in the cube model.
With the help of the online rooms and synchronous communication tools the collaborative work could be increased substantially in quantity and quality.
Whereas in the first three project months, the collaboration intensity was relatively low and dominated by individual stock-taking activities, the work group phase was highlighted by a utilisation of the asynchronous tools (LMS) followed by the "blog-phase" between project months 9 and 19. The online room as a major communication and collaboration tool was invented in project month 9 and had been employed until the project finished. The collaboration in online rooms shows peaks when preparing the conferences and during the intensive development and pre-test phases around project months 17/18.

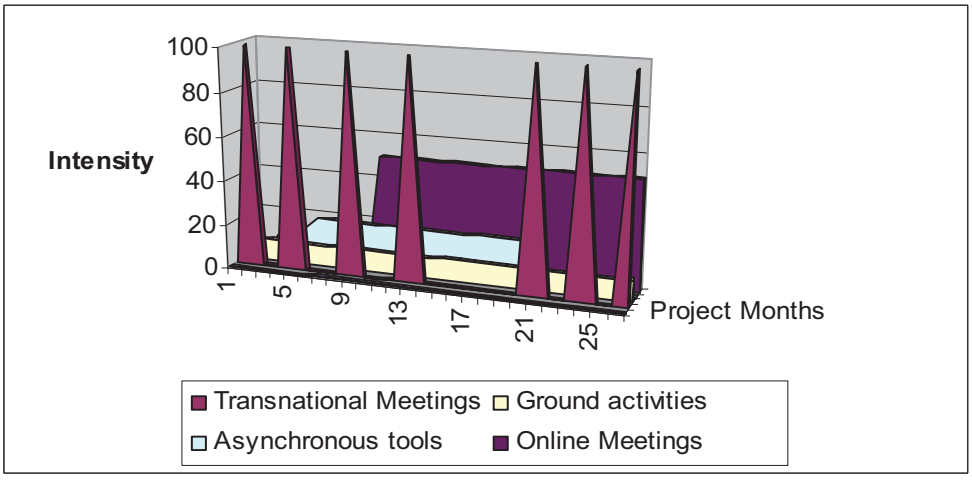


Figure 10: Different communication levels and intensities in ACT (hypothetical run)

[40] VoIP = Internet based phone – the voice is channelled through the internet as data packets that are routed via the Internet Protocol (IP).

4.4 Project Outcomes: The ACT Evaluation Approach

In the following, theory building in ACT and the resulting project results will be highlighted in a chronological way.
Major interim results will also be presented as they indicate different working stages. They are important to demonstrate the *process* of reasoning according to Action Research principles.

4.4.1 AC Model

Being aware of different interpretations on the meaning of Active Citizenship and agreeing on the fact that AC is more like a process than a fixed condition, ACT developed a first visualisation model to describe Active Citizenship.
The consortium chose a coordinate system with abstract minimum and maximum values as an appropriate model to locate a given AC condition of a target group in a system.

Stage 1: 2-Dimensional Model
The relation between the "community axis" and the "activity axis" sets up a 2-dimensional model.

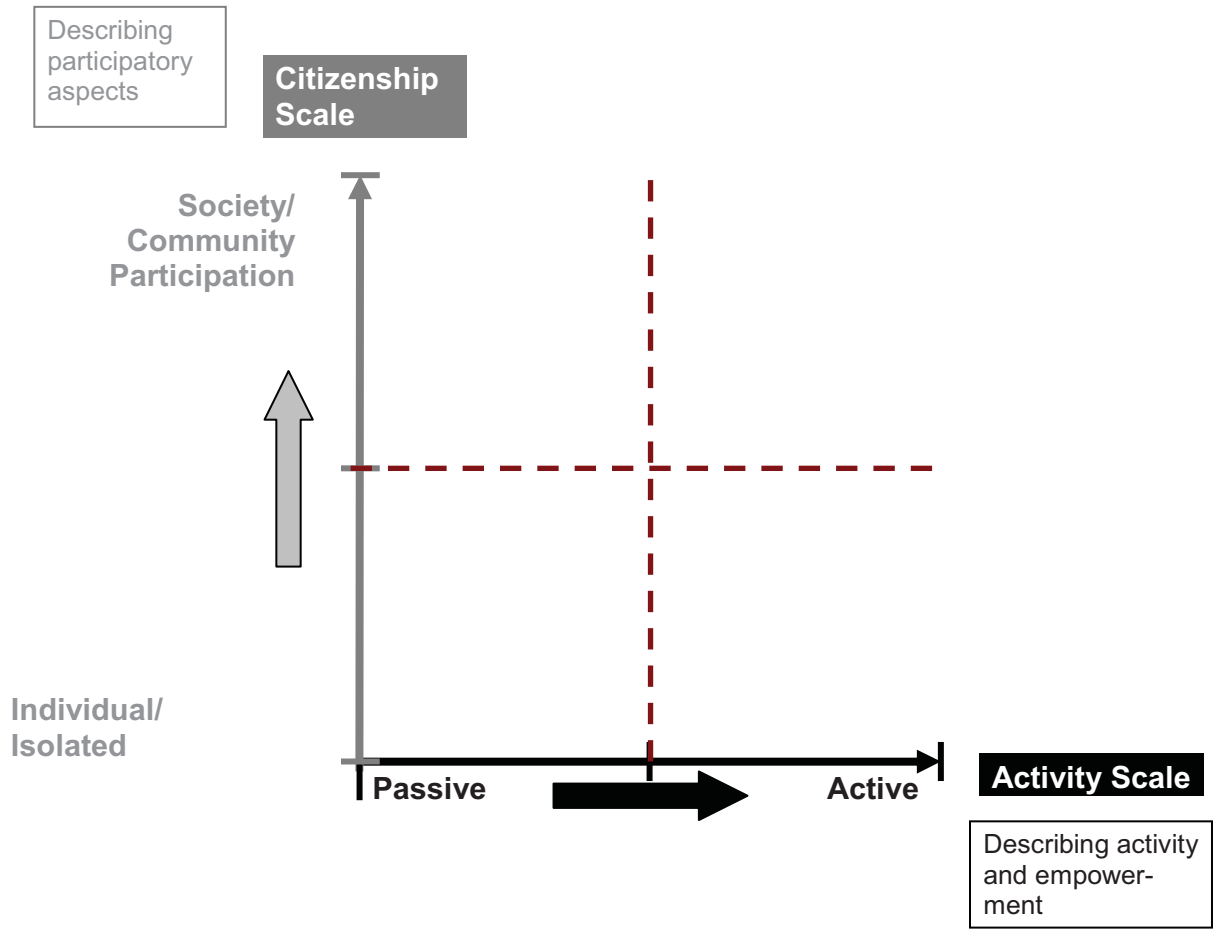


Figure 11: Coordinate system with a citizen and an activity axis

The model was further elaborated by also describing the interim stages ("0.5-degree") between the minimum and the maximum stage of the axis by one exemplary target group in a specific context.
This was done during the first workshop in Göttingen by the definition work group and discussed by the whole group.

Visualising the approach of active citizenship, it becomes obvious that a person can be located between the poles of passiveness and activeness and individual and participation in community. The AC condition of a citizen can be displayed by the values in the coordinated net. Following the approach, the two axes (activity and citizenship) are related to each other.
To verify the appropriateness of the model the ACT partners were asked to describe the states (conditions) concerning activity, participation and competency in attributes and sentences fitting to (some of) their target groups[41].
The results were presented and discussed in the web-based LMS, discussed via e-mail and further refined.

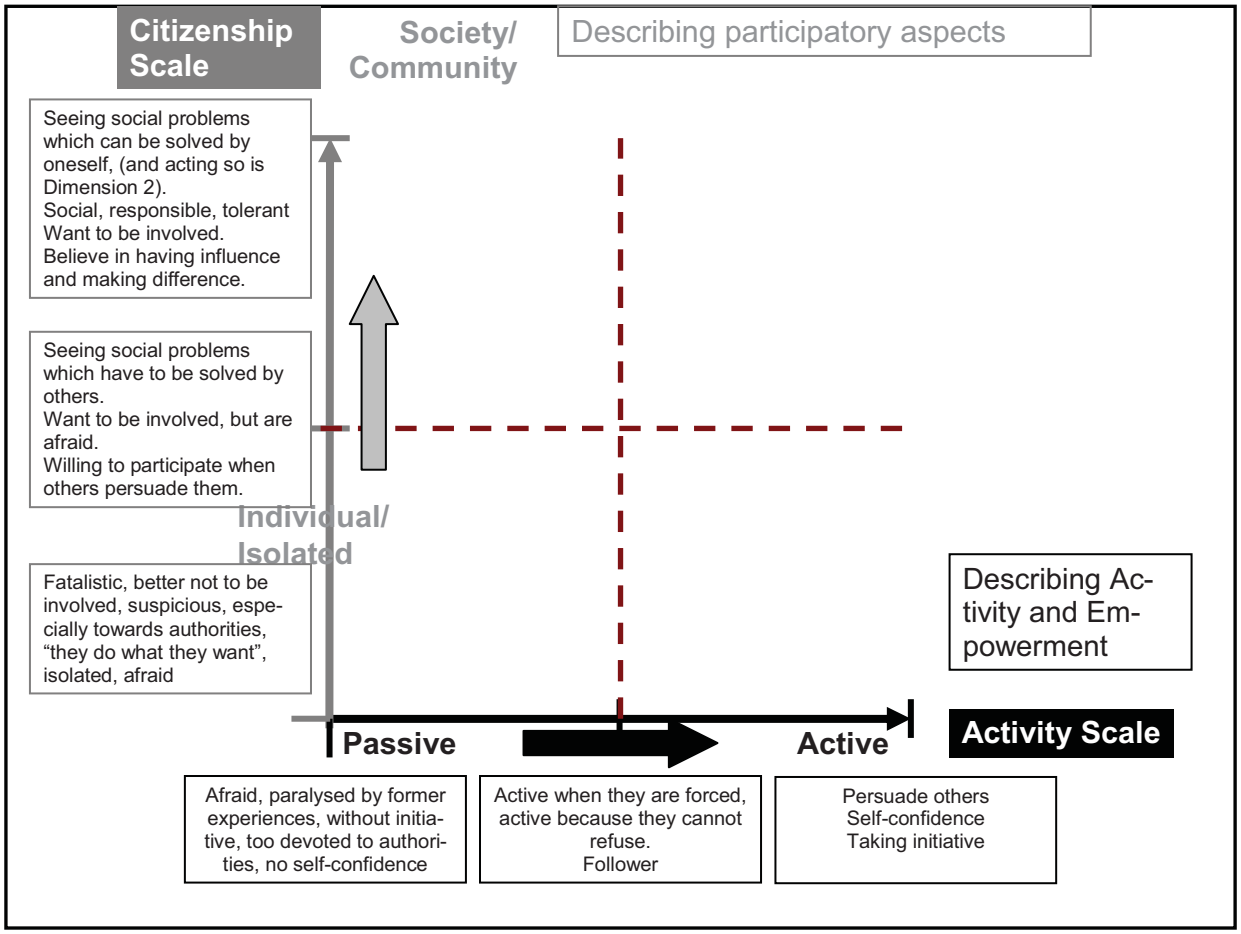
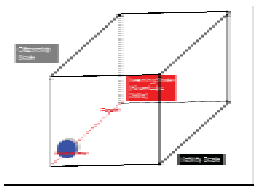
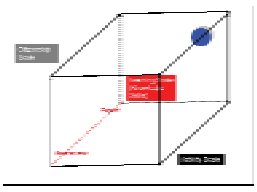


Figure 12: Example of different citizen and activity stages of a selected person and context

Stage 2: 3-Dimensional Model
It was clarified and agreed that the coordinate model is especially valuable to describe Active Citizenship because it is a dynamic descriptive system especially suitable to bring out the process character of AC in learning projects.
The development continued with a 3-dimensional model integrating the participatory approach (citizenship scale (taking part in society or community), the activity scale and the learning process ("training") scale).



Thus, the individual can be located in this system dependent on the three different variables.
A passive person, unaware of social issues will be located near to the 0-point, whereas a well trained person who contributes actively to the civil processes will certainly be located in the upper right rear sector.

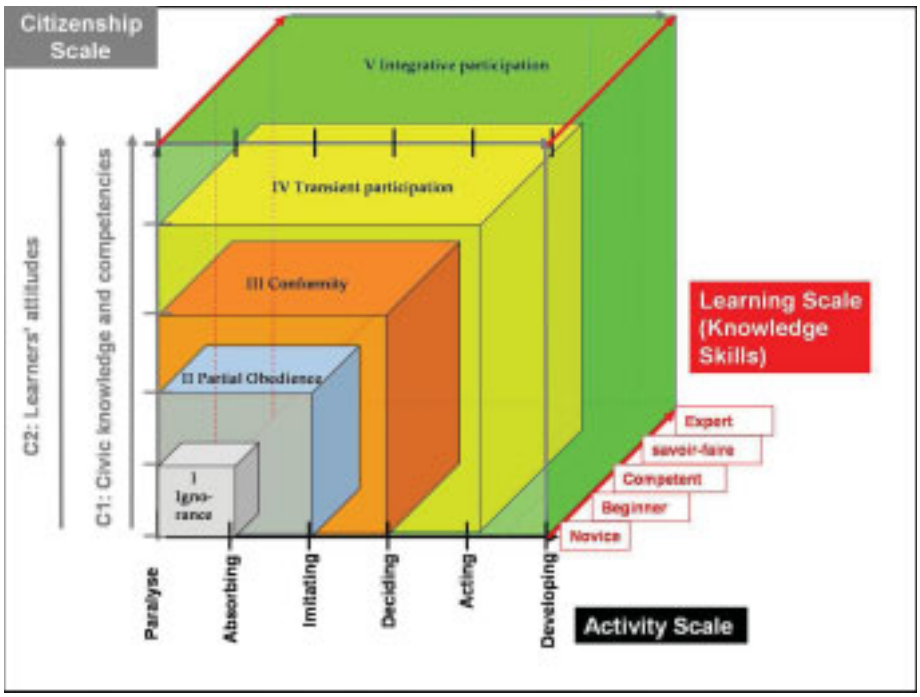


41 To be found in the appendix to this dissertation.

At this stage (June 2006) the term citizenship *competence* was first introduced in the explanatory approach because the model now visualised the process of learning, the gain of competencies on AC (development of awareness, knowledge and skills concerning active citizenship).

Stage 3: Transfer of the Explanatory Cube to a General Active Citizenship Model

The first explanatory cube model still consisted of the citizenship scale in which the cognitive competences were mingled with the civic attitudes that had been defined by the evaluation work group.



The activity scale remained as proposed by the definition work group and, as a new (third) dimension, a competence scale was introduced.
On the basis of this approach an explanatory system of nested cubes was developed to display different levels of citizenship.

Figure 13: Explanatory model for citizenship levels

The model of Hoopes (1980), developed to display different stages of intercultural participation, was transferred to the AC theme and an abstract system of citizenship levels was conceptualised:

- Level I: Ignorance
- Level II: Partial obedience
- Level III: Conformity
- Level IV: Transient participation
- Level V: Integrative participation.

In the resulting 3-dimensional model the 5 levels can be identified as idealised conditions.
They helped to describe different types of persons or groups with regard to their knowledge, attitudes, activities and competencies concerning citizenship.
The ultimate, "ideal citizen" (*Level V* = *Integrative Participation*) has reached the highest level of knowledge and attitudes towards citizenship – the person is an expert and able to develop new strategies and actions.
The lowest level (I*: Ignorance*) is located in the lower left corner representing marginal knowledge, maybe even undesirable attitudes (e.g. discrimination), paralyse or very small activity without or only with very little learning output.
II Partial Obedience is characterised by low to medium C-status and a maximum of imitating activities. As far as the learning scale is concerned they could be called "beginners".
III Conformity is the medium stage on the citizenship scale concerning knowledge and attitudes, group members range from "imitating to deciding" on the activity scale and they are competent as far as citizenship topics are concerned.

Transient participation (IV) is not as stable as *level V (Integrative Participation)* but means that persons belonging to this group act independently, have a huge knowledge and good civic attitudes (for instance in relation to tolerance, anti-discrimination etc.). The difference to the integrative participators is the last level of activity: the development activities for citizenship. They may already be experts but the role of the initiators will be played by groups represented by level V.

Remarks on the utilisation of the cube:
The previous description referred to an ideal situation, and the cube is a tool to describe abstract stages of knowledge, competence, action and attitudes.
Of course there are no intergradations but a seamless transition from one level to the other, thy are continuums.
The model was an approach to allocate an individual or a group in a rather abstract, visualized reference system. The cube model could be applied for the description of different target groups and even for individuals who could be localised according to their knowledge, attitudes, activity and skills in the cube.
The model also allowed visualising the effects of a learning process by comparing the original status and with the later status of a target group/an individual.

4.4.2 Reference System - Evolution of the Cube

The AC-cube model was modified and developed further:
The knowledge scale was separated from the attitude scale, and a new three dimensional approach was developed by using a

- Cognitive,
- Affective and
- Active dimension.

The approach was presented and discussed during the Ankara meeting in October 2006.
It may again be highlighted that this model was a logical development result from the explanatory approaches developed in the first year of the project. It corresponds to the Pestalozzi paradigm of an education (in the German meaning of Bildung (education) with the connotation of forming a person) with hand, heart and head. In respect to Blooms' model, as already mentioned in chapter 2, the "psychomotor dimension" was modified to the "activity dimension" displaying the activity levels of a person in respect to the evaluated AC topic.

The outcome was a provisional pattern describing the 5 levels of the 3 dimensions.

Level	Cognitive levels	Activity levels	Affective levels
5	Intuitive Acting	Developing/constructing	
4	Implicit understanding	Discovering/acting independently	Internalising/Personalising
3	Distant understanding	Deciding/selecting	Valuing
2	Know how	Application, imitation	Showing interest
1	Know-that	Perceiving	

Table 4: Description of the scales as interim results at project month 12 (Ankara)

In contrast to Bloom and his 6-level scale for the cognitive dimension (remembering, understanding, applying, analysing, evaluating and creating), the partnership decided to go for a 5-level scale. The 5-level system had to be applicable for each of the dimensions to form a cube. The different stages were discussed and applied to some examples from practice.
Again at that stage, the practice-science dilemma surfaced because the stakeholders from the field had to understand, at least to a certain extent, the stages.

This is why the descriptions on the cognitive level were simplified.

In reference to Bloom one could state that the "Analysing and Evaluating" level corresponds to what ACT described as "Implicit Understanding" whereas the other levels correspond in a 1:1 ratio:

- Know-That = Remembering
- Know-How = Understanding
- Distant understanding = Applying
- Implicit Understanding = Analysing and Evaluating
- Intuitive Acting = Creating

Due to the invention of the activity scale, some of Blooms stages had to be modified. The cognitive scale was more focused on the intellectual aspects, whereas Bloom originally also related to activity driven competences from his cognitive level 3 onwards (applying, analysing, evaluating and creating).
Since interdependencies between the cognitive and the activity level were expected, this differentiation seemed more appropriate.
One has to remark that the 5th Grade of the cognitive level has an activity related connotation (acting intuitively) but in the meaning of "transfer of knowledge".

The activity scale develops from pure perception without acting (level 1) to imitation ("just applying") (level 2), to consciously deciding (and selecting, level 3), to discovering (this implies the ability to securely act independently, level 4) and, finally, to level 5: "developing/constructing", which includes the creativity aspect.

Once again it may be highlighted that, in contrast to Bloom, the cognitive and activity levels tend to show results related to the level of the other dimension. There may be exceptions (for instance the intellectual who knows everything about immigrants (level 4, cognitive) but does not come into contact with them (level 1, reception). In general, and following the ideal cube model presented on the basis of the considerations by Hoopes, one can expect that there is a tendency of corresponding levels. For instance a person who just knows that there are different languages will just notice a different language. With a little bit of know-how this person may remember that it is French and may even apply some words such as "Salut/Bonjour" ("Hello")) in a salutation. This may also be the case if a person, discovering a different culture, imitates some non-verbal communication codes.
In the course of the development, various exemplary conditions were acted out.

The third, affective dimension was modified and specified in project month 15 (January 2007)[42]. Discussing the first feedbacks of the pre-test from the partners, it became obvious that the affective dimension could hardly be described.
Another interesting effect of transnational collaboration showed up: the descriptions of the affective scale varied in accordance to the professional background of the researcher: the psychologists described it according to the concept of "emotional intelligence", whereas educationalists followed the concept of "competence".
As a common understanding of the terms and concept was evident for the success of the collaborative project, another literature research was carried out, and an appropriate descriptive model was introduced, which was to a large extent based on the work of A. Guardini (2003):

The initial point of reference is Salovey and Mayer's (1990) original conceptualisation of emotional intelligence and its refined version (Mayer and Salovey, 1997).

Emotional intelligence involves
- the ability to perceive accurately, appraise, and express emotion;
- the ability to access and/or generate feelings when they facilitate thought;
- the ability to understand emotion and emotional knowledge; and
- the ability to regulate emotions to promote emotional and intellectual growth.

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[42] The development step was initiated by a contribution in the ACT blog: http://www.act-eu.org/blog/?p=54

Their previous definition and model was too vague and did not include all necessary aspects. More specifically, they argued that a better conceptualisation should also include how people "think intelligently about feelings", which means that cognitive aspects should receive more emphasis in the model. Criticism concerning the term "intelligence": "… correlations with personality traits will remain a threat to the emotional intelligence concept as long as proponents insist on the "intelligence" label" (McCrae,2000).

Finally, the fourth branch "reflective regulation of emotions to promote emotional and intellectual growth" constituted the highest level of emotional intelligence abilities and closely resembled the second dimension of the original model because it focused on how an individual can effectively regulate its own emotions and those of others.
By conceptualising affect-related competence Guardini defines affect-related competence as

1. the competence to accurately perceive and appraise the affective state of the self and of others[43]
2. the competence to express emotions
3. the competence to access and/or generate certain affective states when they facilitate thought
4. the competence to understand affect (emotions, feelings, moods);
5. and the competence to regulate affect in the self and in others to promote effective work-related behaviour.

In the definition the accurate and effective

- processing,
- utilisation, and
- regulation

of affect and affective information is central."
Adapting the competence levels proposed by Giardini on a five level scale, ACT worked with the following stages for affective competencies:

Level	Affective levels
5	Regulating (with) others
4	Affective self regulation
3	Empathy
2	Perspective taking
1	Indifference[44]

[43] In German: "erkennen und einschätzen".

[44] At a later stage the scaling was modified as indifference was to be considered as 0-point. Thus level 1 was titled "self-centred view" to indicate that a person only considered the own affective condition (mood) not taking into account the feelings and situations of others.

4.4.3 Inventory of Competencies

An inventory of relevant AC topics was combined with the 3-dimensional approach.
The inventory presented below represents the kernel grid of the citizenship topics. It was developed from the results of the evaluation work group (presented during the meetings in Göttingen and Sopot) and matched with the 3-dimensional approach at the Ankara meeting.
In the stock-taking phase ACT partners collected all the relevant aspects/topics for active citizenship.

The AC topics are clustered in five categories:

1. Civic knowledge
2. Soft skills or key skills
3. Basic attitudes
4. Attitudes towards other groups
5. Civic activities

	TOPICS
	1. Civic knowledge
1.	1. Institutional knowledge on micro level
2.	2. Institutional knowledge on macro level
3.	3. Environmental Issues
4.	4. Cultural Issues
	2. Soft skills
5.	1. Communication
6.	2. Cooperation:
7.	3. Decision-making:
8.	4. Negotiation:
9.	5. Expression:
10	6. Management:
	3. Basic attitudes
11	1. Orientation towards change
12	2. Self-esteem
13	3. Tolerance
14	4. Empathy
	4. Attitudes towards other groups
15	1. Knowledge about life and situation of others
16	2. Willingness to interact with people from other groups
17	3. Willingness to accept diversity and neglect discrimination
	5. Learners' civic activities
18	1. Getting and using information
19	2. Enacting in civic contexts, social group situations, institutions and projects
20	3. Participating in community with others

Figure 14: Inventory of relevant AC topics (state 2007)

With these categories, ACT intends to display the major areas of concern for Active Citizenship:

1. Knowledge about fundamental societal issues
2. Key competences/soft skills necessary to act appropriately (as a member of the citizenry)
3. Inner values and dispositions of the citizen
4. Attitudes determining the relation of the subject to other members of the citizenry
5. Activities in civic fields.

Needless to say that not all aspects are relevant for each citizen and learning environment – for instance environmental issues may not be of importance for extracurricular cultural events and vice versa. The inventory allows evaluators to select the relevant topics.

Refining the Topics
Topics need refining in order to be understood. The topic of communication means something different in a language course than in a seminar about body language.
The different topics were therefore further specified and described in the framework of descriptions of each single micro-project.

Reference System
Each relevant topic that was listed and adopted in the inventory includes all three dimensions. Obviously, each level must be described in accordance to the context of the project. Communication competence levels in an informal students' exchange project for youngsters have to be described and rated differently than communication competence levels in a project concerning handicapped migrants with reading and writing difficulties.
This is why the ACT developers invented the term "multivariable system", since a complex systemic approach had to be created to evidence the impact of the learning processes and in a complex societal system. The titles of the levels were further discussed and modified in online meetings during project months 12-18, and the 3-dimensional system and each of its descriptions were related to each of the topics being identified to be relevant for active citizenship. The output was a descriptive system consisting of more than twenty 3-dimensional grids that formed the basis for the individual reference system. The general descriptions were modified or fine tuned in each micro-project context that was discussed and further developed from project month 18 onwards.
Simultaneously, an evaluation workflow was developed that was later transformed into a counselling (or internal evaluation) procedure.

4.4.4 ACT Evaluation Procedure

The procedure consists of a sequence of evaluation steps that can roughly be comprised in three functionalities:

1. System building
   Here the projects are sufficiently described, the topics are selected. The individual 3-dimensional reference system is set up for each project.

2. Assessment
   This step consists of the selection of the right assessment methodology for the project and the assessment (measuring) itself.

3. Evidencing
   On the basis of the system building works the results from the assessments can now be included in the individual (project related) reference system patterns.

ACT evaluation includes reference patterns with general descriptions such as help documents, a catalogue of assessment instruments, descriptive patterns and a perfected software solution.

The systemic approach serves both evaluation and counselling purposes:
- It describes projects in a sufficient and transferable way
- It shapes out the relevant (learning) topics and competences of the beneficiaries
- It describes the competence levels in an individualised but still transferable way
- It helps the people in the field to assess the competences of their beneficiaries in an adequate way
- It evidences the competence development of the beneficiaries

The evaluation stages with the related instruments were comprised in the following chart:

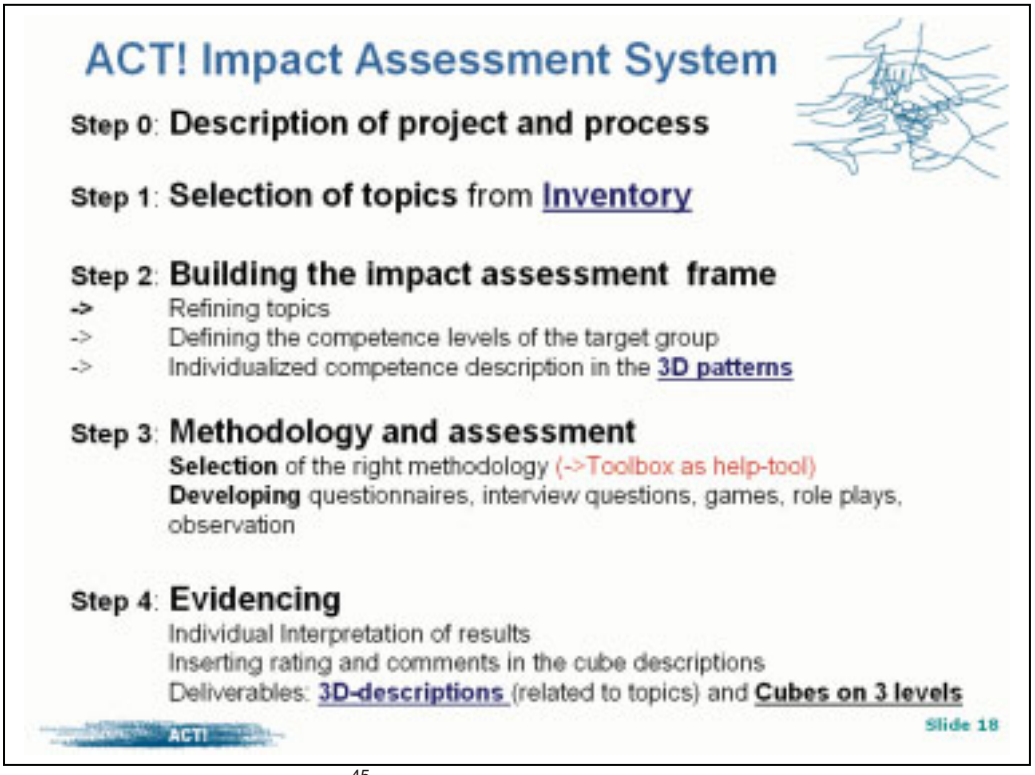


Figure 15: Evaluation steps[45]

The following instruments were designed and prepared to support the evaluation processes:

- Project description patterns
- Inventory of AC topics
- Individual reference system patterns
- Assessment instrument toolbox
- Individual reference and rating pattern
- IAS cube and software

4.4.4.1 Project Description Patterns

An extensive context analysis pattern was developed to describe the different situations of the grass-root organisations including their projects and resources.
Following the inventory idea (and maybe also didactic reduction), the questionnaire pattern was reduced to the crucial questions needed to describe the properties of a grass-root project sufficiently.
The outcome was a project pattern which is the basis for paper based (offline) and web-based (online) project descriptions.
The project descriptions were used for 3 purposes:

1. To present the projects on the ACT portal
2. As a basis for the evaluation process
3. As a reference in the computer based IAS (Impact Assessment System).

[45] Screenshot from a (conference slide, 2007).

Figure 16: Screenshot from a descriptive pattern of the Swedish partner on the ACT portal

4.4.4.2. Inventory of AC Topics and Competencies

The inventory described above was introduced as the second step of the evaluation process.

4.4.4.3 Reference Systems

The explanatory cube was an abstract model[46] describing processes and changing conditions concerning AC referring to a certain situation and target group.
Therefore, the scales of the cube had to be described individually. The descriptions depend on target group, context, environment and learning activities.
An exemplary grid for the topic "conflict solving" is presented in the following tables:

Cognitive Dimension

1	2	3
Grade/ Level	**Corresponding Level Titles**	**Specific Level Description (Reference)**
5	Intuitive Acting	To have sufficient knowledge to act intuitively in order to avoid conflict situation or to help others in looking for a good solution and compromises. To be able to apply conflict management competence in different situations (to be a conflict manager)
4	Implicit understanding	Having practical experiences with techniques of conflict solving, e.g. by getting in a "proper" discussion about pro and con arguments, maintain "proper" communication with others and consider the opinion of others
3	Distant understanding	To understand (to experience) processes and techniques of conflict solving
2	Know how	To understand processes of conflicts Understanding compromising
1	Know that	Knowing that conflicts can be solved

Activity Dimension

1	2	3
Grade/ Level	**Corresponding Level Titles**	**Specific Level Description (Reference)**
5	Developing/ constructing	Being able to behave in different conflict situation with different people (passive, aggressive, assertive etc.); elaborating ways for compromise and conflict solving strategies
4	Discovering/acting independently	Having capacity to initiate and maintain cooperation/discussion in looking for the best solution, consideration of all pro and con arguments
3	Deciding/selecting	Choosing an own way to listen to and express all pro and con arguments, to discuss them and to find the best solution in solving problem / compromise
2	Application, imitation	Using the patterns of negotiating skills; applying of known methods of looking for a good solution
1	Perceiving/noticing/ remembering	Recognising ways of behaviour in acting in conflict situations or/and avoiding conflict situations

[46] There are other models, e.g. the triangular model of Alden Biesen presented in the framework of Special: The SPECIAL project aims at web based guidelines, courses, didactic tools and strategies to bring about a European citizenship added value in existing and new adult education courses, http://www.activecitizen.net/index2.htm.

Affective Dimension

1	2	3
Grade/ Level	**Corresponding Level Titles**	**Specific Level Description (Reference)**
5	Regulating **with** others	Influencing others to contribute to conflict solving
4	Affective self-regulation	Proving capacity to solve conflicts by reflecting own feelings and states of mind as well as taking into consideration opinion, rights and feelings of others
3	Empathetic con-cern	Balanced emotional behaviour in conflict situations – ability to under-stand the affective status of others in the conflict situation
2	Perspective tak-ing	Taking into consideration opinions, rights and feelings of others
1	Indifference	Acting self centred in conflict situation

Table 5: Reference system for conflict solving

4.4.4.4. Assessment Toolbox

During the transnational meeting in Ankara in October 2006 it was decided to design a toolbox with a collection of methods that could be used for the evaluation of active citizenship in order to deliver an overview of methods that are useful for individual projects and settings.
The following methods of data collection were chosen:

- Reflective diary
- Concept map
- Interview
- Group discussion
- Role play
- Questionnaire
- Test
- Observation
- Unobtrusive measurement
- Portfolio
- Case study
- Self assessment
- Games.

For every method a short description was prepared as well as recommendations and instructions, examples and ideas for the evaluation of active citizenship and advantages and disadvantages of the method.
Only short introductions were given to make the document easy to use. Some references were collected for those who like to have more information about single methods.
The toolbox is added in an annex to this dissertation.
The toolbox could be combined with another, recently published evaluation toolbox for practitio-ners from a Socrates 2006 project SEALLL that added some more aspects of evaluation tech-niques and gives additional valuable help for grass-root projects (Tilkin et al. 2007).

4.4.4.5. Individual Reference and Rating Pattern

The results of the assessments can be rated in accordance with the scale descriptions in the ref-erence systems set up by the experts of the grass-root projects in step 3.
The reference system will be enlarged by three more columns to facilitate a complete rating and documentation functionality.
On the basis of the descriptions the evaluators give ratings between 1 and 5 on each of the three dimensions.

In the last column the evaluator is supposed to include the reasons for the rating and some useful remarks to evidence the choice.

1	2	4	5	6	7
Grade/ Level	**Corresponding Level Titles**	**Individual description/ explanatory statement**	**Rating 1**	**Rating 2**	**Remarks, explanations, reasons for your rating**
5	Intuitive Acting	grade 5: knowing how to use learned communication skills to improve communication in the group			
4	Implicit understanding	grade 4: knowing how to clearly express questions for the interview with local people interesting in the project		1,3	**Leszek** and **Andrzej** during the lifetime of the project learned how to talk with different people including formal language in formal situations
3	Distant understanding	grade 3: realising that there is a difference between informal and formal communication style	1,3	2,4	**Leszek** and **Andrzej** knew that there was the difference in formal and informal communication styles from the beginning **Tadzik** and **Magda** reached this level thanks to the project that was observed during the exhibition
2	Know how	grade 2: providing feedback to the instructions, including own ideas	2		**Magda** understood the instruction and knew how to provide feedback
1	Know-that	grade 1: listening to the trainer and understand instructions	4		**Tadzik** limited himself to listening to the leader without any comments

Table 6: Cognitive dimension on communication in a Polish project

In the example, the Polish partners described the development of four youngsters on the cognitive level with regard to their relevant knowledge on communication.
Columns 5 and 6 indicate the ratings at different assessment times and the reasoning will be given in column 7.
The documentation of the reasons for the rating is important from two points of view:

- With regard to the scientific approach it is a means to validate the rating
- With regard to the practical utilisation this documentation is necessary to follow quality management and assurance policies. This is especially relevant for those institutions that are dependent on public funding.

In the framework of ACT more than 20 projects were evaluated according to this procedure.

4.5. IAS Cube and Software

4.5.1 The Cube as Visual Evidencing System

Transferred back into the cube system a complete rating for one topic can now be displayed as one point in the cube.

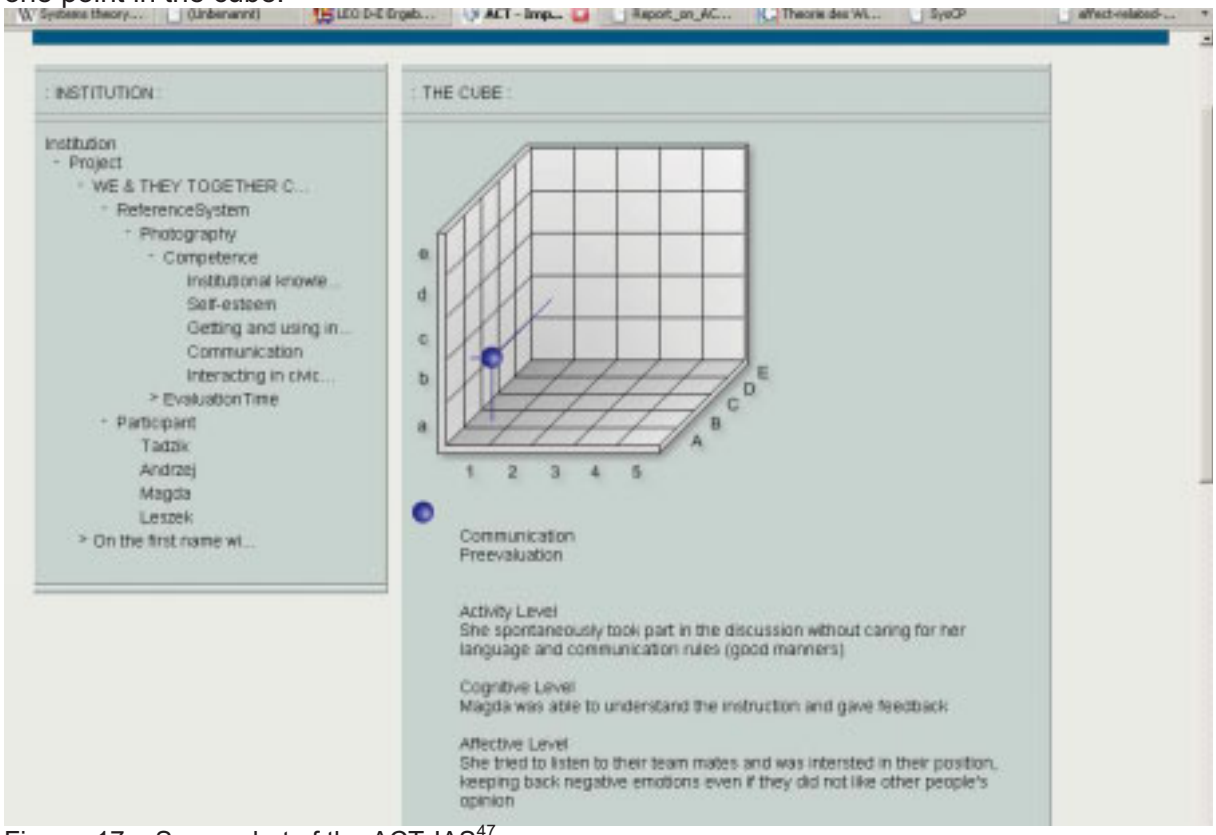


Figure 17: Screenshot of the ACT-IAS[47]

The cube shows the results on the activity scale (1 = perceiving/listening). The learner reaches level 2 on the cognitive axis (= know how) and level 2 on the affective scale (= perspective taking).

The ratings were described and documented:
Activity Level
The learner “Magda” spontaneously took part in the discussion without caring for her language and communication rules (for good manners).
Cognitive Level
Magda was able to understand the instruction and gave feedback.
Affective Level
She tried to listen to her team mates and was interested in their opinions and kept back negative emotions even if she did not like other people's views.

[47] Screenshot from http://ias.act-eu.org/ displaying the state of the topic “Communication” for one participant in the Polish informal learning project at the beginning of the project.

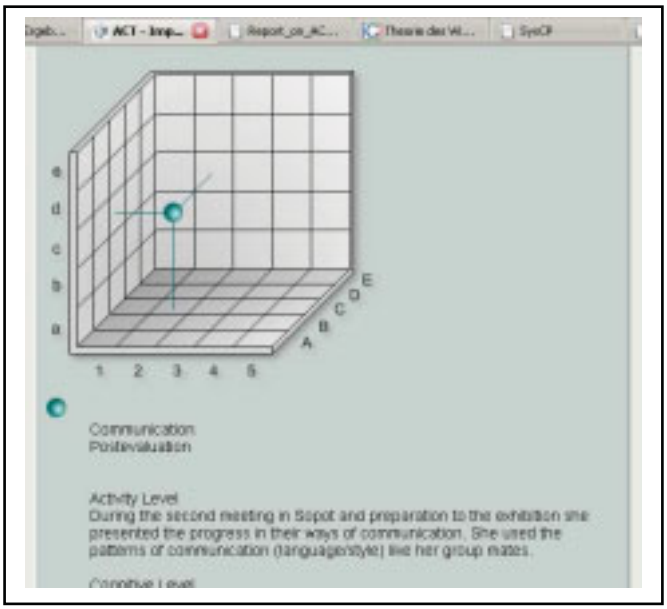
The picture changes after the following assessment:

The learner reached level 2 on the activity scale (imitating), level 3 on the cognitive scale and level 3 on the affective scale.

The ratings were described in the following:

Activity Level

During the second meeting in Sopot and preparation to the exhibition, she presented the progress in their ways of communication. She used the patterns of communication (language/style) like her group peers.



Cognitive Level

She realised that there is a difference between informal and formal communication style, and she reached this level thanks to the project that was observed during the exhibition in the presentation of her work to the public.

Affective Level

During work in the project and contacts between groups they became aware of other people's feelings while exchanging different views. She was able to adapt her behaviour according to the feelings and expectations of other persons (fellow team-members/visitors of the exhibition)

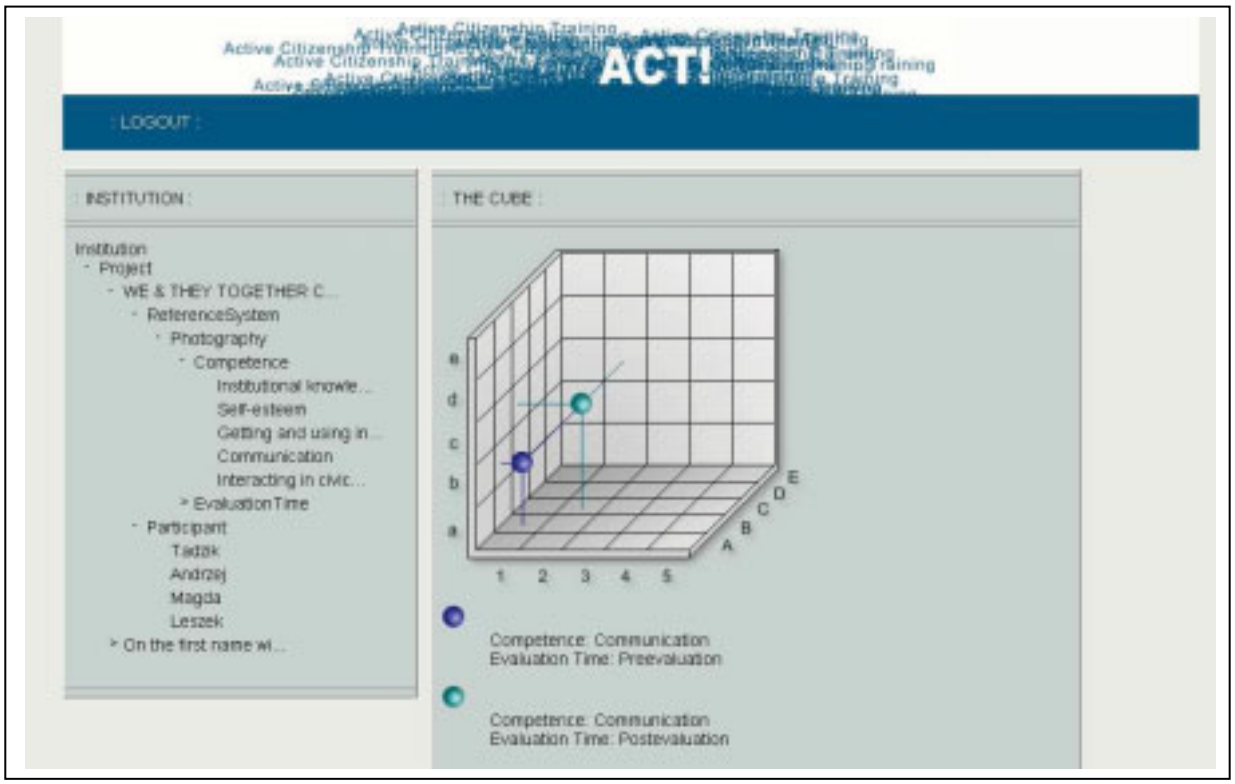


Figure 18: The communication competence at 2 evaluation times

By comparing the levels in one cube the development of the competence becomes obvious: The learner improved by one rating on each scale.

4.5.2. The IAS Software

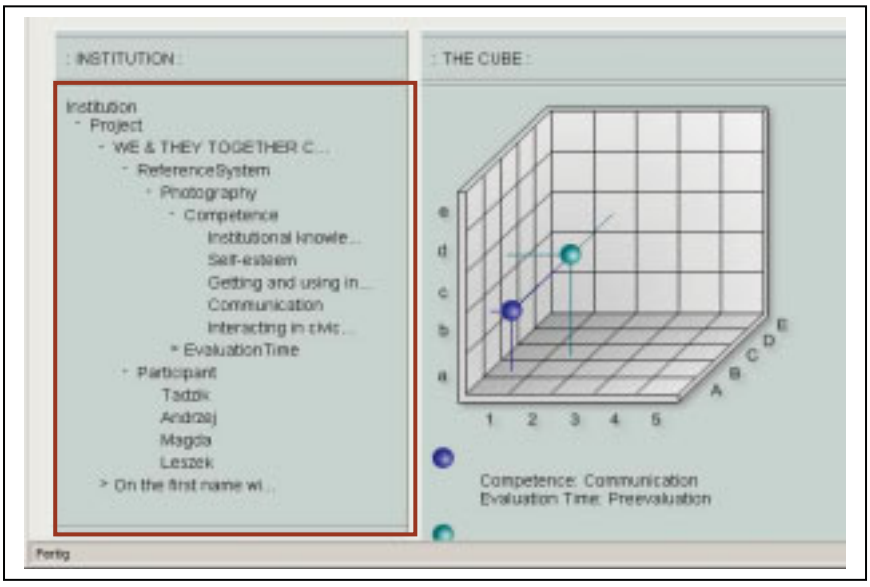
Though not explicitly intended, the idea to develop a software solution was already mentioned at a relatively early stage during the meeting in Sopot in a bilateral talk about a mathematical approach to display competences in a cube.
The conceptual phase for the programming started in early 2007, when the design of the cube model (three axes and the 5-level scaling) was adopted by the partners.
There are always systematic problems when translating the demands and wishes of the “spiritual parents of a system” into the programming, especially if the clients are not at all acquainted with computing.
The programmers work on a level on which every single sign, every bit is important for the functioning of the software. A working culture of trial and error is absolutely not acceptable in their developing processes.
This working culture was relatively far away from the open, communicative and sometimes abductive way in which ACT developed its approaches.
Apart from these collaboration problems the fundamental challenge of ACT – the multivariable approach was an additional obstacle in designing, conceptualising and programming the IAS software.
In short, the working hypothesis for the programmer had to be to develop software that is able to

- Evidence competence in a scale in which
- Competencies and scales may change in content and other values.

This means that the software had to be able to display results in an open reference system thereby enabling the users to redefine their descriptions.
This was to be achieved with a system consisting of five grades on three dimensions each, which are selectable from a catalogue of more than 20 topics (competencies) each of them belonging to one specific context (micro-project) carried out by a different organisation. Not to forget that each single grade must be related to a certain person in this context.

To emphasise again the challenge for programming, two examples are presented:

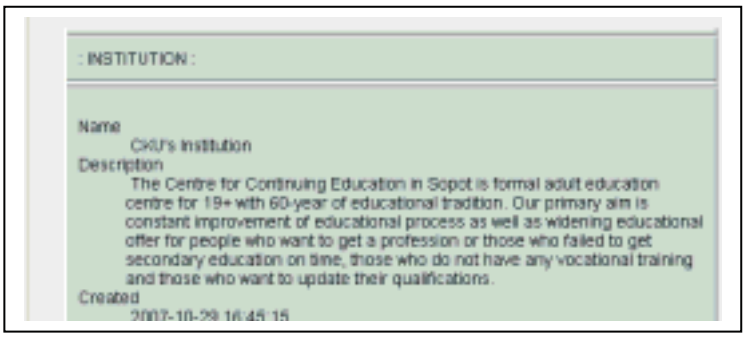
1. The learner in the Polish project mentioned above
2. A learner in a European project by one of the German partners



The first project was already described. All elements are displayed in the navigation tree on the left side of the screen:

- Available project(s)
- Reference systems
- Selected competences
- Evaluation times
- Participants

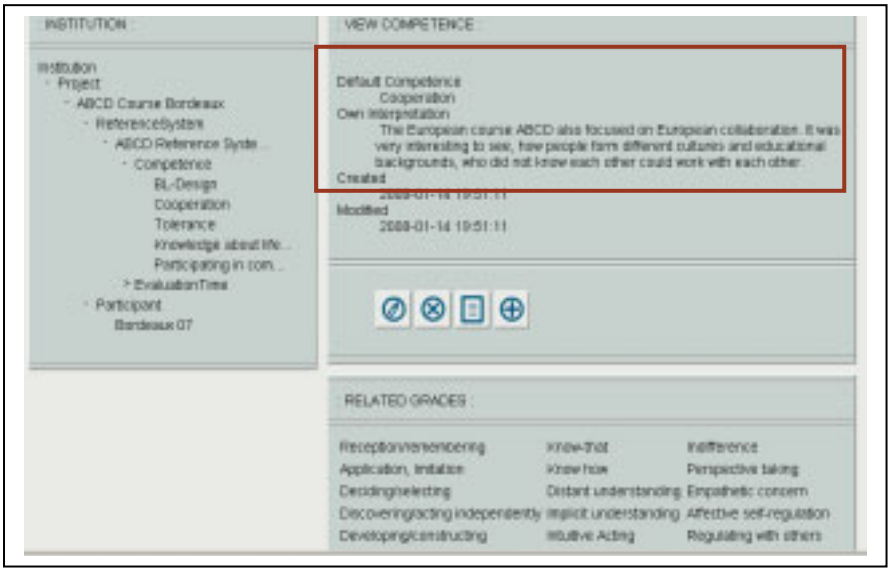
Figure 19: Navigation tree for the Polish project



The project belongs to the institution CKU and the respective description can be accessed by clicking on the respective navigation point.
All details are editable, not with regard to the institution but also concerning the project, selected topics and their related scales on the three axes, the participants and the evaluation times.

All these details are, on the one hand, completely variable, but on the other, they are also related to each other.

In the second example an evaluation of a non-formal course by the German partner is displayed.



It has a group of participants and topics that differ completely from the first project:
The selected competencies are:

- Cooperation
- Tolerance
- Participating in community
- Knowledge about life of others.

The topic “cooperation” is highlighted as follows: “The European course ABCD also focused on European collaboration. It was very interesting to see, how people form different cultures and educational backgrounds, who did not know each other, could work with each other.“
The different grades are displayed at the bottom of the page and can be accessed and edited.

Figure 20: Definition/specification of cooperation (German project)

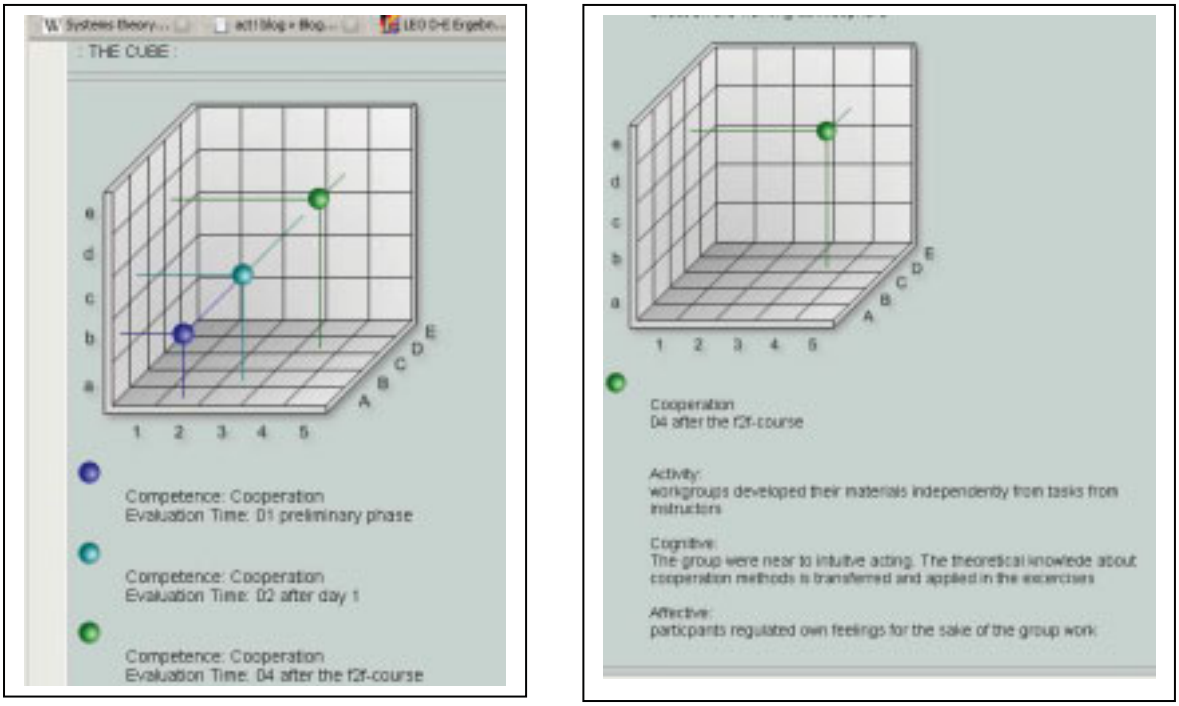


Figure 21: Evaluation of the topic “cooperation” in the European course ABCD (German project)

The cooperation competencies in the course increased in the course of the non-formal learning event (left screenshot). The right screenshot displays the state assessed at the third evaluation time (at the end the course). The evaluators documented their rating and the remarks are displayed under the cube.

Software Development

Step 1: Conceptualising the Software
The two examples reveal the performance and the operative efficiency of the software. The requirements of the system afforded a multivariable system.

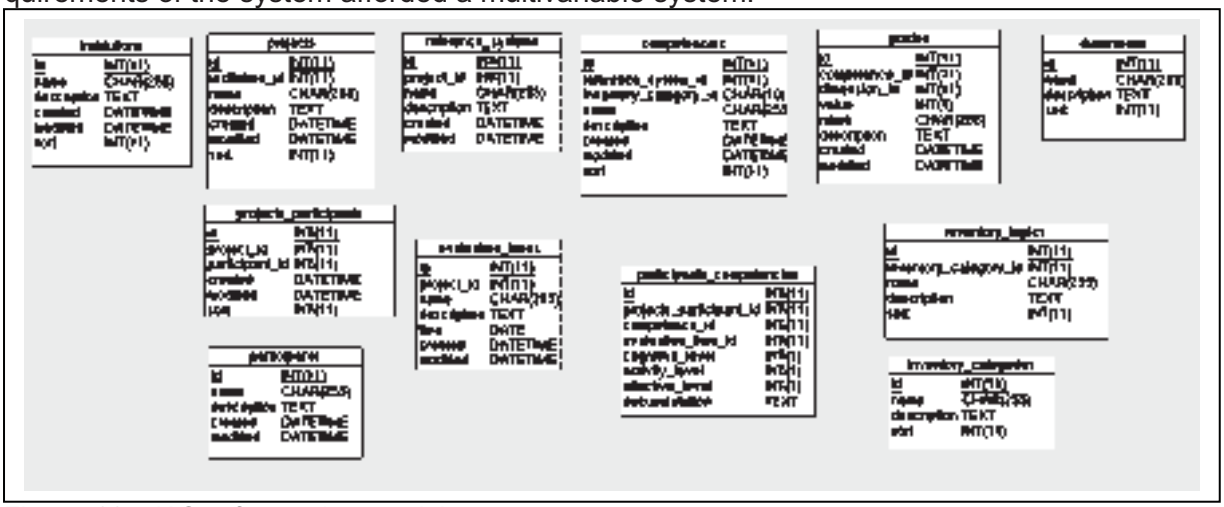


Figure 22: IAS software data model

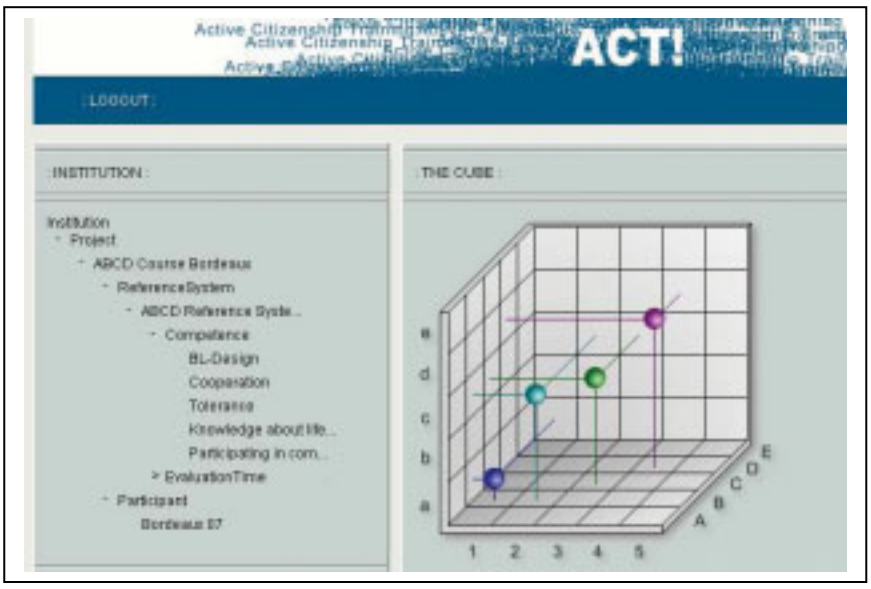
The system is a cascade of nested containers. Each container is a singular database for different purposes (institutions, projects, reference systems, topics/competences, grades and dimensions) that are connected with other databases over predefined interfaces. As a matter of fact, it is necessary to take into account the participants and the evaluation times.
The interdependences of the different system containers are displayed in the technical chart (data model) showing the different data tables and their relations.

Step 2: Prototype
Consistency tests
After a programming time of approximately two months a first web-based prototype with Provisional User Interfaces (data masks) on a lower level was presented during the meeting in Alden Biesen in September 2007.
During the meeting, the project of the Latvian partner was used to make a “life“ test-run of the IAS-software system. Although several minor inconsistencies (bugs) were realised, the software system worked in general (example: during the test, certain data suddenly disappeared, when other connected data were changed due to interconnected references). After debugging, the referential integrity of data was safe. After further debugging and test runs with another ten complete exemplary datasets, the system ran in a stable beta version.

Step 3: Data Integration
In the following step between September and December 2007, 20 partner projects were integrated. This was done on the basis of the offline (paper based)

- institutional descriptions
- project descriptions
- selected competences and descriptions
- reference system descriptions
- ratings of the assessments and their documentations
- specifications of participants and
- evaluation times.

Step 4: Optimisation of the User Interface (UGI)



The UGI had to be modified in order to be accessible by several users. In the pre-test, the projects were only designed for one user. The multi-user access was developed by employing a so-called access control scheme (ACL access control list).
Simultaneously, the design was adapted to the ACT Corporate Identity (CI) and the user navigation (tree-structure) was adapted.

Figure 23: Inclusion of IAS in the ACT portal

Step 5: Delivery:
Before the final conference in project month 27, the first stable version of the ACT-IAS 1.0 was delivered.
Up to the end of the funding period in December 2007, an amount of 100 topics, 300 dimensions and 1.500 level descriptions were integrated for 20 projects. For an approximate average number of three participants in each project another 4.500 levels were documented with individual descriptions.

4.6 Networking

As the transnational team consisted of eleven partners from nine countries, one could already talk of a development network due to the blurred boundaries between cooperative project teams and networks.
On the other hand, according to the most recent publication about European networks, the Art of Networking (Bienzle et al, 2007), ACT still showed clear properties of a development project.

However, the funded ACT project was terminated in December 2007 with all its objectives, results and forecasted activities. As the partnership agreed to continue its activities and new potential partners joined and new and extended tasks were identified and described on the basis of the knowledge generated by the project, the establishment of an ACT network will be developed in the follow up phase from 2008 onwards.
Due to this development it is valuable to witness and describe the evolution of ACT-Net as a European Educational network.
Against this background basic findings and theory about (European) networking shall be presented in the following.

4.6.1 Network Theory

The term network has become increasingly popular during the last decade of the 20th and the first years of the 21st century – probably influenced by the IT-revolution and the spreading of the internet.
Information gathering and spreading of information and resources is well known in everyday life and network theory has become one of the most important transdisciplinary sciences. Network theory establishes a bridge between mathematics, IT, natural and socioeconomic sciences on the basis of Complexity Theory and Social Networking Analysis (Katzmair, 2005)

Networks can be differentiated in respect to their purpose:

- Research Networks
- Innovation Networks
- Production Networks
- Distribution or Marketing Networks
- Educational Networks
- Inter-organisational Networks
- Intra-organisational Networks.

From a professional-theoretical perspective, networking can be understood as the process of building up ties by people and groups and as a fundamental basic attitude of professional action:
Networked working is a qualitative basic attitude, which does not entail precise ‘product related’ cooperation alone, but the establishment of a communicative process of understanding of the long-term impact between staff (Jungk, 1994).

4.6.2 Social Capital, Networking and Innovation

The success of an organisation does not only depend on human capital (knowledge and competences) but also on social capital (networking capacity (Granovetter 1973).
The theory of social capital was shaped by sociologists like Pierre Bourdieu, James S. Coleman or Robert D. Putnam. Social capital is a multi-dimensional concept. Generally formulated, it tells us that specific ties may result in benefits for the agents. Pierre Bourdieu has impressively worked out the special character of this form of capital, as opposed to economic and cultural capital. Social capital constitutes the ties that can be reverted to. It is firstly non-material and symbolic. Since the forms of capital are convertible as a matter of principle, social capital can be converted into economic capital. Bourdieu defines social capital as a network of ties, which emerges above all, as the end-result of long-term investment decisions. In the process, coincidental ties are converted into permanent ones and with a certain degree of commitment character. The build-up of social capital as investments in ties, aims at medium and long-term impact: (...) the network of ties is the product of individual or collective investment strategies that are consciously or unconsciously established for the creation and sustaining of such social ties as (sooner or later) promise direct benefits (Bourdieu 1983, p. 192).

Social capital is the value evolving from social relationships. In contrast to human capital knowledge will be mobilised (and utilised) as social capital. For this purpose the right relations (links/ties) are required (Granovetter, 2005).

From the formal point of view networks consist of agents (or persons, teams, groups, departments, companies, entities) that are connected by the relation of the same kind. Networks are defined by the existing and not existing relations.

	People	Knowledge/ Resources	Tasks/ Events	Organisations / Affiliations
People	Social network: Who is in contact with whom?	Knowledge and resource network: Who knows what? Who has what?	Task and event network: Who does what? What happens at a certain point?	Membership and attendance networks: Who is member of which affiliation? Who attends which event?
Knowledge/ Resources		Information network: What information leads to what knowledge? What knowledge is needed to use a resource?	Needs network: Which resource is needed to fulfil a task? What knowledge is needed to fulfil a task?	Capability network: Which organisation has what knowledge? Which organisation has which resources?
Tasks/ Events			Transversal and workflow networks: Which tasks must be done before which? What happened before what?	Organisation support network: Which organisation supports which task or event?
Organisations / Affiliations				Interorganisational network Which organisation is in contact with which? Which organisations are linked to which people?

Table 7: Casos metramatrix model[48]

With the help of the metamatrix-model developed in the 90s at the Carnegie Melon University in Pittsburg, USA the 5 dimensions people, knowledge, resources, tasks ad affiliates (relations to organisations, associations etc.) are related to each other.
The metamatrix model can be used as a basic planning tool to raise the fundamental questions in relation to a network.

[48] (Carley/Krackhardt, 1998)

4.6.3 Properties, Advantages and Driving Forces of Networks

Burt (1992, 2000) and Granovetter (2005) stated that social networks need investments in the form of social energy (time, communication, resources, products, services) but that they also reveal a series of advantages and outcomes for the members of the network for instance:

- Minimised transaction costs
- Advantages of contacts
- Tactical information advantages (receiving information earlier)
- Strategic advantages (better overview on market developments)
- Control advantages (flow of information)
- Advantages in negotiations.

From a profitability perspective processes in a network can be regarded in such a way that output of agent A (e.g. knowledge created) becomes input for agent B who adds or modifies the product which becomes an input for agent C and so on. Depending on the amount of these feed-back loops the networking process becomes increasingly productive. Network theory calls this phenomenon "autocatalytical circles" to describe the creation of value.
In a monodimensional development this process is "colder" and the innovative potential is less promising.

Position in and Structure of Networks

The position within a network determines the profit of an actor through the accessibility of resources and information. Both dimensions can be measured by network analytical means. Vice versa, the value of a network is different from agent to agent as all have (slightly) different positions, roles and different opportunity spaces.

Roles
With Katzmair (2005) one can differentiate 4 main roles of network participants:

- Global players (driving forces with the highest centrality[49])
- Local players (actors in the periphery who have a strong local centrality)
- Insider (inside the network in contact with the global players)
- Peripherals.

Typology of Networks
According to Burt (2000) one can generally differentiate between closure networks (CN) and structural holes networks (SHN):
Closure networks are characterised by close relations of all agents in a network who are interconnected with each other. CN show a large potential of trust which leads to a good development of common ideas, virtues and norms which is important for team building processes. These networks are very stable but lack efficiency because these networks are at the same time static and lack the explorative dimension to discover new grounds.
Vice versa, structural holes networks show contacts to actors who are not part of the network. This leads to high efficiency because information from outside can easily diffuse in the network through loose ties and new developments can be adapted quickly. On the other hand, SHNs lack the stability of CNs and they are relatively vulnerable for external forces because they lack triangular relations typical for CN.

Quality Criteria for Networks
There is no ideal condition for a network, but an ideal network should be transformable from a structural holes network to a closure network and vice versa according to the necessities of the

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[49] "Centrality" will be further described in chapter 5.3.2 below.

situation. This already describes one of the most significant properties of a successful network: "scalability", which means the adaptability and transformability of the network structures to the complex requirements and tasks of the network.
Derived from complex theory one can state that an ideal or excellent network is determined by coherence despite the constant (perpetual) change of its elements, their relations and its objectives and targets.
In a changing context in the educational sector (due to new network partners, modified funding situation and different educational policies) an educational network must still be capable to produce innovation in the form of projects, products, learning offers, evaluations etc.
Success factors for networks are therefore not only the cost-profit ratio or other economic indicators or efficiency criteria, but also resilience, adaptability and evolvability (Borgatti, 2003).
If a network is only directed to achieve utmost efficiency[50] it becomes at the same time vulnerable because it neglects the criteria of resilience, adaptability and evolvability.
According to Langton 1989 and Kuffmann (1995, 2000) successful (excellent) networks are located "at the edges of chaos", showing utmost adaptability and are scalable in their structural properties. Watts (2003) calls them Multi-Scale Networks.

4.6.4 Research on Networks

4.6.4.1 Complex Systems Research

Networks are so-called "complex systems" that are, unlike random systems, not completely chaotic and thus not completely unpredictable On the other hand they are not regular like predictable physical systems.

Being complex systems, networks are a challenge for research because they cannot be completely explained with the help of traditional reductionist research instruments.
Networks escape the reductionism approach as they are more than the sum of their elements as they are to a large extent defined by the relations (ties) between their components.
Social systems/networks are defined by the relation of their components (group members/citizens) to each other; their interactions influence the character of the network (society, market, group etc.).

Based on mathematical rules, network research tries to describe these complex systems in a natural scientific way. This reminds one of Lewin's field theory, which explains social relations with the help of social, psychological and mathematical approaches.

In its basic roots and assumptions, Gestalt-Theory already showed parallels to network theory. They both neglect the reductionist approach. Wertheimer (1925) developed the Gestalt-Theory and also invented the terms "complex" and "system" to describe the entity and the Gestalt. He emphasised the idea that in certain contexts the properties of elements of a system can be derived from the structural principles of the entity. This idea will later be called structural determinism in Radical Constructivism.

The generation of knowledge in complex systems (e.g. in socio-economic systems) is more of an evolutionary process. Individuals in a network generate ideas, products and services – if they produce beyond a critical mass probably one will stay sustainable. This means that the success and sustainability of the ideas depends on the context (values, traditions, state of development etc.).

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[50] This may be the case in profit oriented collaborations if diversity aspects are only regarded as factors that increase transaction costs.

Brain waves and flashes of inspiration are random-driven processes and cannot be induced or controlled. Instead, the relations of participants in a network can be supported.

Innovation can be described as a development that is sustainable under the pressure of societal selection. A network will be as successful as it is able to foster a critical mass of ideas to enhance the interrelations of these new ideas and developments.

As networks are highly dynamic entities network management cannot steer the development of products as it does in companies or projects, but has to create a fitting frame for the creative development of their members and for the establishment of a stable, adaptive and productive network.

As Kauffman (1993) and Jain and Krishna (2002) pointed out, sustainability in networks can be achieved by constant innovation. New developments (e.g. a new research method, a new product, a new culture) must lead to a rapid adaptation of the system. Network theory calls this phenomenon “autocatalytical circles”, this means that feedback between the players of the network leads to a modification of the network in terms of content, methodology, structure to adapt to innovation. The management of the network (or the innovation management) must have clear ideas about useful (achievable) and contra productive (bad) innovation. Like in management of projects or companies the network needs a clear vision and mission to set up a framework for its sustainable development.

4.6.4.2 Social Network Analysis

Emerging information technologies and new visualisation and simulation technologies fostered the social network analysis (SNA) as the scientific discipline most advanced in relation to network theory.

According to Kratzmair (2005), SNA’s roots go back to mathematic research in 1870 with the development of Number Theory, Algebraic Logic, Boolean algebra and Group Theory, which lead to the Graph Theory, which is the focus of SNA today. At the beginning of the 20th century SNA was developed by Jacob Levy Moreno, Fritz Heider and Paul Lazarsfeld.
SNA is an instrument to assess, analyse and visualise the complexity of social, political and economical relations, thus an instrument to steer network processes.
It reveals opinion leaders, information flows and control over them, analyses flexibility of the system etc. and the efficiency of activities and networking actions, such as:

- Cooperation relations (common research, publications, quotations)
- Formal relations (copyrights, ownerships, background, foreground, IPR[51])
- Communication relations (who, how)
- Economic relations (sponsorships, clients, supplier?)
- Affiliations, memberships.

SNA is based on three pillars:

1. Measuring relations with the help of structural indicators (s.a.),
2. Visualisation of relations (graph drawing techniques, e.g. network maps, hub assortativity, degree diamonds to indicate the hierarchy in a network etc.) and
3. Simulation of relation dynamics via Agent Based Modelling

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[51] Intellectual Property Rights

Measurement of Relations

Classic social science measures the characteristics of agents; network analysis measures the characteristics of the relations with the help of Graph Theory and Group Theory (using matrix algebra).

Traditional social research is based on the assumption that the characteristics of the research objects are independent of each other. In SNA these interdependencies are the prerequisite, the research subject itself. One could argue that action research is also heading for findings concerning the relations of individuals or group members but SNA is doing so by quantitative research.

Networks can be differentiated into different network levels:

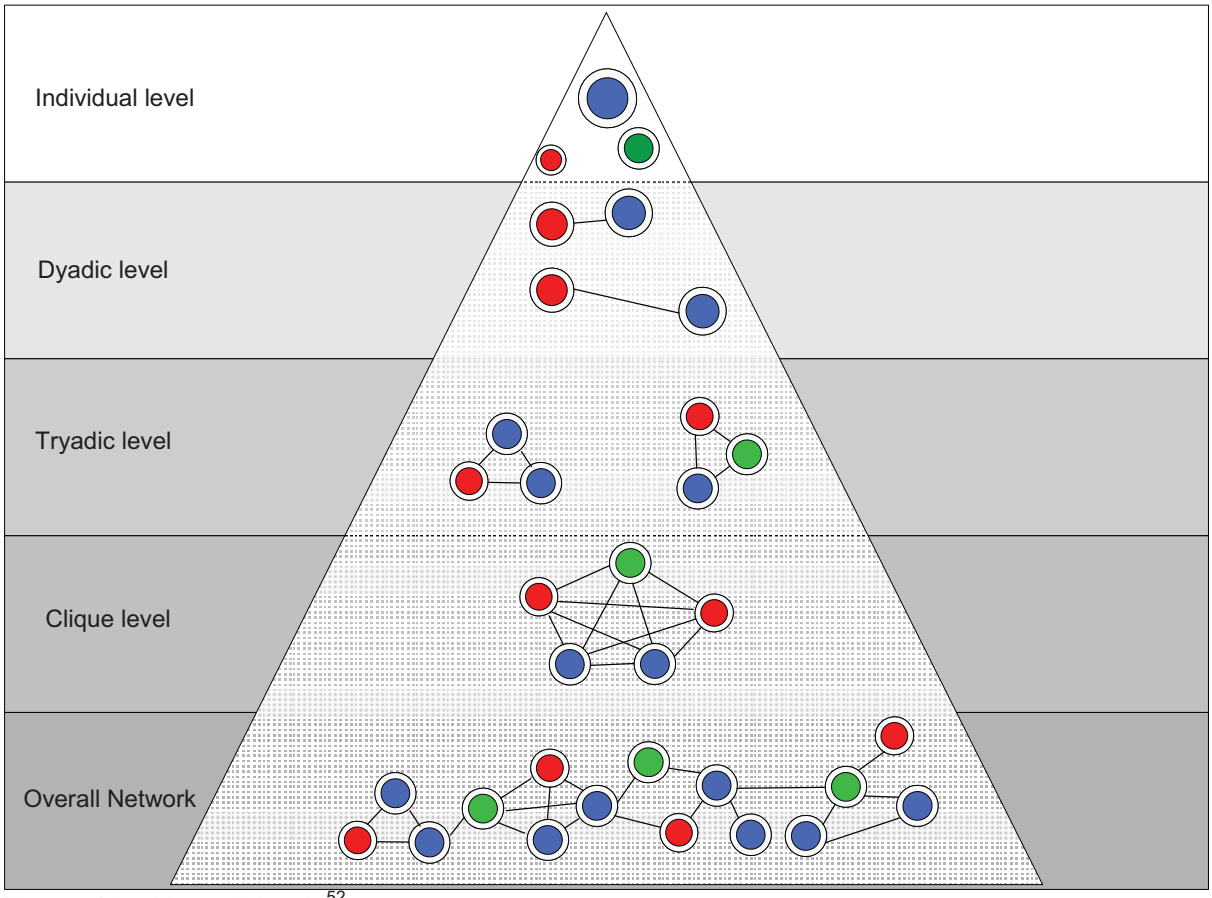

Figure 24: Network levels[52]

The emerging patterns can be measured with the help of special arithmetic operations.

Central stakeholders are those actors in a process that take a more profound position. There are 4 means to measure centrality:

1. Degree centrality: is the number of relations of an individual that indicates the activity of a person (or a group) in a network.
2. Closeness centrality: measures the accessibility to each node in the net. The shorter the distance the higher the closeness centrality and the easier for an individual to reach other members of the network.
3. Betweenness centrality: measures the control over network processes which is indicated by the position between other agents. An agent who is between others can control relations and foster or hamper the flow of information.

[52] Like the following figures 25-28 based on a chart of FAS-Research (2005).

4. Authority weight: measures the influence capacity of the friends, this means the contacts of the nodes of those agents who are in contact with the individual (indicator for the capacity of contacts).

Visualising of Networks

Network maps are instruments to communicate complex information. Since it emphasizes the important points, visualised information is more rapid and it can display relations and structures of relations impossible to communicate with a verbal description (Scott, 2000, Krempel, 1994 and 2005).

Patterns can be recognised; thus, the information (complexity) in the visualisation can be reduced as the brain completes the information.

While statistics neglect the local level, network maps can also analyse local relations in network mapping. This is especially important because knowledge and ideas are generated on the local level in the first place.
As a prerequisite one needs access to relevant data (who is collaborating with whom, for example, or who is working on which topic). Networking therefore needs transparency because protection of information and a culture of hiding information will not foster innovation and collaboration. Especially in the educational sector with limited funding this change of paradigm is one of the major challenges for successful networks.

Simulation of Networks

Network based simulations are mainly applied to establish strategic concepts in research, policy or financial settings and as tools to assist decision processes.
In the framework of SWOT analysis the following questions will be tied with the help of simulations:

- Which are the best strategies to improve the innovation potential of a network?
- Which are the effects of in relation to efficiency and innovation if new actors are integrated?
- Which ties should be strengthened to improve stability and to optimise efficiency?
- At which positions links should be added or deleted to minimize transaction costs?
- How do external factors (e.g. funding programmes) influence the network strategy?
- How adaptive is a network in cases of external shocks (e.g. in case of technology changes, market crashes etc. and modifications on the actor level)?

In agent based modelling each agent receives a certain set of codes of practice to optimise his position in the network in interrelation with other network partners.
These interrelations can be simulated and they offer different scenarios that are related to different objectives of the network.

- *Close strategy*: agents try to close their structures with the help of close local networks (relations)
- *Jump strategy*: agents jump to distant areas to connect with network partners from these regions.

Other stakeholders interconnect at random, without a clear strategy and shift from the close to the jump strategy while others stay passive and only react on invitations.

The choice of the right strategy depends on the network:
In a random network a close strategy is recommended whereas in a highly centralised network (social free network) jump is the better strategy. Especially for outsiders (stakeholders at the periphery of a network) jump is sometimes the only possibility to reach the centre of a network or to establish a new centre.

Those stakeholders that are also in contact with far distance network regions (partners in so-called structural holes networks) are advantaged in case of crises because of their adaptivity and their proximity to new ideas and solutions.

4.6.5 Development Dimensions of Networks

According to Katzmair (2005) networks can be described in relation to 3 inherent development dimensions and their respective indicators:

1. **Stability**
    a. Transitivity
    b. Connectivity
    c. Multiplexity

2. **Diversity**
    a. Entropy
    b. Niche Breadth

3. **Efficiency**
    a. Proximity)
    b. Fragmentarity
    c. Hub-assortativity

Stability Indicators

Transitivity is expressed by the number of direct neighbours of two agents (if only one agent is connected with all other network partners = low transitivity; many partners connected with each other = high transitivity).

Connectivity is indicated by the number of ties that need to be destroyed for the collapse of a network (high number of ties = high connectivity).

Multiplexity characterises different relation levels. If several agents interconnect partners on different (e.g. content related) levels the network shows a higher multiplexity than a network in which only one agent has all the ties in his hand.

Efficiency Indicators

Proximity indicates the average distances (number of steps) in relation to the network structure and the position of the stakeholder (short ways vs. long ways).

Fragmentarity is described by the percentage of stakeholders that cannot be reached via direct or indirect contacts.

Hub-assortativity describes the dependence of the centrality of the total network on the sub-centralities of the main stakeholders who are connected with each other (degree correlation).

Diversity Indicators

Entropy is a means for the number and distribution of stakeholders with different characteristics (properties).

Niche-breadth indicates the utilisation of resources by different stakeholders (e.g. EU-funding programmes).

On the basis of these indicators 4 different prototypical networks can be described differentiated according to their mission:
Research, Development, Production and Dissemination (Diffusion) networks.

Research networks are characterised by a maximum level of efficiency, diversity and stability indicators except a medium level fragmentarity.

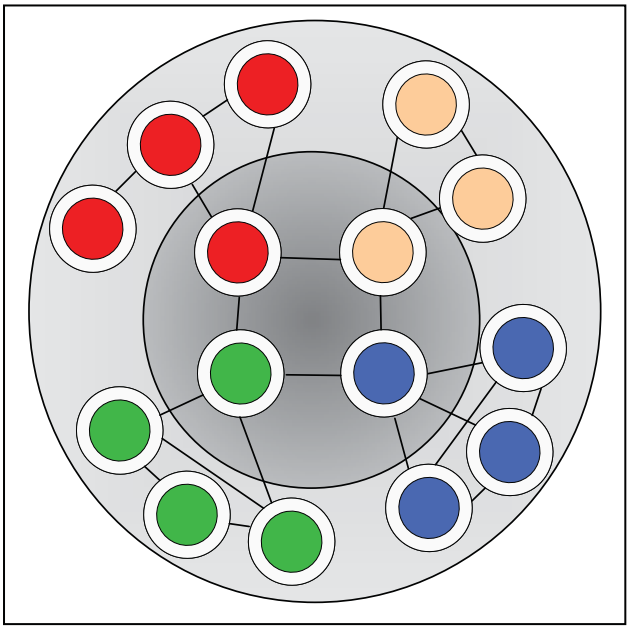

Figure 25: Prototype structure of a research network

It is their strength that the internal diversity leads to a high production of new ideas and the support of research findings and that the coherence fosters trust and the formulation of common goals (e.g. in new collaborative research projects). They show, on the other hand, a high structural redundancy (double production) and, due to their strong internal coherence, they often lack a connection to real life which leads to hampered transfer of research findings into practice. This finding may be one of the main reasons why the European Commission has very much emphasised the collaboration of industry-academia partnerships in the 7 FP[53].

In development networks teams of specialists with a critical mass of competence collaborate in work groups.

[53] Which is e.g. displayed in the new 7FP-Marie Curie Industry-Academia Programme (IAP, 2009 Call for Proposals).

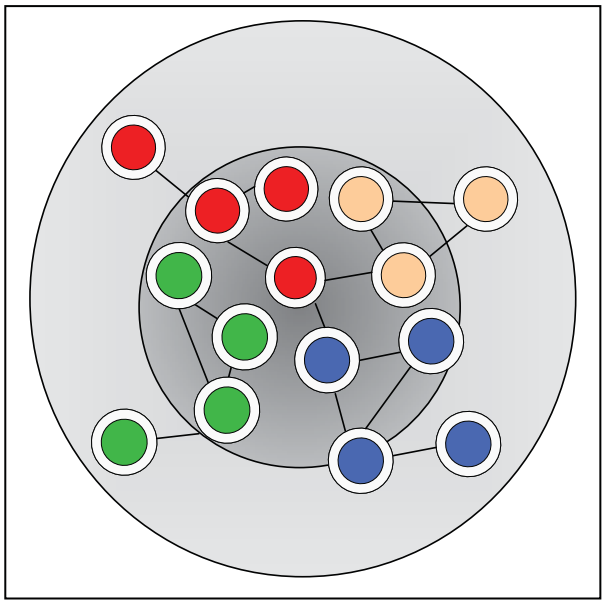

Figure 26: Prototype structure of a development network

They still show high scores in terms of stability and diversity except for the multiplexity criterion (few actors can also induce developments whereas a research network should “exploit” the creativity of as many actors as possible).
In relation to efficiency indicators, proximity and fragmentarity show medium scores (medium distances from one actor to the other) because of intermediate agent structure and eventually different development clusters (fragments). Since there may be different responsible stakeholders for different development areas hub-assortativity is high.
The strength of this structure is high efficiency because of team working and strong local stability whereas long ways between the working teams may hamper effective communication. The network itself is not as stable because failure of certain modules may threaten the whole network. Especially the coordinator in the centre is extremely vulnerable since his performance centrally determines the success of the network.

Production networks are prototypically organised hierarchical to achieve utmost efficiency.

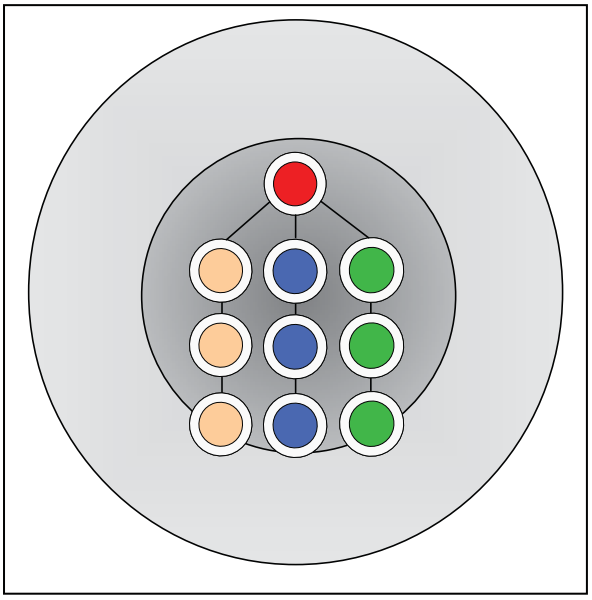

Figure 27: Prototype structure of a production network

They show maximum hub-assortativity and high fragmentation rates whereas the proximity indicator is influenced by long ways[54]. On the level of the characteristics of the network partners they show low or medium scores (entropy and access to resources) and due to their hierarchical structure, low connectivity, multiplexity and transitivity they are relatively instable.
Production networks are characterised by clear production processes, descriptions and distribution of roles and tasks and criteria for success and failure (e.g. balanced scorecard, QM etc.). As described above they have a relatively low stability due to the lack of alternative development pathways and long feed-back loops in case of modifications in the production process or context. Since they are not interconnected production teams that work “in line” cannot organise themselves in case that a higher level is disconnected or breaks down.

Diffusion networks (figure 24) are prototype structures for marketing and selling. They show low values in terms of diversity (indicated by only two colours), multiplexity and fragmentarity.

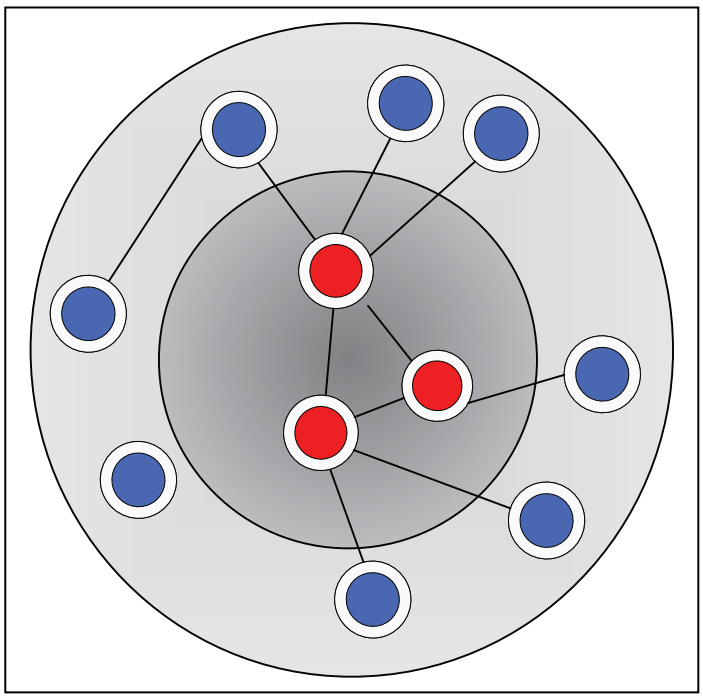

Figure 28: Prototype structure of a diffusion network

In other words: diffusion networks are characterised by missing sub-structures because it is their task to disseminate results or to sell products. In contrast, they show high scores in relation to connectivity and hub-assortativity and maximum levels of proximity (fast diffusion) and transitivity (many partners connected to each other).
Their weakness is the very low connectivity to other branches which may lead to low knowledge of technology or product properties. This segmentation may also be an obstacle for the development of a learning organisation.

[54] One actual example is the instable Airbus production in 4 European countries and/or 54 American states).

4.6.6 Networks in Education

4.6.6.1 Functions of Educational Networks in Lifelong Learning

Networks are an organisational answer to the diversity and complexity of educational needs of the various stakeholder groups of lifelong learning. Their diversified and specific learning needs and provisions lead to the demand for integration of the diverse experiences and approaches.
To form and participate in inter-organisational and personal networks seems to be one answer to the problem of overcoming the fragmentation of the lifelong learning landscape:

- Educational challenges are multi-dimensional and often linked to each other. Cooperation and exchange are needed to tackle them adequately.
- The fields of action in lifelong learning often lack coordination. This deficit is the starting point for networking. Networks aim at improving communication between actors and enabling joint planning processes.

Networks aim to create synergy between different

- Activities (projects, conferences, seminars, research, development of materials, lobbying…)
- Institutions (coordinating institution, partner institutions, commissions, European associations, national networks, public authorities…)
- Professionals (practitioners and managers of the above-mentioned institutions, members of networks).

Networks are supposed to increase the effectiveness and efficiency of learning provision, and contribute to quality assurance. Sometimes networks are even expected to make up for structural deficits and thus become a projection screen for the unfulfilled wishes of the educational community. For this reason some researchers have started to talk critically about the network myth. But even if the expectations with regard to networks are sometimes exaggerated, there does not seem to be a professional alternative to acting in networks.

The motives of educators in joining a network vary considerably, but can probably be put into one or more of four categories (Bienzle 2007):

Personal
Striving for personal enrichment can be a driving force. People want to meet colleagues in other countries, to learn something new, or just break out of the usual work routine.

Political
There may be a strong desire to lobby for certain (perhaps disadvantaged) target groups in education or to promote a branch of learning hitherto neglected by policy makers or the public at large. Values play an important role.

Professional
An attraction can be the wish to improve professional competence or to enhance job performance through getting involved in a network.

Institutional
Membership of the network may raise the profile of the institution concerned. Network agents may even be sent by their institution to represent it at the European level. In some cases the motivation to join a network will be a mixture of the four incentives, in other cases one attraction clearly prevails. In any case, networks are most effective if the people participating in the network and their institutions as a whole expect and receive benefits. The concrete benefits the agents expect are mostly non-monetary and should be explicitly identified.

They may include

- the regular reception of most up-to-date information
- the chance to test innovative learning materials without paying
- a forum for self-presentation and promotion
- contacts for project-making
- advice on particular challenges
- new ideas for improving the range of educational offers
- access to decision makers etc.

The more relevant the expected benefits are for the network actors, the more intense is the commitment to and involvement in the network.

4.6.6.2 Funded European Educational Networks

Even in the limited field of education, the term European Educational Network (EEN) is ambiguous, as it is used for different types of organisational structures. These vary considerably in terms of their formality and organisational stability and range from informal (personal networks) to large scale formal associations like EUCEN, EAEA, EAIE[55].

EEN work within a project-type funding mechanism in the Lifelong Learning Programme: consortia of educational institutions are temporarily funded on the basis of a work programme, attempting to develop network structures which have the ability to endure after the funding period is over. They normally show a rather fragile organisational basis as compared to permanent European associations because they do not constitute a legal entity, but are merely temporary partnership consortia formed on the occasion of the application to the funding programme.

Not being supported by permanent funding those networks begin their work under relatively tight conditions

- European Educational Network needs to develop its structure and implement an ambitious work programme in a rather short funding period of two or three years (plus potentially a possible second funding phase).
- In times of decreasing public spending on education, these networks often rely exclusively on EU funding, and the level of funding is generally speaking felt to be rather low compared with the tasks assigned.
- Moreover, in the case of adult education European networks are sometimes built by partner institutions which lack basic funding for their original activities.

In the main EU funding instrument for education, the European Commission's Lifelong Learning Programme, networks play a prominent role. Network actions are foreseen for all sectoral and also in transversal sub-programmes: LEONARDO DA VINCI (vocational education), COMENIUS (school education), ERASMUS (higher education), GRUNDTVIG (adult learning) and the transversal languages and ICT programmes.

A system-inherent problem already arises on this level since all EU-programmes are mainly funding project activities. This means that the establishment and permanent networking activities are funded in a project spirit - on the basis of project management criteria and indicators.

A project can be defined as a complete planned venture, with defined objectives, envisaged objectives (defined in quality and quantity) and estimated activities, determined by a professional

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[55] According to Bienzle et al. (2007) approximately 1,500 organisations which operate as interest and advocacy groups for their member institutions or individuals call themselves "networks": they are legally established long-term organisations with formalised statutes, regular membership, a yearly budget, and permanently staffed head offices.

resource and time management (Cleland and Gareis, 2006). Regarding these requirements the concept of a project is contradictory to the network concept which is heading for a permanent, stable structure with utmost adaptability in terms of input and output on the basis of changing contexts and working conditions.
Bienzle and his team constantly stress that a network is not a project – nevertheless, the European Commission consequently treats and judges EEN according to project criteria.
As a consequence even the coordinators of EEN sometimes confuse their network with projects and report about severe difficulties to achieve the (rather unclear) objectives for networks on the programme level.

However, networks are supposed to play an important strategic role. There are high expectations with regard to the integrating mission of networks from the side of the European Commission.

According to Bienzle, European networks in education are a multifaceted form of transnational cooperation. In many cases they develop from project to network status.
They are very process-oriented, have complex and multiple aims and are implemented by a diverse set of actors.

Due to its large scale the research *project* ACT showed properties of a research and development *network.* It is about to be merged with related projects[56], thus further developing its network character.

In chapter 6.5.5 this dissertation will focus on the analysis of the relations of the stakeholders in the ACT project since the ties between the partners and the changing structures within the project partnership determined to a large extent the success of the research project.

[56] A collaborative project proposal has been launched in the 2009 LLP-Grundtvig call by members of ACT and an intercultural management project “INTERTool” (www.intertool.eu).

5. Results and Experiences

Description of Outputs and Used Methodology
In the course of the research works, the ACT evaluation approach was tested in 24 different European informal learning projects, so-called ”micro-projects“. This test-run aimed, on the one hand, at getting an insight into informal learning situations in different contexts in Europe and their essential effects on Active Citizenship competence. On the other hand, it enabled the project team to test the developed evaluation approach in practice and thus enabled the team to identify how the approach works out in concrete grass-root projects.
The projects were carried out in the following domains:

- Knowledge and activities about home cities, cultural patrimony
- Community (neighbourhood) development activities
- Combating domestic violence
- Informal youth actions
- Environmental protection
- Culture and Arts
- Sports education
- Language learning
- Project management activities
- Didactic and methodological competences related to blended learning
- Extracurricular school activities.

Target groups addressed were (among others):

- Members of deprived neighbourhoods
- Pupils and students
- University students
- Youths; organised and self-organised
- European educational personnel
- Victims of domestic violence
- Unemployed persons
- Migrants
- Large scale public audience in case of a large scale event
- Disabled persons
- Women from rural areas.

Out of 24 projects, 14 were described in detail according to a standardised structure (target group, project activities etc.). In the second part of these reports, project impact and the application of the ACT evaluation scheme were highlighted. Each project concluded with a discussion of its evaluation results and a development of perspectives for the further work with the ACT methodology[57].
In an empirical approach an evaluation of the usability of the ACT-evaluation-system was carried out. The approach was consisting of two parallel strands:

- a quantitative questionnaire clustered in x segments to answer relevant quantitative questions (e.g. related to demands of time and resources) and
- a qualitative open question part in which the evaluators were asked to describe their experiences and highlight strengths and weaknesses of the ACT approach

to derive an overall picture of the acceptance and the usability of the ACT-approach[58].

Outputs of this double approach are quantitative results and statements about:

- Usability and feasibility
- Effort, required resources and acceptance
- Necessary pre-knowledge and skills of staff
- Transferability to other projects and learning activities.

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[57] 14 project reports are added in the appendix to this dissertation.
[58] The questionnaires are attached in the appendix.

In depth experiences and lessons learnt by the partners in all the projects were derived from the individual experience reports[59] developed on the basis of preformatted questions in relation to the same 4 criteria:

1. Feasibility
2. Efforts
3. Preconditions
4. Transferability and perspectives.

In the following chapters summary descriptions of one exemplary project per country will be presented (5.1). The results of all projects are summarised and discussed in chapter 5.2.1 and partners' experiences in relation to the ACT approach are evaluated in 5.2.2.
Results of the collaborative development and networking approach will be highlighted in chapter 5.3.

5.1. Summaries of Micro-projects

In the following one exemplary micro project per partner country will be summarised according to setting, objectives, basic learning characteristics, outputs and evaluation. The evaluation method will be shortly presented together with their lessons learnt in reference to the ACT approach. Detailed project descriptions and project posters are provided in the appendices to this dissertation.

Project 1, Poland
Holidays in the Sailing Boats

The project team in the Centre for Continuing Education in Sopot cooperated with experts from the local "Caritas Youth Centre" in Sopot who carried out a summer camp for disadvantaged youngsters in Bóbrka and the project "Holidays in the Sailing Boats".

Abstract/Summary
The main aim of the project was to organise holidays in sailing boats for children from dysfunctional families from Sopot. The participants learned sailing and kayaking and how to organise their free time purposefully. Some of them could take part in the exam for the sailor's patent.

Rationale/Background
According to the Polish experts the project developed the following citizenship competencies:

- Learning activity in general and about the democratic structure of the local self-government
- Becoming aware of the value of free time and how to use it in a reasonable way
- Negotiations
- Entrepreneurship
- The project also showed European aspects since 2 volunteers from other European countries were engaged in the activities.

Target Group and Context

- Direct target group: children at the age between 11 and 17 coming from dysfunctional families (poor, with no custom of organising time for children during holidays)
- Indirect target group: youth leaders
- Group size: 50 children.

Objectives

- Organising active time for children who spend their holiday in town
- Teaching them sailing and kayaking
- Preparing older participants (14+) for the exam for the sailor's patent

[59] Experience reports are added in the appendix.

- Combating social exclusion
- Helping integration and assimilation
- Developing children's skills, competencies and knowledge
- Giving the youth leaders the opportunity to acquire knowledge about the needs of children and ways to work with them.

Informal Learning Activities
A group of 50 children took part in the activity. Small groups of 8 to 10 children came every day, supervised by the Sopot Match Racing Centre. The most active children had the opportunity to attend a professional training in the Sailing Club in Gdynia. Young people who attended the training had to do some boatswain's work with the redecoration of boats. Young people also had to cooperate with representatives of two clubs/discos for youths in Sopot and to negotiate the possibilities of hiring necessary equipment, place or guards.

Evaluation
To assess the project the following tools were taken from the ACT Assessment Toolbox:
- participants' feedback and
- interviews[60]

leading to a comprehensive report for the Municipality Office that financed the activity.

Results
All project's objectives had been achieved by including young people in being active during their leisure time, and encouraging their entrepreneurship. The project was identified as an example of good practice – easy to use, interactive for learners and accessible for a range of them, adaptable to different languages. It also provided opportunities to evidence citizenship and social competence.

Project 2, Bulgaria
Socialisation of Long-Term Unemployed through adapted Sports Games and Physical Activities

Abstract/Summary:
The University of Gabrovo carried out evaluations using the ACT approach. One of the evaluated projects called SOCUNEMPLOYEDSPORT was carried out in the framework of the SOCRATES (Grundtvig) programme and was initiated with a view to the European Year of Education through Sport 2004. The project aimed at using physical exercise as a pedagogical tool for acquiring social skills and higher level of activity on civic issues. The training system was envisaged to help long-term unemployed adults to develop social skills through practicing adapted sport games so that they can achieve more active life styles and better physical fitness, which in turn will motivate them to search for jobs.

Rationale/Background
Long-term unemployed adults suffer most both in terms of employment and social opportunities. They live in a world of their own where they are inactive observers of society and the labour market which results in a low level of motivation, self-respect, responsibility, self-confidence, self-expectations and psychological well-being. This leads to their isolation (personal, social and employment), inactivity, both physical and social. Therefore, there is a high demand for a comprehensible training system which can help those people acquire certain social values so that they can easily integrate into society and thus improve their emotional state, flexibility, self-respect, and self-efficacy, which, in turn, will lead to better social contacts, employment opportunities and personal achievements.

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[60] The Polish team used instruments that were described in the "ACT toolbox".

Target Group and Context

Direct target group: Long-term unemployed

Indirect target group: Adults with a low level of physical fitness; short-term unemployed; students having a low level of physical fitness. Special characteristics: low level of motivation, self-confidence, self-awareness and integration skills; high-level of stress; threatened of diseases because of their inactive way of living (very often problems with obesity), inactivity at all levels.

Objectives

- To develop an activity and training system for socialisation of long-term unemployed adults through adapted sports games and physical activities;
- To develop a methodology for assessing social skills and the level of physical activity;
- To promote social values through physical exercise;
- To create social contacts outside home environment;
- To increase the level of health and fitness;
- To increase employment opportunities, recreation activities and social endeavours;
- To promote cooperation among social partners, local authorities, universities and training organisations;
- To promote trans-European cooperation.

Informal Learning Activities

The training process was carried out within the period 15.05.2006 - 20.07.2006 in Bulgaria. It was organised by BORO, an Agency for Human Resources Selection, which is responsible for the selection of trainees, and by the Technical University of Gabrovo (Coordinator), which is responsible for the provision of teachers/trainers and sport facilities, as well as for the very training. Two sport trainers and one teacher in sociology and psychology were involved in the teaching process in Bulgaria.

The training system was based on 3 course books (Adapted Team Games, Adapted Individual Games, Artistic Physical Activities) including descriptions and rules for the adapted sport games and physical activities, a self-study kit (printed and CD-ROM) and a methodological guide for teachers/trainers.

The course was designed for 10 weeks – 2 sport sessions + after session + social skills exercises a week.

Actually, there were 10 weeks of training, 2 sessions a week (a total of 20 training sessions). Each session included sport activities (in particular adapted sport games) followed by social skills exercises.

Evaluation

The evaluation process was carried out according to the assessment methodology approved by SOCUNEMPLOYEDSPORT partnership at their third project meeting in Portugal and the ACT. evaluation methodology. Seven AC competencies (topics) were selected for the evaluation of the whole group and the methods of data collection were chosen from the ACT toolbox: together with other evaluation methods (observation, group discussion, case study etc.) tests or questionnaires are used obligatory. The questions were oriented to help evaluators to assess the objective state of the trainees and the whole group in order to be related to the most suitable level on the three dimensions. At the beginning of the training, trainees were more motivated to participate actively in the sport sessions rather than in the social skills activities. However, as the training advanced, the trainees got more and more interested in their work on social skills. According to the Bulgarian team leaders[61] reported at the end of the training that the Project Socialization Training System reached a very good balance between sports and key competence training.

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[61] The Bulgarian experts reported on the basis of interviews with learners.

Project 3, Romania - Defending Women's Rights – between USE and ABUSE
Training for volunteering students of law and journalism for carrying out monitoring activities

Abstract/Summary
The training was initiated within a larger project called "Defending Women's Rights: Between USE and ABUSE!". The teams of volunteers were involved in the monitoring activity of the media and justice system in order to observe how both systems were dealing with the issue of women's rights. Trainers were specialists in the area of women's rights, media and law. The training aimed at increasing awareness regarding human rights issues on the one hand and on the other hand the willingness and capacity of participants to be actively involved in activities that contribute to the development of an awareness and responsibility for the issue of women's rights in public institutions.

Target Group and Context
The target group consisted of students of law and journalism, aged between 18 and 25 years. The participants wanted to be involved in NGO work as volunteers. They mostly had no work experience in the area of women's rights and no information on methods of defending them.

Rationale/Background
The activities referred to knowledge on women's rights, legislation, methods of getting involved and influence (control) mechanisms. The trainees learned how to proceed and to interact with official institutions and within the working group. The training promoted a proactive attitude of taking initiative and not waiting for others to act.

Objectives
1. Providing knowledge and instruments for working with and for monitoring public institutions with responsibilities in defending human rights.
2. Promoting teamwork in developing activities

Informal Learning Activities
The training mainly used group work methods. There were some introductory presentations combined with practical experiences and case studies. For the teamwork and cooperation aspects exercises were specially integrated in the training. Other activities included role plays, debates, thematic discussions and presentations.

Evaluation
The following topics were chosen from the ACT inventory: institutional knowledge, cooperation, obtaining and using information, orientation towards change, willingness to accept diversity.

Results
The methods used were: questionnaires, observation, quizzes (tests), document analysis. Students participating in the training programme significantly improved their knowledge about legal institutions regarding procedures and competencies of legal bodies. The viability of the information acquired was also reflected by the appropriate completeness of the monitoring sheets (level 4). Evaluation results showed that students proved a good level of cooperation and the capacity to obtain and use information. Satisfactory competencies were appreciated in relation to the orientation towards change and willingness to accept diversity.

Project 4, Germany - Children Finding Their Way Around in Their Hometown

Abstract/Summary
The project was initiated to support and empower children of migrant families who are taking part in a language training course offered by the University of Göttingen. Within this context an excursion to the historical city centre of Göttingen was organised as an extra-curricular activity. The

children learned to use compass and map in order to find their way to certain places in the city on their own while solving a quiz. The project was supposed to give the children more confidence in finding their way around, make them more familiar with their home town and thus strengthen their identification with the city they live in.

Target Group and Context
The project was aiming at children of migrant families who take part in a language training programme carried out by the University of Göttingen. The group consisted of five children at the age of nine to ten. The children were familiar with their immediate neighbourhood but did not know other areas of the city. They were eager discover more places but lacked confidence and courage to explore them on their own.

Rationale/Background
Germany is the home to some 15 million people having a migrant background. Integrating them is one of the key tasks of society. In addition, several studies show that formal education does not reach children of migrant families adequately. Informal education can thus be a valuable contribution in addition to formal education for these children. The project facilitated active learning and improved skills which are essential for these children to become fully integrated and active members of society.

Objectives
- Learning to find a way independently
- Discovering regional distinctions of the city
- Strengthening the children's autonomy and self-confidence
- Improving communication and cooperation
- Promoting the children's identification with their home town

Informal Learning Activities
The children took part in an extra-curricular excursion to the ancient city centre of Göttingen. They learned to use compass and map in order to find their way to certain places in the city on their own while answering a quiz. The activity was prepared by the project team who informed the parents, prepared the material and explained what the children needed to know. In the follow-up the children had the possibility to give their feed-back.

Evaluation
The project was evaluated by the project team, assisted by a team from the University of Göttingen. Overall questions of the study were:
- What do children learn when exploring their home town on their own?
- Which competencies will be promoted through the project?
- Which effects can be observed?

The evaluation focused on the topics:
- Cultural knowledge
- Communication
- Cooperation
- Independence
- Obtaining and using information

The aim of the evaluation was to find out what the children had learned in the fields mentioned above. The evaluation was conducted via observation by the project team. The project leaders accompanied the children's group but the children acted independently. The inormal learning evaluators made notes which were analysed subsequently and evaluated the quiz after the activity. The results were transferred to the IAS system.

Results
The project was well received by the children. The children really enjoyed the activity and the group cooperated very well. They found their way without any help from the project team. Through the project the children experienced a feeling of success. They were enabled to find their way

around in the city on their own. This strengthened not only their self-confidence but also their interest in the regional distinctions of the city. When local history was addressed at school they all achieved good results in their exams. The evaluation with the IAS system shows that learning took place in each of the fields mentioned above.

Project 5, Turkey
Evaluation of Impact of Curricular and Extra-Curricular Activities on AC Education

Abstract/Summary
The Turkish project team from the METU[62] acted as a control group, which also included formal education evaluation.
Their study attempted to answer the question if values of active citizenship can be acquired for lifelong practices through formal education as a curricular and extra-curricular academic agenda. Participants were the teachers and the students at the Foundation Primary School at METU; approximately 289 students from the 6th, 7th, and 8th grade; and 22 teachers from different social sciences subject areas. Learning took place through both curricular (citizenship and human rights course curriculum) and extracurricular (projects like Eco Schools and Bridge of Civilizations; planned extra curricular social skills activities like team work, inter-cultural role playing) courses, which lasted for a semester. Data were collected through both quantitative and qualitative methods. Findings indicate that students learned in a more meaningful and effective way in terms of transferring their knowledge about active citizenship into their daily life through extra curricular activities.

Rationale/Background
There is a growing international consensus on the importance of citizenship and human rights education as a means to raise consciousness about these values and promote a democratic culture. Although there were some drawbacks in practice, Turkey has taken an important step by formulating its National Plan of Action in citizenship and human rights education in 1999 and introduced “citizenship and human rights education” courses in all primary schools; this gained especially importance with the Copenhagen Criteria.

Target Group and Context
Primary school students attending ODTÜ/METU GELİŞTİRME VAKFI ÖZEL İLKÖĞRETİM school in Ankara. The school is a foundation school on METU campus.

Purpose
This study attempted to answer the question if values of citizenship and human rights can be acquired for lifelong practices through formal education; it also served to evaluate curricular and extra-curricular activities. The curricular activities that were conducted are rooted in the program of the human rights and citizenship education course, whereas extra curricular activities are rooted in several projects such as “guidance hours,” “sharing hours,” “The Civilization Bridge,” and “Echo Schools” activities. The purpose of education through extracurricular material and the human rights and citizenship course was to train students to become conscious and responsible citizens who are respectful, and sensitive towards others and the environment.

Process
Active citizenship training was conducted in two phases as can be understood from what was said above: curricular and extra curricular.
Phase 1: evaluation of the “human rights and citizenship education” courses in grades 7-8 (curricular activities and the program)
Phase 2: evaluation of extra curricular activities in social studies course and on-going project work. In other words, the evaluation of the following dimensions in the school program:

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62 METU: Middle East Technology University, Ankara.

a. Sharing hours
b. Counselling hours
c. School clubs,
d. On-going projects: ECO schools, social studies fair, Civilizations Bridge: Anatolia, Act!, Active Citizenship Training.

Evaluation
Multiple means for data collection were utilised to collect data:
- Document analysis of students' work and concept maps
- Observations (field notes based on class activities and project work)
- Interview with teachers/students/school project coordinator
- Questionnaires for students and teachers.

Results for Curricular Activities
Evaluators concluded that achieved results were satisfying in terms of students' outcomes like self-expression, self-esteem, social skills like cooperation, awareness about active citizenship, enacting in civic contexts, and willingness to accept diversity.
Results indicated that through curricular activities students developed their knowledge and skills in three dimensions, cognitive, activity and affective, of most of the topics/competencies in active citizenship education. In the cognitive dimension, students reached a distant understanding level in cooperation and management as well as an implicit understanding in self-esteem; in the activity dimension student showed deciding/selecting behaviour in cooperation, management, interaction and tolerance; in the affective dimension they indicated empathetic concern in management, tolerance, the willingness to accept diversity and in interacting in a civic context.

Results for Extra Curricular Activities
The METU experts concluded that extra- curricular activities may be effective in the development of active citizenship especially in activity dimension as well as cognitive and affective. In cognitive dimension students reached distant understanding in institutional knowledge micro level, cultural issues, communication, cooperation and conflict solving. In activity dimension students reached deciding/selecting level in institutional knowledge micro level, cultural issues, communication, cooperation, conflict solving, and interaction. In affective dimension, students showed empathic concern in cultural issues, decision making, management and tolerance.

Results and Conclusion
Students developed the following skills and attitudes other than academic knowledge: expressing themselves; obeying social rules such as the rules of traffic; increased self-efficacy; holding a high self-concept; developing social skills such as empathy building and communication; building awareness of differences and values in their social milieu which are likely to be reflected into the larger society and globe; developing sensitivity towards global values and the natural and ecological environment through taking various actions. METU's study findings highlight the importance of the participants' age. In other words, although the Turkish team members found that curricular and extra curricular material has an impact on developing active citizens, the participants of this project were in the middle of their formal operational growth, and it is common for them to have egocentric behaviours which makes it difficult for them to transfer their knowledge, skills, and attitudes outside the school contexts.

Project 6, Sweden: New Try – Swedish Language and Civics with Computer Aid

Abstract/Summary
The project aimed to gain knowledge about Swedish language and society by developing the participants' language ability in order to give them better skills in everyday life and increase their chances to find work. Another objective was to give the participants means to become more active (citizens).

The jobcentre offered them this possibility to study in order to help the participants to find a way out of long-term unemployment.

Target Group and Context
The participants were unemployed immigrants, six women and six men between age 30 and 60, who had a background of low formal education and whose language levels varied.
They had been living in Sweden for many years but were not integrated in Swedish society. The course was one of the courses offered by Swedish Folk High School in Gothenburg (AFIG). The duration was 15 weeks and the participants could continue for one school period or more.

Rationale/Background
A large part of the immigrants in Sweden were (and still are) long term unemployed. They have a poor knowledge of Swedish and some of them also have reading and writing difficulties.

Objectives
In the course AFiG worked with Swedish vocabulary, grammar and spelling. They also worked with civics in a practical context in order to make everyday life easier; this included, for example, how to find phone numbers, read timetables, consumer law and how to look for work and to write a CV and a personal application. Newspapers have been used in the course as an everyday tool to understand what was happening in the surrounding society and worldwide.
Computer studies are included in the course to learn how to use the computer as a support for spelling and to find information on the Internet. The participants also learned how to handle various compensational computer programs.

Informal Learning Activities
- Active group discussions about articles in newspapers
- Discussions concerning the participants' life situation
- Individual discussions to make individual "Action Plans" for every participant
- Making study visits to museums, libraries and community institutions.

Evaluation
Three participants were assessed against the following topics:
- Institutional knowledge on macro level,
- Communication,
- Cooperation,
- Decision making,
- Endeavour/achievement motivation,
- Self-esteem,
- Empathy,
- Knowledge about life and situation of others,
- Obtaining and using information,
- Enacting in civic contexts,
- Participating in community,
- Willingness to accept diversity.

At first the AFIG team tried to use questionnaires but they showed poor and insufficient results due to a lack of understanding.
As the team did not trust the answers to the questionnaire, they used observations for assessment carried out during a group-painting, a discussion on tolerance, on one occasion when the group went for lunch together and on one occasion while the group was refurnishing the classroom.

Conclusions
The Swedish project team contributed much to the development process since they pioneered the utilisation of approach and the evidencing system in a sort of case study for a "very difficult" learning group showing only very small learning steps.

Since the general scales were much to general for their learners they induced a very fruitful discussion about resizing the scales to the context and the abilities and competence levels of the target group. The outcomes are described and theoretically discussed in chapter 6.3.4.1. This extreme example contributed much to the ACT approach because it gave reason to the idea that a standardisation (or a formalisation) of competencies or levels of competence with regard to difficult target groups is not useful and feasible. In addition, it underlined that ACT should not create a kind of "virtual objectivity" by using decimals pretending that citizenship competence can be assessed and displayed by a numerical (empirical) approach.
After a modification of the scales and a repetition of the testing phase in December 2007 the cube was also applicable for this group.

Project 7; Latvia: Women from Rural Latvia Learn Project Planning and Development

Abstract/Summary
The aim of the project was to promote the ability of women from rural Latvia in project planning and elaboration. Thirty women of the Vidzeme region (one of 4 historical regions of Latvia) took part in a 48-hours training programme called "The fate of the country lies in our hands" (analysis of present situation, setting of aims, target group and activities etc.) and in a summer school (sharing of experiences, brain storm, ideas for new projects etc.). The evaluation of this project showed that the civic activity of women from rural areas and their willingness to change the present situation had been growing during the project period of 8 months.

Target Group and Context
The association of Rural Women of Latvia was founded on the 28th November, 2000. Its objectives are to facilitate woman from rural areas to receive education as well as information and to coordinate inhabitants of rural areas and national institutions. The association is comprised of 245 officially registered women organisations and 50 unofficial women clubs. All in all, the association has 4000 members. In the present project 30 women of the Vidzeme region took part.

Rationale/Background
After Latvia's joining of the EU, many of the EU funding sources were available and used for the development of the whole country as well as specific regions. Well planned and elaborated projects are an excellent possibility to receive funds for rural development and to empower the activity of the citizens in these rural areas. The Latvian team leaders therefore reported about a large demand to activate people from rural areas, especially women, to take development projects "in their hands".

Objectives
- To define the needs of women in rural areas,
- To promote their civic activity,
- To strengthen the belief in themselves,
- To develop cooperation skills,
- To recognise the need of changes in the local society,
- To recognise the needs of other groups and see the solution of problems,
- To select useful information,
- To recognise the impact of their projects,
- To share experiences and to produce new ideas.

Informal Learning Activities
- 48-hours training programme called "The fate of the country lies in our hands" (tests, project elaboration and presentation)
- Training material
- Leaflets (information about experience made as well as results and consulters)
- Summer school (exchange of experiences, deciding on follow-up of this training program)

Evaluation
Methods: interviews, observation, document analyses, questionnaires, group work, reflective diary.
Chosen Competencies: institutional knowledge macro level, cooperation, orientation towards change, knowledge about life and situations of others, obtaining and using information.
Leading Question: How will the civic activity of women in rural areas and their willingness to change the present situation change during this project?

Results
The evaluation of this project showed that the trainees knew the institutions which can help to solve their actual needs and where they can receive advice. The civic activity of women in rural areas and their willingness to change the present situation had grown. The cooperation between women in rural areas developed on a level of increased intensity. Regional development in Latvia was positively impressed as new funding could be acquired for projects developed by women teams in rural Latvia.

Project 8, Italy; Monumenti Aperti – Open Monuments

Abstract/Summary
Monumenti Aperti was founded in the late 1990s by a self-help organisation of Sardinian youngsters (Imago Mundi). In the last decade Monumenti Aperti developed to one of the most successful culture tourist events in Sardinia exceeding for the first time the number of 200,000 visitors in the year 2007. Monumenti aperti functions as an informal learning event for students who take over the patrimony of one building – presenting it to the Sardian public (and to an increasing number of tourists in the last years).

Target Group and Context
Monumenti Aperti was focusing on two possible target groups:
- *young people, pupils, volunteers;*
- *visitors.*
In particular, one target group was a class of students (30 pupils, average age of 12 years) of the junior high school "E. Zuddas" of Dolianova (Cagliari). On the other hand, the Italian team decided to verify the impact of *active citizenship* on the visitors on a wide scale: 1,000 questionnaires were the results.

Rationale/Background
Pupils, volunteers and associations (freely and spontaneously) used the initiative to sensitise all the people on the value of the cultural goods and the historical, archaeological and cultural patrimony of their own city. In this sense, Monumenti Aperti has been a way to involve citizens and stimulate participation in civic life.
Prior to the event, training courses for volunteers were provided to develop the knowledge and methodological skills. Such courses have been the object of intensive study and evaluation. Visitors as active citizens formed the second learning group.

Objectives
The aim of the project was to develop the interest of young people in their cultural patrimony, to protect and value it and at the same time to develop their consciousness to belong to a community.

Informal Learning Activities

Imago Mundi provided training courses on Monumenti Aperti, Open Monuments. The course was structured in five learning units for volunteers, teachers, public administration workers and pupils. Every learning unit contained different documents and learning material which explained how to plan and carry out the event adequately in a target oriented way.

Results

Being a concrete and involving experience, Monumenti Aperti helps youngsters in discovering their cultural patrimony, in using their own individual resources to acquire information on the territorial reality in which they live and making them conscious of the aesthetic, cultural, educational and social aspects of the environment, of the urban context and of the historical scenery they live in.

Concerning the evaluation on active citizenship, major difficulties were to choose the right methodology and to choose it in respect to the evaluated focus groups. Considering that Monumenti Aperti is a major event with different levels of participants the Italian project team tried to use quantitative assessment methods for their visitors on a large scale.

Concerning this target group the results remained behind the project teams expectations. As Imago Mundi was mainly interested in measuring the impact of Monumenti Aperti on their large audience, the setting of their evaluation seemed difficult since visualisation of large group competences on Active Citizenship still need further considerations and development works.

It remains doubtful whether quantitative methods can be applied to evaluate the impact of such an (informal) event on a large group of visitors.

However, important results and experiences on feasibility and usability were delivered, especially as creation of awareness for evaluating and planning of informal learning events is concerned.

Project 8, The Netherlands Gés Barbecue

Project Description (Background/Rationale)

In 2005 the Dutch government appealed to social organisations to propose ideas in order to improve social cohesion in the communities of the cities.

The background to this appeal was a tendency in the Dutch society for people to show less confidence in each other, to be not open to other groups and of a hardening climate.

One of these social organisations was LSA, a national union of collaboration of “attention neighbourhoods” (deprived neighbourhoods).

Together with housing associations it started the project “CAN DO”. The project CAN DO uses the ABCD strategy, Asset Based Community Development. This strategy is not problem related, but it stimulates the capacity and knowledge of inhabitants themselves. It uses the opportunities and means available in the neighbourhood.

In the Netherlands a pilot project started in 2006: in 15 cities within 15 month 12 community-based initiatives of the inhabitants themselves were realised with financial and personal support. In every city a community coach operates, who acts as support for “active” citizens who want to realise ideas for the sake of their communities.

The idea must be new in the neighbourhood, the activity must benefit more groups than just their own and it must be realistic. Together the groups investigate whether the idea is feasible or how it can be made feasible. Each group can receive a maximum of €2500.- for their idea. The community coach supports the inhabitant to realise their idea, but they are responsible themselves. They own the project. It can be an activity which takes place only once or which is sustainable. Then the coach helps to find other local means or support.

In 2007 Jikky Dinçelek-Lettinga from the ACT partner CESO who worked as a community coach in Eygelshoven evaluated a micro project carried out by a 60 years old lady (“Gé”) for her community.

Informal Learning Activities

She had the idea to organise a barbecue for her neighbourhood - for the new and old inhabitants, for the adults and the young ones - and activities for the children. She wanted to organise it at the

neighbourhood playground, hoping that there would also be more volunteers coming to help in the playground in future. Gé had no idea how to organise such an event. Together with her coach she planned the event step by step and she realised her own possibilities. The barbecue was a great success. One hundred and twenty people came to the event after which the atmosphere in the neighbourhood improved.

Evaluation Topics
For the evaluation the following topics were chosen:

- Institutional knowledge at the micro level (e.g. for permissions etc.)
- Communication (she had to communicate her event at different levels)
- Tolerance (due to different ethnic groups in the community which might become a crucial obstacle in case of certain sorts of meat)
- Empathy (taking into account the impact of certain activities to different groups)
- Willingness to accept diversity (very important for the migrants as new inhabitants)
- Participation in community with others (Gé needed support and to interact with other community members)

Results and Experiences
The added value when using the IAS was described as follows:
The development of the reference system had been a learning process for the responsible persons themselves. Although time consuming, it created consciousness about what coaches and trainers were doing and what they intended to achieve. Since the evaluation of different topics was related to three different dimensions, awareness of the impact on each of the distinct dimensions can be realised. The coach was “very happy that she could see the impact of the Can Do programme on active citizenship, and what active citizenship means for the individual and the community.
The results generated from the IAS system were much more profound and gave more information about the individual. It made the results visible for everybody involved in the programme and also to the financial sponsors.”

5.2 Results of the ACT Evaluation Approach

The ACT approach was applied and examined in a variety of different European learning projects. The results of these evaluation activities provide an insight into different learning settings and their implications for the development of Active Citizenship competences.
The results of the project assessments and evaluations are summarised in the following chapter 5.2.1 while in chapter 5.2.2 the experiences with the application of the ACT approach are reported and discussed. Chapter 5.2.3 gives a report on the experiences made in the transnational networking and collaboration processes.

5.2.1 Results of Micro-Projects

The evaluation of the ACT micro-projects revealed many examples of proven practice in informal learning. In all projects competence development towards Active Citizenship took place.
The achieved outcomes were based on different project activities and a broad variety of methodologies.

For the evaluation different topics of the inventory were evaluated. The partnership agreed upon choosing at least one topic from each section in the inventory in the test-run to ensure that a broad variety of topics could be evaluated. In practice, this was actually not possible in every case, even though every team eventually chose at least five competencies all in all.
Almost all topics were chosen at least once (except of ”decision-making“, “conflict-solving“ and “empathy“. Two topics were additionally added (“blended learning design“ and “environmental protection“). Therefore, the concept of an open inventory turned out to be very useful. Future prac-

tice-research should work out whether further topics should be included as fixed elements or if individual topics can be dropped[64].

The following table shows an overview on the topics which were chosen in the projects[65] described above for each section:

Topic	Number of choices
1. Civic knowledge	
Institutional knowledge macro level	**2**
Institutional knowledge micro level	**8**
Culture	**2**
Special topics for instructors: blended learning design[66]	**1**
2. Soft skills	
Communication	**8**
Cooperation	**4**
Decision-making	**-**
Negotiation	**1**
Expression	**3**
Management	**1**
Endeavour	**1**
Conflict solving	**-**
3. Basic attitudes	
Orientation towards change	**3**
Self-esteem	**5**
Tolerance	**4**
Empathy	**-**
Achievement motivation (ambitious, disinterested)	**2**
Dependencies (independence!)	**1**
4. Attitudes towards other groups	
Knowledge about life and situation of others	**4**
Willingness to interact with people from other groups	**1**
Willingness to accept diversity and neglect discrimination	**3**
5. Analysis of learners' civic activities	
Getting and using information	**7**
Interacting in civic contexts, social group situations, institutions and projects (engagement)	**4**
Participating in community with others	**5**
Environmental protection	**1**

Table 8: Inventory

Firstly, what can be concluded from these results is that the inventory contains topics which are relevant in different settings of informal learning. Some topics seem to be more relevant to many projects whereas others are only of minor importance.

The most relevant topics of each section in this sample were:

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[64] In the follow-up project "ACT-NET" this question has intensively been tackled from 2009 onwards.
[65] With exception of the Turkish projects.
[66] Good didactic design for informal learning projects.

Topic	Number of choices
1. Civic Knowledge	
Institutional knowledge micro level	**8**
2. Soft Skills/Key Competencies	
Communication	**8**
3. Basic Attitudes	
Self-esteem	**5**
4. Attitudes towards other Groups	
Knowledge about life and situation of others	**4**
5. Analysis of Learners' Civic Activities	
Obtaining and using information	**7**

Table 9: Most relevant AC topics

Civic Knowledge Part
The civic knowledge part is determining the area of work of the grass-root organisations. The fact that most (more than 60%) of the partners selected the topic "Institutional Knowledge on the Micro Level" indicates that most of the projects are rooted in the local area and that the necessary citizenship knowledge of the beneficiaries refers to issues, stakeholders and organisations on this small scale level.
The two projects with "Institutional Knowledge on the Macro Level" were specified by the subtopics: "rights, duties and possibilities on the labour market" and "knowledge and attitudes towards new demands of society connected with changes in ethno-demographic content of society". They referred to the Swedish project for long-term unemployed and a Latvian project for educational staff on bilingual education[67].
In other cases, civic knowledge is related to cultural and environmental issues.

The *specification of the topics* (leading to describable subtopics) is evident for the validity and for the success of the approach.
An example from the 4th meeting in Cagliari may highlight this statement: a new evaluating person was introduced with her own project about management competence for women in rural areas. In a common work group process, an assortment of relevant topics was compiled. After choosing "institutional knowledge on the macro level" there was a long and rather unsatisfying discussion about what could be the stages of the referring reference system on this topic. In a moderated development process, the group found out that the specific relevant subtopic was the knowledge about funding programmes that could support small scale development projects on the local level. On the basis of these fundamental considerations ("what is it exactly what you want to bring about?") the newcomer was able to establish a perfected auto-evaluation system up to the next meeting within a period of 2 months.
This example underpins the principle of a selection of a relevant topic from an inventory and a refining of these citizenship topics (competencies) on the basis of the concrete demands of the beneficiaries.

Key Competencies
The majority of the projects chose "communication" (44%), together with "expression" (17%) – two topics that are related to verbal skills and the capability of expression.
Topics like "management", "negotiation" and "endeavour" play a less important role and "conflict solving" and "decision-making" were not selected by the partners. Even if each citizen should be able to make decisions, the selection reveals that this competence is of minor importance in the researched groups.

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67 These are rather exceptional project settings in relation to target group and their specific living and working situation. The projects also showed explicit learning objectives in relation to the knowledge of macro-structures in society thus representing a more formalised learning approach.

The findings show that for the experts (intermediate persons) communicative skills are the most important key competencies for their beneficiaries.

Basic Attitudes
In comparison to the first and the second category the distribution of topics in the category “basic attitudes” is rather equal. The item selected most was “self-esteem”, followed by “tolerance” and “orientation towards change”, still two partners headed for “achievement motivation”.
Interestingly enough “empathy” was not selected. It may be considered that “empathy” is already included in the affective dimension thus being already included in the rating of every topic.

Attitudes towards Other Groups
Not every partner selected a topic from this category. Attitudes towards other groups are obviously not relevant for every project and target group. 50% of the partners chose “knowledge about life and situation of others”, whereas only one project specified on the topic “interaction with people from other groups”.

Civic Activities
Like in the basic attitudes category there is a rather equal distribution of selected topics. Most frequently “obtaining and using information” was selected which indicates that this topic is of major importance for the selected target groups and that the ability to gather information is a central competence for the learning citizens in these informal contexts.
Together with the selection of “institutional knowledge on the micro level” it reflects the idea of grounded grass-root projects that are vivid in their local surrounding.

5.2.2 Application of the ACT Approach in the Micro Projects

The evaluation test-run in the micro-projects provided a basis for a collection of experiences by applying the ACT methodology in different fields of informal learning. The ACT practice-partners reported in their descriptions about benefits and obstacles of the approach.
In the following, these experiences are summarised and discussed. In order to receive an additional and also more systematic feedback with regard to the application in the micro projects two evaluation instruments were additionally applied in the partnership:

1. A quantitative questionnaire
2. A pattern for an experience report[68].

The quantitative questionnaire includes the following sections:

- Usefulness/helpfulness
- Practicability
- Effort
- Transferability
- Pre-knowledge and skills of staff

Each section contains statements which can be rated on a scale from “very much“ to “not at all“.

The pattern for experience reports includes the following sections:

- Usability and feasibility
- Effort and acceptance
- Pre-knowledge and skills of staff
- Transferability

Each section includes leading questions which aimed at assessing detailed aspects with regard to the different sections.
The results of both assessments, which were carried out in the last phase of the project, are taken into account in the following considerations.

5.2.2.1 Feasibility and Usability

The ACT approach could be applied successfully in all projects in the ACT partner’s contexts. Many partners achieved satisfying results when applying the ACT evaluation methodology. This is reflected by the following exemplary statements from the experience reports:

> *“The results obtained during the application of the IAS-approach are definitely positive. The development of an appropriate Reference System makes possible the elaboration of tests, questionnaires, interviews, etc. which comprise precisely directing questions whose answers allow the individuals or the group to be referred to the respective level of the 3D system. Applying this approach at the beginning and at the end of the training provides us with a clear picture in relation to the level of active citizenship achieved as a result of training.”*
>
> *“It was very satisfying. Describing the results made them more visible.”*
>
> *“The system brings out the dimensions that are difficult or even - impossible to detect in other ways.”*

[68] Please find both instruments in the appendix.

The ACT partners consider the approach to be helpful in a variety of aspects. The majority of them agrees for instance that IAS helps the project personnel to justify their work, to improve their work processes and develop their competencies (see figures below; all figures: n = 10) .

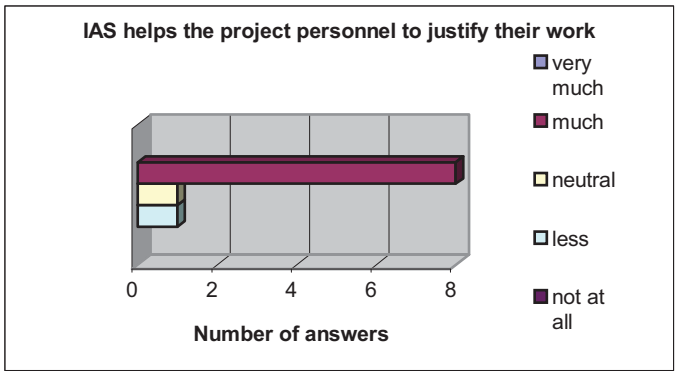

Figure 29: Statement: justification of work

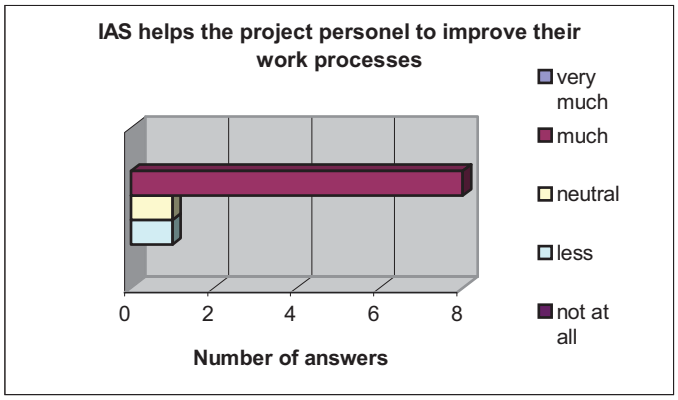

Figure 30: Statement: improvement of work processes

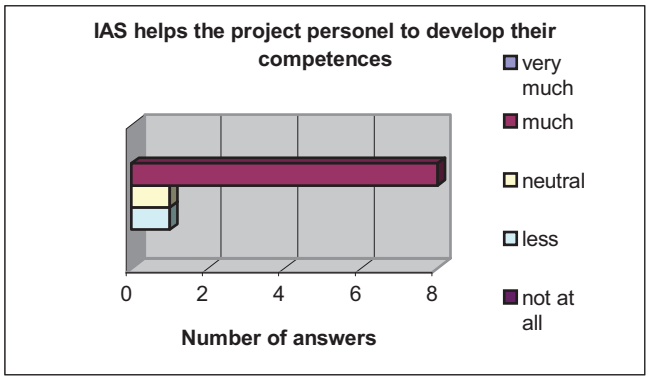

Figure 31: Statement: competence development of staff

In general, the approach seems to be quite understandable to the project partners:

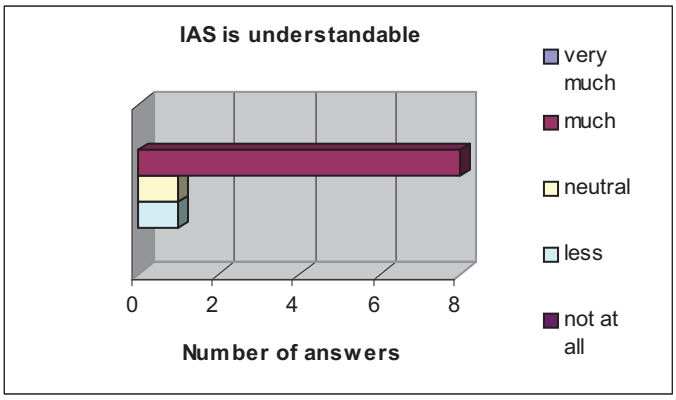

Figure 31: Statement: comprehensibility

Areas of improvement mentioned in the experience reports were mainly the rather abstract language and the high documentation effort.
Many partners therefore suggested that counselling would be needed when using the system even though it works faster when people have some routine.

"Consultancy is needed, because it's an complete new way of measuring and identifying results" (Exemplary statement from the experience report)

"We think that external consulting is needed when using the IAS-system, you need guidance the first times you carry out an assessment. You learn the system by using it, and after working with it for a while you are able to work out more refined assessment-tools." (Exemplary statement from the experience report)

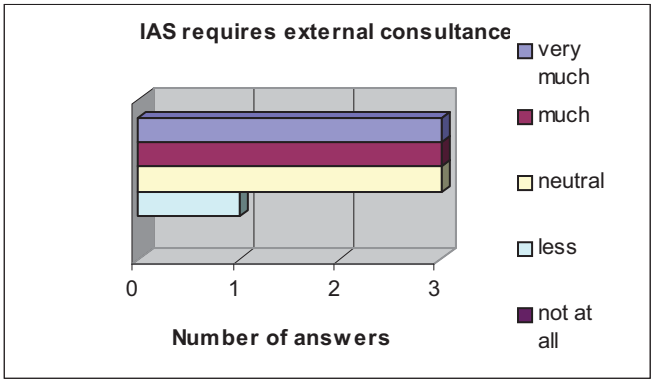

Figure 32 Statement: requiring external counselling

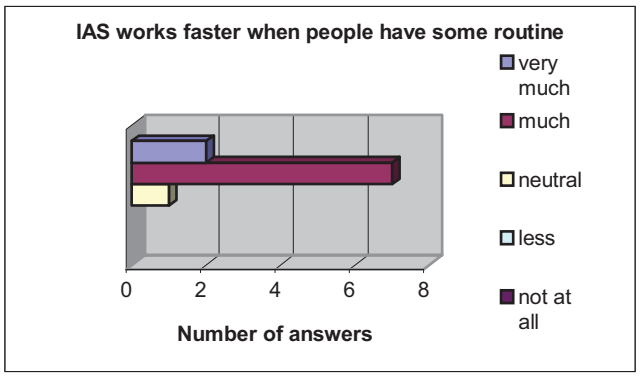

Figure 33: Statement: effect of routine

Further suggestions refer to reducing the number of instruments and improving the clarity of the software. Help-tools are considered to be less important by many of the partners, whereas some also put importance on this issue (see figure below).

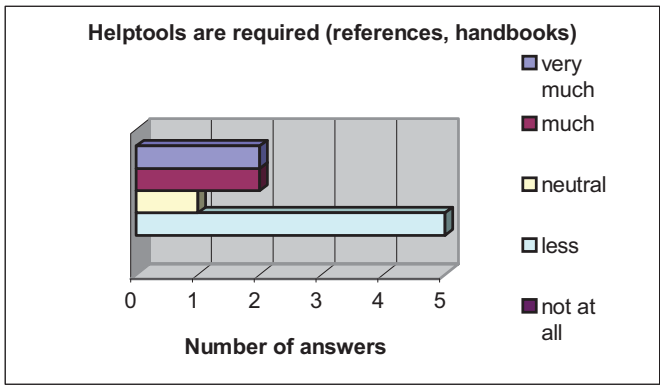

Figure 34: Statement: requiring help-tools

5.2.2.2 Effort and Acceptance

Most responding partners strongly agree that the IAS approach affords a a large amount of effort (see figure below).

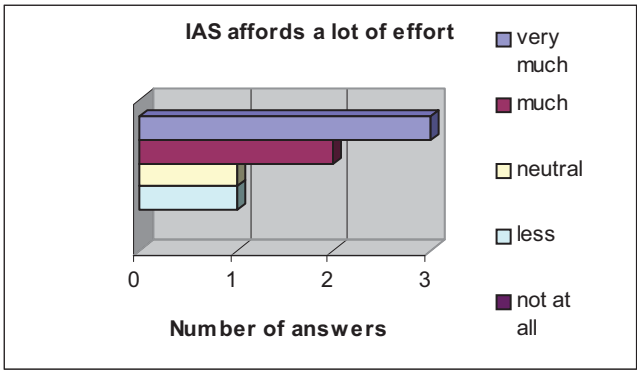

Figure 35: Statement: effort

However, how this effort distributes in time to the different working steps differs considerably from project to project:

	Number of answers				
Hours	1-2	3-4	4-8	8-16	16-24
Required time for the selection of the relevant topics	5	4	-	-	1
Required time for refining the topics	3	2	3	-	2
Required time for completing one 3D-system for 1 topic/competence	2	2	5	1	
Required time for assessments	3		2	4	1
Required time for inserting data of 1 person per competence (3D)	6	1	2		

Table 10: Required time for procedural steps

According to the experiences in the partnership certain individual steps were especially time-consuming and difficult (e.g. the creation of the reference system). Although in the end the input-

output ratio was considered to be satisfactory by most of the partners, the acceptance of the grass-root project personnel was ensured. This is exemplarily reflected in the following statements:

"We learnt that it is necessary to spend much time on choosing the appropriate topics and also to define subtopics that are relevant to the group. We also learnt that to find out the best measurement tools/methods is a crucial part of the work. You have to synchronise the tools with the descriptions in the scaling of the topics." (Exemplary statement from the experience report)

"The most difficult step was the developing of reference system." (Exemplary statement from the experience report)

"We think that in general the system possesses a good input-output ratio, but we should not forget that the developing of a reference system for each new competence/topic and for each new target group requires considerable efforts and time." (Exemplary statement from the experience report)

"We think that input and output ratio is adequate". (Exemplary statement from the experience report)

"The teachers appreciated the project and our efforts. Input-output ratio was satisfactory." (Exemplary statement from the experience report)

"The efforts for the grass-root project leaders are high, but compared to other systems (QM) they are comparatively low. But still it affords a good convincing work to create a positive attitude towards this extra work. Once finished most of the stakeholders appreciated the effects, especially as the software can give evidence." (Exemplary statement from the experience report)

5.2.2.3 Pre-Knowledge and Skills of Staff

Although the ACT project partners see that the application of the system requires pre-knowledge in a variety of areas, they are also convinced that it can generally be applied by staff from projects in the field (see figures below; n = 10).

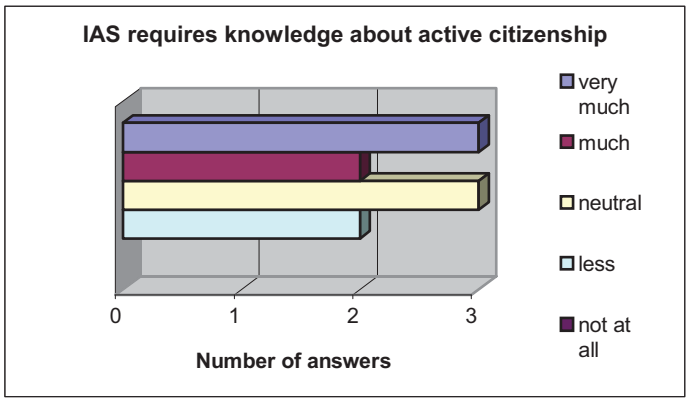

Figure 36: Statement: required AC knowledge

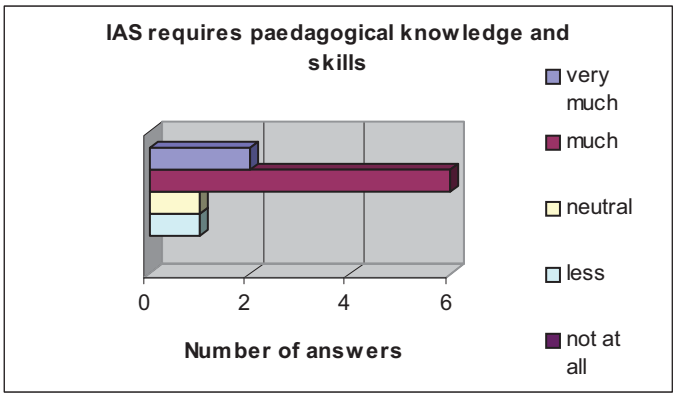

Figure 37: Statement: required pedagogic-knowledge

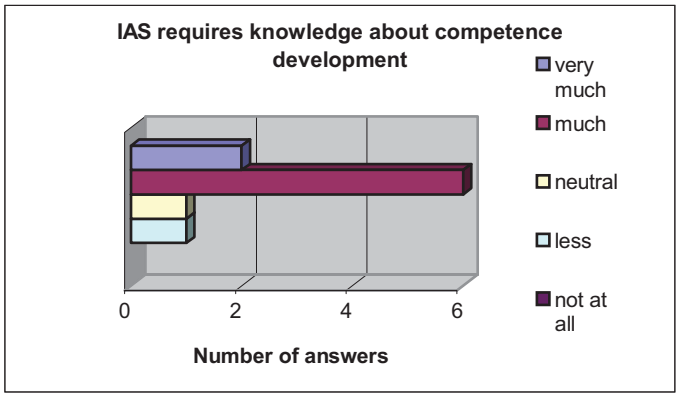

Figure 38: Statement: required knowledge on competence development

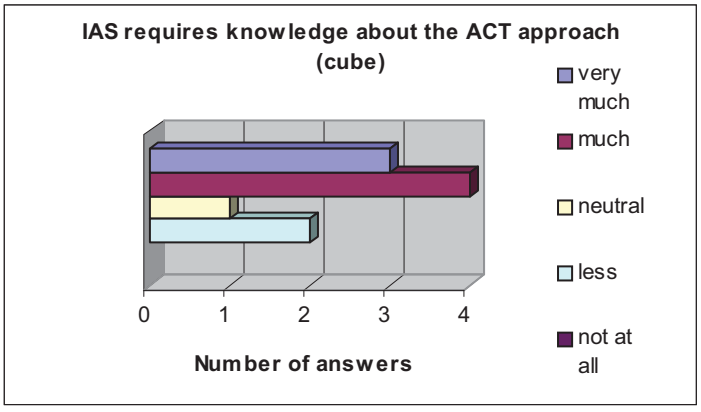

Figure 39: Statement: required knowledge on ACT approach

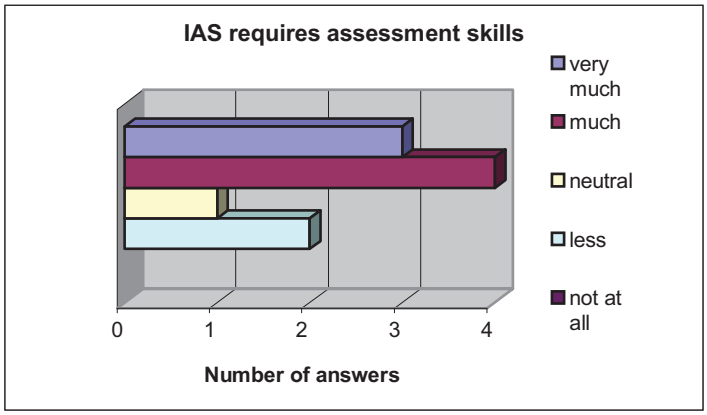

Figure 40: Statement: required assessment skills

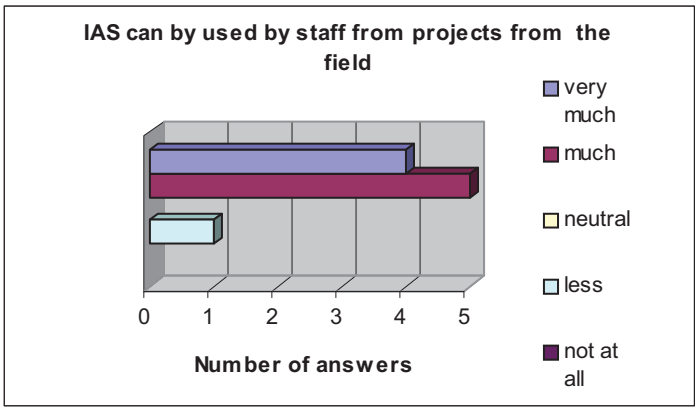

Figure 41: Statement: usability for project personnel

This tendency is also reflected by some statements in the experience reports. In addition, some partners suggest in this context that a counselling or training offer would help with getting acquainted with this system:

> *"In order to utilise the three-dimensional approach, stakeholders need an in-depth understanding of measuring knowledge, attitude, and activity before they describe the reference system or behavioural objectives for their evaluation report."* (Exemplary statement from the experience report)

> *"They should be aware of the existing evaluation methods. In addition to that, they should be able to create their own evaluation instruments. Even though some participants might not have any work experience in the IAS area, they can take part in a special training that can teach them how to apply the IAS method." Exemplary statement from the experience report)*

> *"They need specific competences and have to be acquainted to this abstract way of thinking. This can be done by counselling first or by a training course."* (Exemplary statement from the experience report)

5.2.2.4 Transferability

Some partners already transferred the approach to other projects. They are mainly convinced that the system can be applied in other fields of their activities or in their region/country and that it has a perspective in social or educational projects:

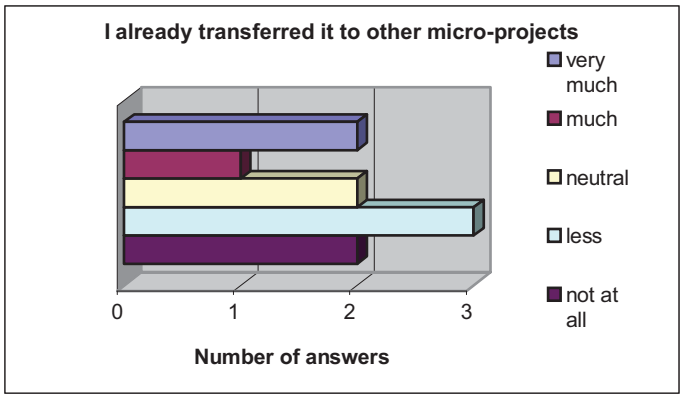

Figure 42: Statement: transfer to other projects

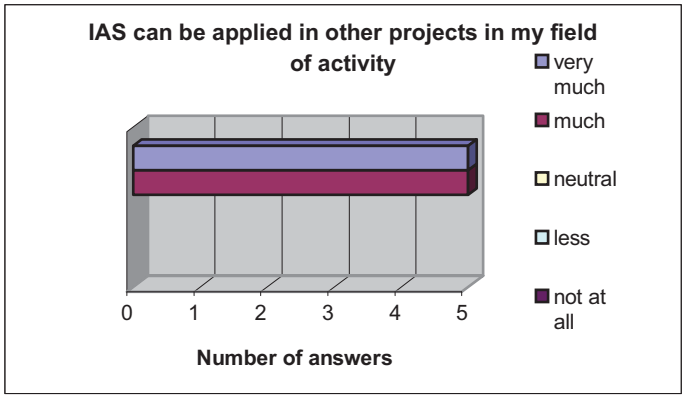

Figure 43: Statement: hypothetical transferability

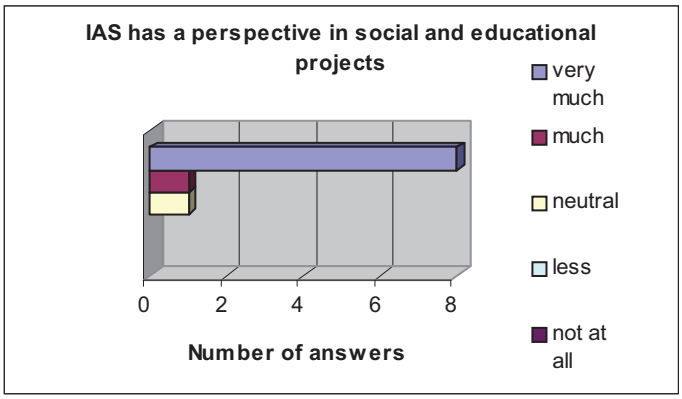

Figure 44: Statement: sectoral potential of IAS

In the experience report many partners additionally mention the high flexibility of the system:

> *"The flexibility of the model makes it possible to adapt the system to different kinds of target groups." (Exemplary statement from the experience report)*

> *"We are convinced that the system is flexible enough to describe practically every situation if its characteristics are taken into consideration in the respective reference system." (Exemplary statement from the experience report)*

> *"The system is flexible since it is adapting to our institution because until now, we had few specific instruments for the victims. The IAS system allows its users to adapt to the target groups." (Exemplary statement from the experience report)*

> *"No limitations at all because of the open frame (inventories and individualised reference system)." (Exemplary statement from the experience report)*

Limitations are mainly only mentioned with regard to the people who apply the system who should have sufficient (pre-)knowledge:

> *"As mentioned earlier, the reference system is easily transferable to other projects. Nevertheless, when evaluating the levels and describing competencies it is important that the evaluator has some theoretical and practical background on dealing with evaluation for collecting data with respect to knowledge, attitude, and activity." (Exemplary statement from the experience report)*

> *"Limits lie in the competency of the evaluators, or rather in the consultants." (Exemplary statement from the experience report)*

"The system is flexible but time consuming – and it needs people who had a special training to carry out the method." (Exemplary statement from the experience report)

These last statements hint at the learning and training of informal evaluators and educators. In this connection Eisner stated in 1985:
"Educators have to become critics and connoisseurs."
He explains *connoisseurship* as the art of appreciation whereas *criticism* is the art of disclosure.
Consequently, "the critic must learn his or her evaluation craft" (Smith 2001, 2006).
Following this idea as major elements of the project's valorisation strategy counselling and training offers shall be developed (chapters 6.5.3.2 and 6.5.3.3).

5.3. Collaboration in the framework of the ACT Project

The collaborative processes in the framework of the project shall be highlighted from two perspectives. In the first part of this chapter the results of the process evaluation will be described and interpreted. The process evaluation was developed and carried out on the basis of a parallel dissertation by Jutta List-Ivankovic in the Pedagogic Seminar.
The second subchapter will analyse and interpret the ACT partner networking structure and partners' relations on the basis of Social Networking Analysis principles.

5.3.1 Results of Internal Process Evaluations

Introduction: Intercultural Team Management

Before describing the group processes, the emotional states of the participants (the likes and dislikes) and the satisfaction with the project products in ACT; a short presentation of a management methodology called TCI - Theme-Centred Interaction - shall introduce the topic of intercultural team management:
TCI is an interaction model for groups and teams and was developed in the early 1960s by the psychotherapist Ruth C. Cohn.
TCI is characterised by a holistic approach and is being used in different professional fields such as education, personal and organisational development, coaching, consulting management and others.
The *"4 factors",*

- I
- WE
- THEME and
- GLOBE,

are the overarching factors of the TCI system.
Each factor has an interactive relationship with the other. According to Cohn team management should consider the *4-factors* throughout the planning and working process, especially during meetings.
The aim of TCI is to achieve individual and collective efforts and cooperation within the team.

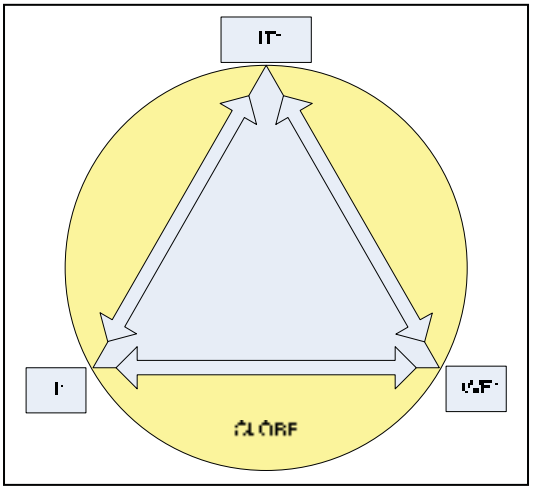

Figure 45: The 4-factor model of TCI[69]

Theme/IT	refers to a specific goal or task a group or team share[70],
I	refers to each individual in the team or group,
We	refers to the group or team as a whole, it changes with the change of participants, including time and space,
Globe	means the surrounding circumstances of the individual and the group as a whole[71].

The reflection on a specific situation or phase of the project under the perspective of the 4-factor model of TCI helps to take into consideration professional, personal, organisational and dynamic factors within team-interaction. It helps to realise goals through integrative participation of all team members by taking into consideration their possible resources. It helps the leader and the team members to be sensitive about changes or irritations with regard to one of these factors. It also helps to conduct the project through a dynamic balance between individuals, team, tasks and the surrounding circumstances.

The process evaluation carried out in ACT was a methodology to witness the 3 factors within the triangle (I, We and Theme). The first four evaluations rather concentrated on the "I" and "We" perspective while in the fifth evaluation the "Theme" perspective as well as the project deliverables (outputs) were included.

The major (exemplary) results of the process evaluation shall be highlighted in the following.

Process Evaluation 1: February and March 2006 (n=15)

In this period participants were satisfied (60%) or even very satisfied (20%) with the project. 20% rated the project as being "ok". In detail they rated the contact between the partners, the management as well as the transnational meeting as "very good" and "good".

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69 adapted from Ruth C. Cohn in Scaccia (2001).

70 In the case of ACT referring to the set targets, expected outputs and activities in the application.

71 This means the individual context, may it be the organisational situation or the position in the local environment and, in case of ACT, the European context of the project team, for instance in relation to the European Commission or the research community etc.

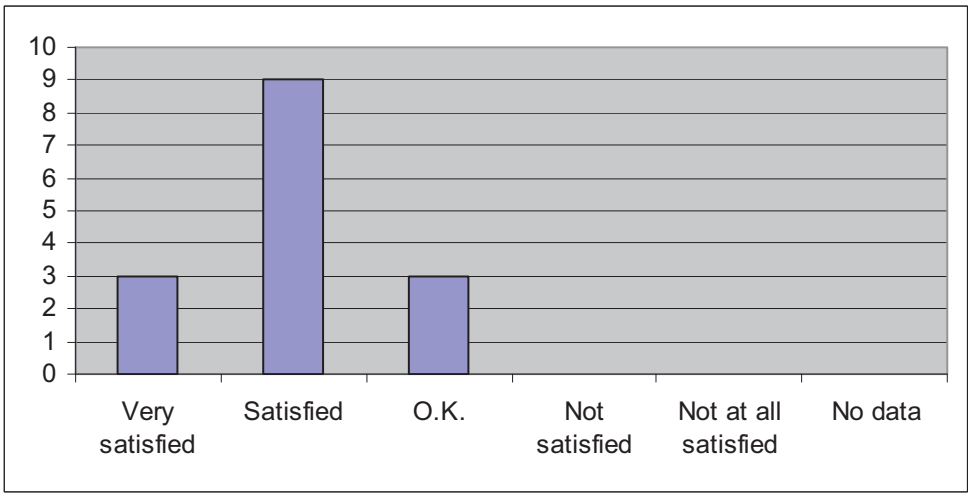

Figure 46: Question 2, overall satisfaction with the project (process evaluation (PE) 1)

The partners liked the management, the partnership and topic itself, the contact to the partners and the discovering and learning of other projects in Europe. They liked the diversity in the group and to exchange experiences. They appreciated the good working atmosphere and the high level of thinking.

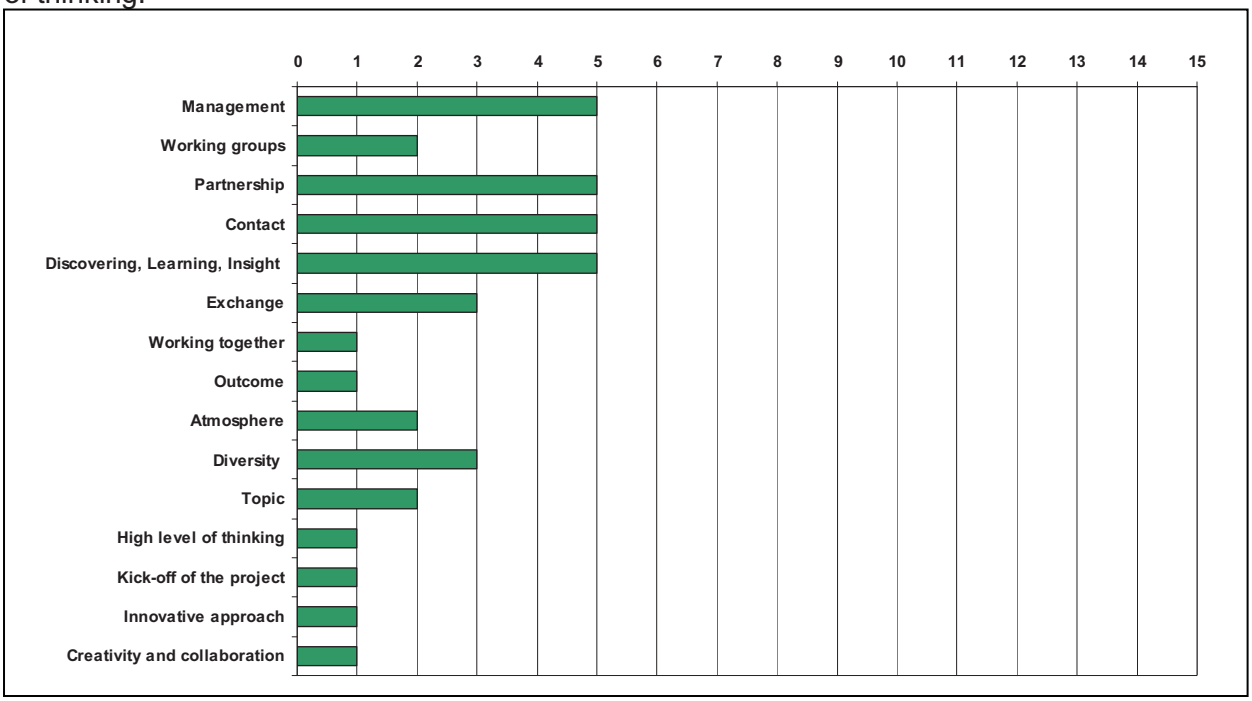

Figure 47: Question: What have you liked so far? Process evaluation (PE 1)

In the following the partner stated that the project should rather focus “on practice and practical experiences”.
Some participants are of the opinion that the communication and contact beyond the meetings as well as the working on the Learning Management System should be optimised.

At this early stage the project already had a highly positive influence on the partners. They especially mentioned the fact to have new partners in Europe, they considered “the network as very promising” and they reported to learn about active citizenship and to receive a “lot of new ideas and experiences” and a “broader perspective”. The participants appreciated the international communication and the mutual enriching.

After the transnational meeting in Göttingen (February 2006) the participants knew more or les what their partners were doing, but they still wanted to have more information.

As a working language, English was “no problem” or “okay” for most of the partners and did not seem to be a barrier for communication.

The partners expected concrete tasks and targets for their work in the project and for the preparation of the meetings and asked for “communication beyond meetings”.

Process Evaluation 2: July and August 2006 (n=13)

In this period participants were satisfied (39%) or even very satisfied (31%) with the project. 23% rated the project as being “ok”.

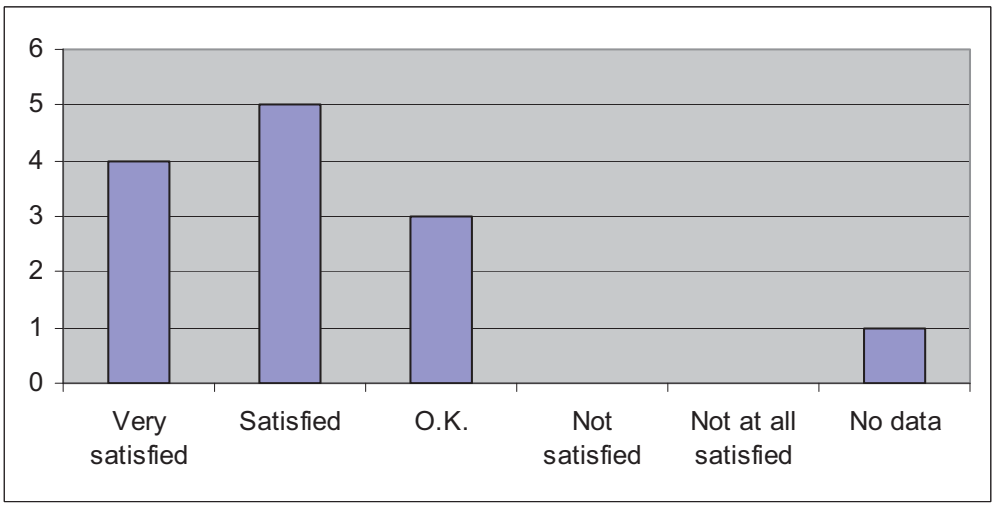

Figure 48: Question 2, overall satisfaction with the project (PE2)

In the second period participants again rated the overall progress of the project, expressed by the contact between the partners, the management as well as the transnational meeting as “very good” and “good”.
So far, the partners especially liked the good working atmosphere in the team and the commitment and involvement of all partners. They valued the good collaboration and cherished the exchange of ideas, knowledge and experiences. They also liked the outcomes and the progression in the project.

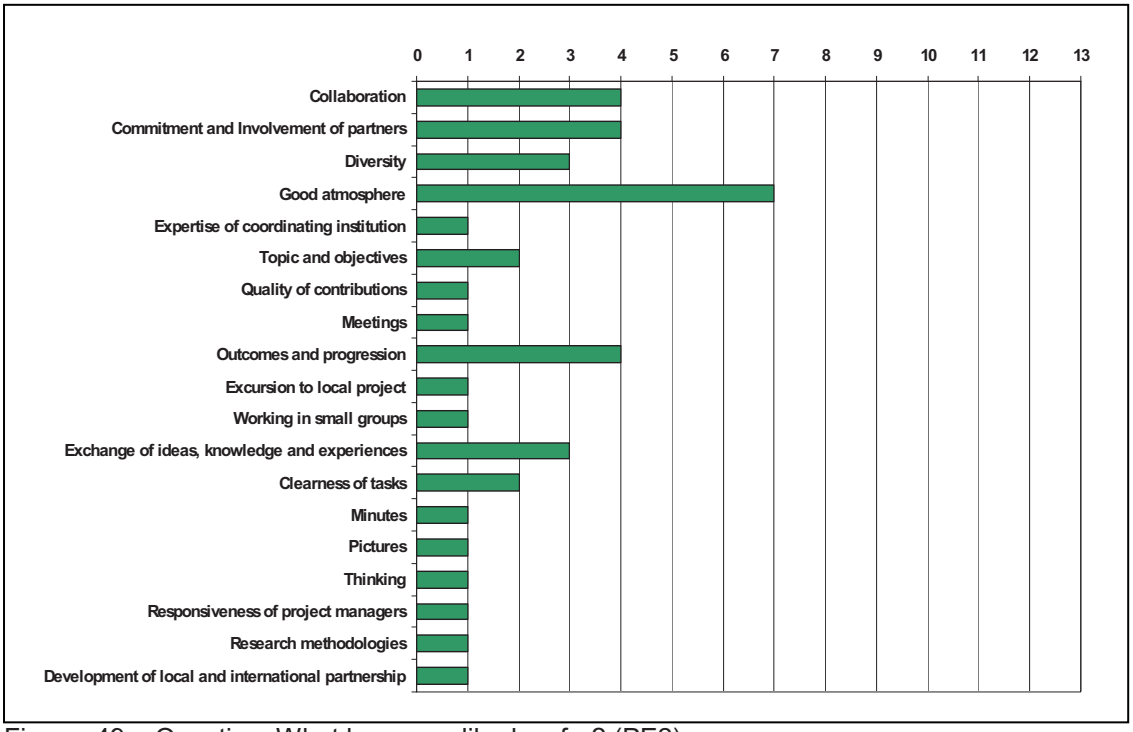

Figure 49: Question: What have you liked so far? (PE2)

The partners reported that the project had a many positive effects. They mentioned especially the "learning about new approaches and methodologies in the field" and "new dimensions how to analyse and evaluate AC". The participants appreciated the "complex and multifunctional definition and explanatory model of AC" that was finished in this stage.

At this point the participants knew approximately what their partners were doing, and wanted to know more about some products or tools they could share with the team. They were interested about the progression in the other work groups.

Process Evaluation 3: November/December 2006 (n=12)

Four partners are "very satisfied" (33%), seven are "satisfied" (58%) and only one person rated the project satisfaction with an "O.K." (8%). This rating points at an improvement of satisfaction in relation to the previous periods.

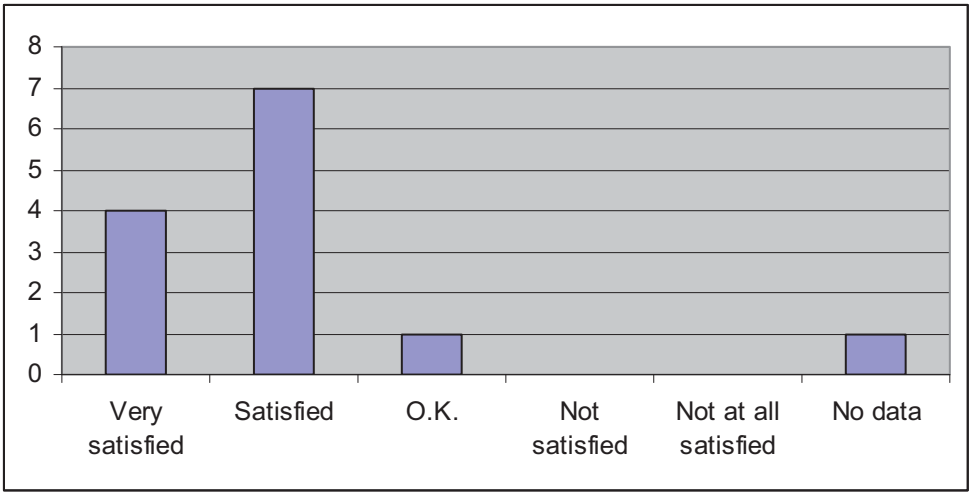

Figure 50: Question 2, Overall satisfaction with the project (PE3)

So far, the participants especially liked the partnership itself (42%) and the good atmosphere in the team (33%). They appreciated the cooperation between universities and grass-roots projects (25%), the exchanging and sharing of knowledge and experiences as well as the commitment of the partners (17%). The participants liked the meetings (17%), they liked to work in small groups (17%) and they also appreciated the variety of approaches (17%). The statements of the partners reflected a very good working team concerning the mixture of partners, the atmosphere and the contents.

One partner disliked the online meetings and two partners pointed to the necessity to prepare them in an appropriate way. Four partners disliked "confusion about the concrete following steps and that targets, tasks, roles and deadlines were not always clear (to them)". Two disliked the complexity and the too sophisticated approach (which hints both at the heterogeneous partnership and the connected research-practice dilemma when reading the opposite positive statements of other partners about the approach below).
Five participants proposed again a more directive leadership.
The project had many positive effects for the partners; they pointed out:

- learning in educational projects,
- gaining inspiration and new working contacts,
- they appreciated the new approaches, evaluation methodologies and instruments in the field of "active citizenship" and
- "learned about evaluation techniques" and
- "new (project) ideas and gained knowledge about different educational systems in the partner countries".
- "we gained a perspective to have the "cube" as way to describe and visualize individual developments".
- in the 3rd meeting the expectations already turned into valorising the outcomes.

In this phase the partners expected for their further work especially the dissemination of results and valorisation of outcomes:
"I like to have nice end-products as good example for other projects".

- "I wish to contribute to the literature on active citizenship training" (scientific exploitation).
- "I expect the development of clear and feasible evaluation methodologies and would appreciate the development of a follow-up and new and innovative AC-projects in the ACT!-network."

Some partners anticipated also a practical application of the cube and a popular version of it.

In this stage of the project the participants knew well about the background of their partners, but they asked for more information about how the partners worked with the evaluation approaches in their individual contexts.

Process Evaluation 4: June/July 2007 (n=10)

In this period the participants were satisfied (60%) with the project or even very satisfied (30%), one partner was fairly satisfied ("OK").

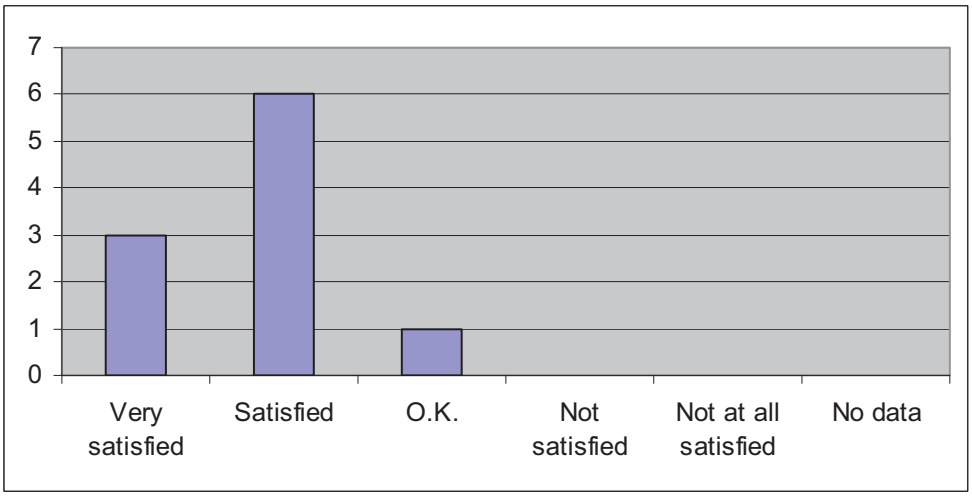

Figure 51: Question 2, overall satisfaction with the project (PE4)

They positively highlighted the contact between the partners, the management as well as the transnational meeting as nearly consistently positive. Only a few partners rated the management, the previous transnational meeting and the online conferences as “less good”.

The partners especially liked the partnership and the exchange of ideas and experiences (40% each), followed by the good working atmosphere and the cube as an innovative three dimensional measurement tool (30%). The participants appreciated to see good examples of AC projects and the motivation and commitment of partners.
By this time the ACT cube improved and became a prominent and central product of the procedure.

In this period 30% of the partners disliked “the unclearness of targets, tasks, roles and deadlines” and it was not always clear to them “in what direction the project was going”. They disliked the “frequent changes of some ideas” and that there was “no conclusion at the end of the last transnational meeting”. Some felt that there was “not as much progress as before”. Some partners disliked “offensive questioning” what might hint at a well known phenomenon in intercultural team building: some partners liked a rather direct leadership style (see statements of the previous process evaluation) whereas others preferred a more participatory management style. In this case a partner might have felt offended by a rather direct questioning style of the management. However, it is important to record these emotional states of the individual partners to avoid permanent conflicts beneath the surface and to consider the diversity of the group members.

Still in this final period participants “appreciated to learn about new and innovative evaluation methodologies and assessment instruments”. They highlighted receiving “information about the projects of the partners” and the possibility to see “best practices” of national projects.
The partners appreciated the visualisation approaches and saw the potential benefit of the IAS approach for social organisations as well as for training activities.
As a perspective the partners proposed to continue with the “development of counselling and support for other organisations”, the “involvement of local projects” as well as the “development of new and innovative projects” and the “enlargement of the network”.

At that stage the participants requested more information on other partners work with the ACT-IAS evaluation approach in their individual context (e.g. what tools they use, how they analyse the data and how they transform them into reports).

Process Evaluation 5: December 2007 (n=10)

In the final project phase the participants were satisfied (36%) with the project or even very satisfied (55%), one partner was fairly satisfied ("OK").

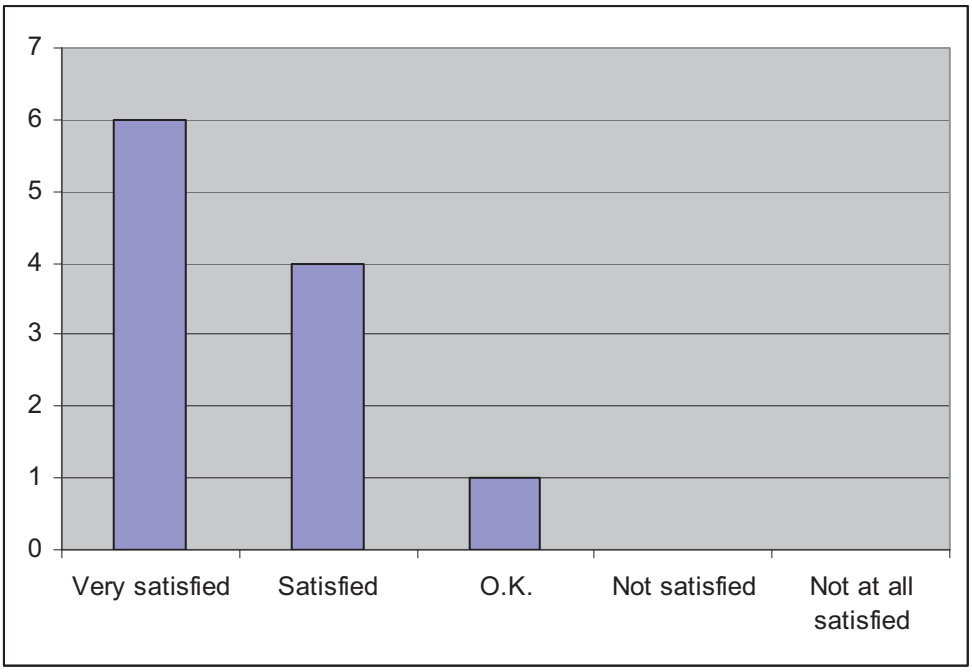

Figure 52: Question 2, overall satisfaction with the project (PE5)

The comparison of the question relating to the overall satisfaction over the project lifetime shows that at the end of the project a majority of partners was "very satisfied". This means that in contrast to the previous evaluations most of the participants top rated the project (instead of a majority of "well satisfied" rating in the previous phases).
One can conclude that, despite interim dissatisfaction and concern about singular issues ("financing", "online conferencing", "a too sophisticated evaluation approach") the general satisfaction with the project improved.

The following table shows the detailed results of the questionnaires with regard to satisfaction with central project processes.
In general it reveals again that the partners are satisfied or very satisfied with the processes since "fair" (rating "3") is the worst rating given for all the questions. This means that the following interpretation is comparing results on a relatively high (positive) level.

No	**Central project processes**	Very good (1)	Good (2)	Fair (3)	Rather Poor (4)	Very Poor (5)	Average
1	Communication with partners	4	6	1			1,73
		36%	55%	9%	0%	0%	
2	Common Planning and execution of activities	3	7	1			1,82
		27%	64%	9%	0%	0%	
3	Coordination/moderation	5	5	1			1,64
		45%	45%	9%	0%	0%	
4	Documentation (minutes etc.)	8	3				1,27
		73%	27%	0%	0%	0%	
5	Delivery of results by ACT partners	1	10				1,91
		9%	91%	0%	0%	0%	
6	Transnational cooperation	7	3	1			1,45
		64%	27%	9%	0%	0%	
7	Transnational meetings	7	4				1,36
		64%	36%	0%	0%	0%	
8	Online conferences	2	7	2			2,00
		18%	64%	18%	0%	0%	
9	Final conference	10	1				1,09
		91%	9%	0%	0%	0%	
10	Intercultural impact (getting to know other partners' places)	9	2				1,18
		82%	18%	0%	0%	0%	

Table 11: Detailed ratings of central project processes

The averages vary from 1.09 to 2.00 – that means "good" was the "weakest" average rating, in this case it referred to the online conferences. In the connected open questions part[72] this point was further substantiated: some participants complained about "too long discussions during the online meetings". One suggested that "probably, on line meetings should be focalized on specific topics". This seems to be a valuable hint for online communication in further European projects: Each online meeting should be well planned and executed with a clear agenda (programme), topics and tasks.

Extremely positive marks were given for the final conference (1.09) and the intercultural impact of the project (1.18). This demonstrates the impact of the European component and the necessity to manage projects in an active way.

In reference to the above mentioned TCI model this process related evaluation refers to the "I" and the "WE" perspective. The individual satisfaction was highlighted in the general question (2). Detailed questions relating to communication, collaboration and other group related processes documented the team-spirit of the transnational project team.

One can conclude that ACT reached a good/very good balance of the individual expectations and the group processes since both aspects - satisfaction and group processes - received very good ratings.

In the following Cohn's "THEME" perspective shall be highlighted by presenting the ratings of partners for the central outputs of ACT:

[72] Attached in the appendix of this dissertation.

No.	**Outcomes**	Very good (1)	Good (2)	Fair (3)	Rather Poor (4)	Very Poor (5)	Average
1	ACT approach (procedure)	5	6				1,55
		45%	55%	0%	0%	0%	
2	Country reports		11				2,00
		0%	100%	0%	0%	0%	
3	ACT cube	8	3				1,27
		73%	27%	0%	0%	0%	
4	Developed material	4	6	1			1,73
	(patterns, tools, leaflets, software)	36%	55%	9%	0%	0%	
5	ACT networking	7	3	1			1,45
		64%	27%	9%	0%	0%	
6	Dissemination	2	7	2			2,00
		18%	64%	18%	0%	0%	

Table 12: Detailed ratings of central project outcomes

Table 12 shows that the project outputs were also well rated since none of the 6 project deliverables received poor or very poor ratings.
Even though in the open questions part of this final process evaluation individual partners complained about a too “academic approach” the *ACT procedure* (1) received very good ratings. The high level of satisfaction with this central output shows that though it was a “research output” it could be well applied in practice. It did not receive a single “fair” rating.
Dissemination (6) and the country reports (2) of the first project period received “only” good ratings and the developed material, such as informal learning patterns (4), was rated good to very good (average: 1,73).
With an average of 1,45 ACT networking received a very good rating, which leads to the following interpretations:

- The internal ACT networking processes were very successful. The network structures – relations, resources and working teams – and the stability and efficiency factors fitted very well to the project phases and work packages. This corresponds to the interpretation of the Social Network Analysis carried out in the ACT partnership (chapter 6.4.3).
- Referring to TCI one can state that the community building processes (“WE” perspective) are vital especially for transnational research and development projects.
- The ACT partners are motivated to continue their collaborative work in a network structure – an interpretation that is backed up by partners’ statements and leads in consequence to new common projects that are parts of the valorisation strategy (6.5.2) and by 2009 already transferred in new applications, other projects’ evaluations and new funded projects.

At the end of the project the ACT cube received best marks (average 1.27) as nearly 75% of the participants gave “very good” ratings.
The success of this central project output is based on:

- its prominent role in the evaluation process,
- its problem solving potential as an instrument in which the competence development can be displayed,
- its powerful visual impact as a double visual metaphor described in chapter 6.5.4.1 and, connected with this,
- its identification potential for the ACT team – which was in fact a rather heterogeneous European group of practice and research team members.

Coming back to the TCI model of Cohn - the rating of all three dimensions was good or very good which means that there was an excellent balance of:

- output oriented (deliverables) and
- process oriented (team building) elements, and that
- individual needs, working contexts and interests were incorporated over the project lifetime.

The consideration of all three dimensions led to a successful and very satisfying transnational project.

5.3.2 Analysis of the Networking Processes in the Project

With regard to the increasing number of educational and research networks on the European level it is worth to examine the networking structures and collaboration processes in the research-practice project ACT.
From the practical point of view, with regard to the transferability of results, ACT was a project that developed outstanding results with regard to its limited resources and the comparatively large and diverse partnership of partners originating from scientific and various practical domains.

As the author had experienced less successful European projects in the past the specific networking processes and approaches in ACT in regard to the collaboration and relation shall be analysed to derive results in terms of general principles of good European networking.

Phase 0: Foundation of the Project

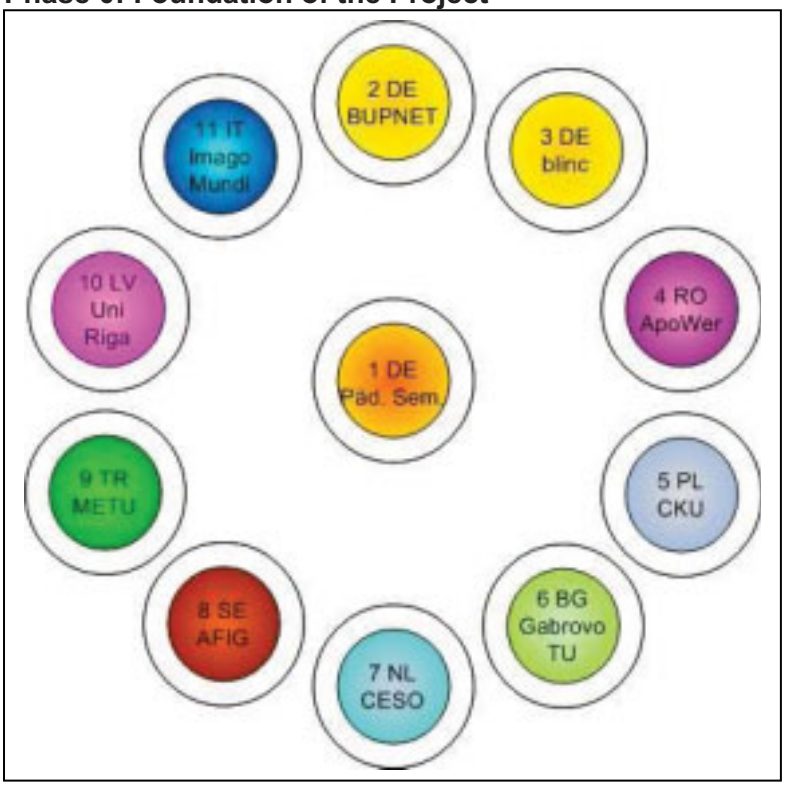

Figure 53: ACT partner network

The partnership consisted of 11 partners from 9 countries coming from different professional backgrounds. ACT showed an equal distribution of partners from all orientations in Europe and old and new European member states. It was a relatively large project in the SOCRATES programme.
Partner 1, the Pedagogic Seminar of the University of Göttingen was the coordinating institution from the administrative point of view.
With regard to trust as one of the key issues of successful networking it is important to state that the ACT partnership showed a ration of 80/20 of partners who already had a rather long and successful collaboration tradition with each other in contrast to new project partners. It can be concluded that this factor, among others, played a major role for the success of ACT – or that it, to put it metaphorically, built the stage for a fruitful European collaboration.

The 3 German partners showed a 5 years history of cooperation in previous projects in the healthcare and environmental sector. There was a rather exceptional and continuing symbiosis of

stakeholders of BUPNET and the scientific staff from the Pedagogic Seminar because the educational and project management agency has developed and executed European projects since 1997 integrating the fundamental concepts, tools and know-how of the Pedagogic Seminar in the framework of several transnational ventures. The third German partner, the Educational Cooperative blinc, was even founded as concrete output of one of these cooperative ventures, the project eL3 funded by the European eLearning initiative.

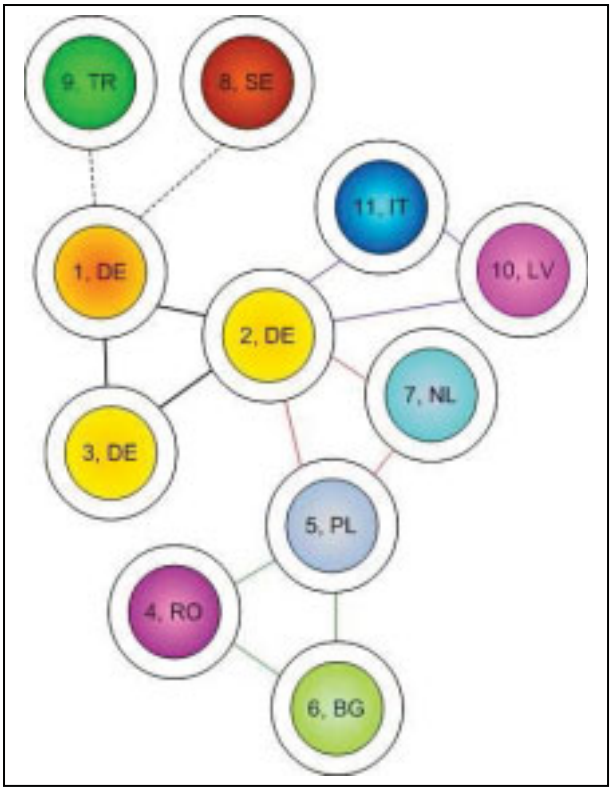

Figure 54: ACT partner relations prior to ACT

Partners from Romania, Poland and Bulgaria also collaborated in several European funded projects[73] referring, among others, to the thematic area of domestic violence. Partner 2 (DE) and partners 7, 10 and 11 worked together in a bilateral way in European projects focusing on youth and environment[74], intercultural learning[75] and gender mainstreaming[76]. Partners from Sweden and Turkey joined during a preliminary project meeting in Brussels.
From the collaboration background the ACT project partnership at the beginning of the project can be analysed in the following way:
There were 4 different existing subnets which are indicated by 4 coloured ties in figure 44. The entity with the utmost centrality is at that stage partner 2 as it shows 6 direct ties to direct neighbours. Partner 5 is the hub to a second sub-net – in fact, partners 4 and 6 were invited on direct recommendation of partner 5. Partners 10 and 11 directly joined the network while loose and singular ties to partners 8 and 9 indicate that they were the “newcomers” in this consortium.

Different working, developing and learning traditions influenced the project and its work groups. The project consciously integrated partners with different professional and working backgrounds, four university partners (partners 1, 6, 9, 10 from different faculties: educational sciences, psychology and engineering), adult training institutes (partners 2, 5, 7, 8), 3 grass-root organisations working in networking, culture and the social care sector (partners 3, 4 and 11).

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[73] Reference Projects: Climbing up (http://www.stockport.ac.uk/climbingup/climbing_up_partners.shtml).
[74] Joint Environmental Management (JEM!), www.jem-eu.org.
[75] INTEGRATION (www.integration-eu.org).
[76] OASIS (www.oasis.org).

This potentially meant for ACT that 3 learning levels could be tackled by the partnership as 4 or 3 of the partners have been concentrating on working either in formal, non-formal and informal learning contexts.

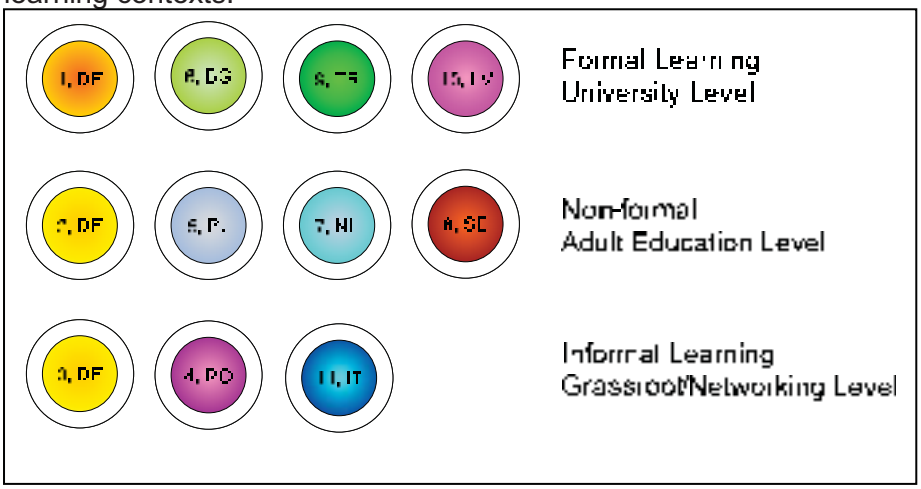

Figure 55: Background and educational working levels of the ACT project partners

Of course this is a rather formalistic view since all partners also had relations and experiences in other learning modalities but it can be stated that ACT profited from the three level expertise of the partnership.
With regard to diversity criteria ACT was well equipped because it showed a high level of entropy (different partner properties). The broad experience of at least 50% of the partners in respect to European funding (access to resources) is a decisive factor for the network stability (niche breadth indicator).

Phase 1: Definition and Stock-Taking
In the course of the project the project consortium emerged from a construction of subnets to a functioning entity, also integrating the partners at the “outskirts” of the network. This effect was achieved by the establishment of 3 working groups for:

1. **Setting up an evaluation framework**
   (leading partners 1 and 9, collaboration with partners 8 and 2
2. **Stock-taking on citizenship learning in different educational European contexts**
   (leading partners 4 and 5, collaborating partners 6 and 11
3. **Modelling active citizenship**
   (leading partner 3 and 7 collaborating in work group with partner 10 and an invited new partner member from an institution from Portugal who took part in all transnational meetings

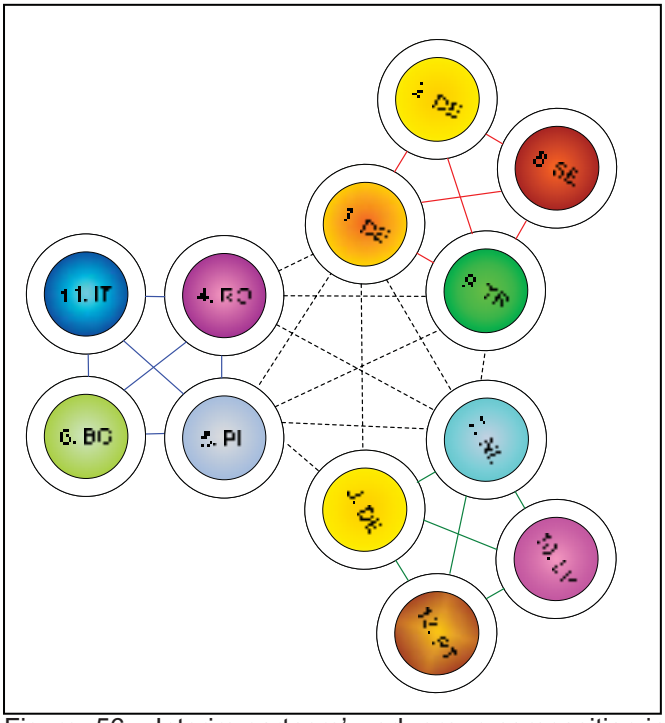

Figure 56: Interim partners' work-group composition in project year 1

This constellation was terminated after the submission of the interim report to the commission. The partners leading the workgroup coordinated the submission of interim results and were responsible for organisation (indicated by the black scattered ties).

According to Social Networking Analysis at this stage the partnership reached a structure intermediate to a research and a developing network which was characterised by:
A high level of centrality of the work-group leaders (high hub-assortativeness) and a medium proximity of associated partners as the working groups formed rather closed sub-units, but were of course still informed and updated during the transnational meetings in Sopot and Ankara.
At this stage the network was obviously very stable with an inner circle of 6 partners and another 6 associated team members with clearly defined tasks. This led to a high connectivity because of the redundant lead partner systems. In contrast to the original situation (see figure 44) the (already high) transitivity increased (number of direct neighbours). Multiplexity was enhanced in the workgroup phase because the workgroups introduced an inner circle of leading partners at that stage.
Diversity criteria did not change as they were related to the properties of the individual partners.

Phase 2: Developing Phase

On the basis of the findings of the evaluation and definition phase the partnership developed the ACT approach which consisted of the ACT cube model and the evaluation procedure. The workgroups were dissolved and partners merged the findings and approaches of workgroups 1 (ACT approach) and 2 (evaluation).
Partner 3 took over the lead of the development process and temporal bi- or trilateral workgroups emerged.
The most active subgroup (partners 1, 3, 7 and to some extent 2) modified the cube model according to the 3-dimensional visualisation model and connected it with the inventory approach created by sub-group 2 (red ties; 1, 3, 9). Another subgroup collaborated on the process description (blue ties; 3, 4 and 8). The other partners were regularly integrated in the development process as each partner had to test and apply it in the next phase.

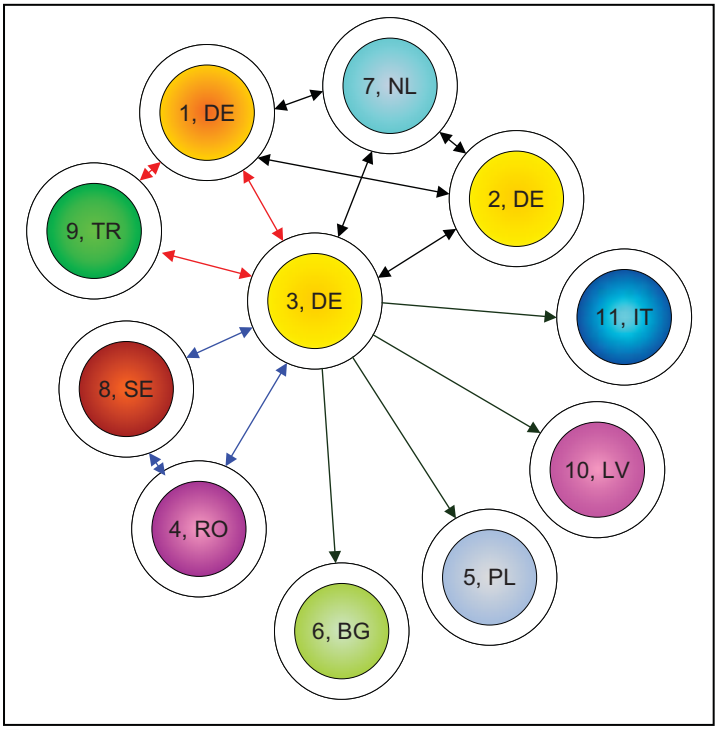

Figure 57: Networking structure in the development phase of the project

In the development phase it is interesting to analyse the different centralities within the partner network that can be differentiated in the following way (Freeman, 1979)[77]:

- **Degree centrality (D)**
  Expressing the centrality in terms of absolute number of contacts thus the degree of activity of a partner in a network
- **Closeness centrality (C)**
  A partner who has a central position in a network can be reached quickly. Closeness centrality expresses the accessibility and the speed of contacting within a network.
- **Betweenness centrality (B)**
  indicates the control within a network. A partner who has many contacts to partners who do not have a connection is central in terms of betweenness. A partner with a high betweenness can control (or steer) the flow of information.
- **Authority weight (A)**
  Measures the centrality in terms of friends (partners) who have a high influence. This is expressed by the ties to other partners who themselves have many ties to other partners.

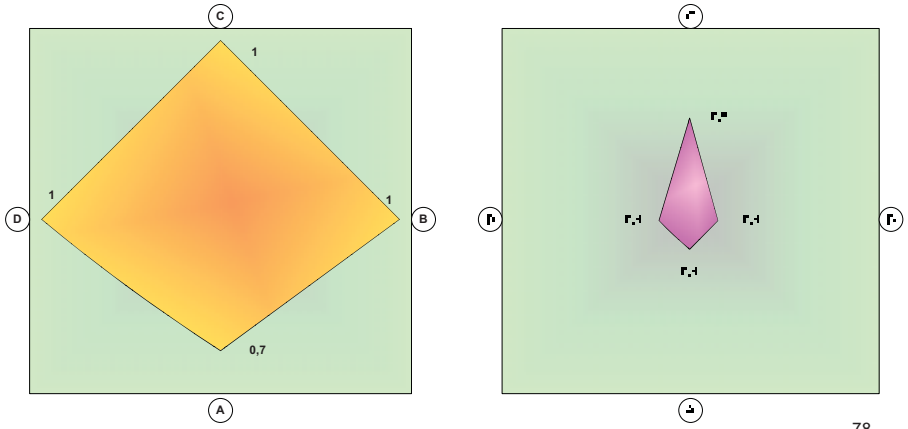

Figure 58: Centralities of partner 3 (blinc, DE) and 10 (Uni Latvia, LV) [78]

[77] Derived from Freeman (1979).

Figure 48 shows different centralities of lead partner 3 and a rather passive partner in this project phase. The centrality profile of partner 3 is characterised by maximum values in degree (focal) centrality (1 = maximum), closure and betweenness centrality (1) indicating speed and control. Authority weight is also very high because partner 3 is surrounded by influential friends (e.g. partners 1, 2, 7…)
In contrast to partner 3, the Latvian partner (10) in this phase only showed low centrality values (0.1-0.5)

Efficiency indicators
The correlation of the 4 centralities indicates the assortativeness of the network (Katzmair, 2005). A high assortativeness indicates a hierarchical network whereas a low one indicates high competition in a network. In this (early) development phase the network was structured in a rather hierarchical way promoting efficiency by high assortativeness and proximity of lead partner 3. Fragmentarity at this stage was relatively low as partners worked on the same tasks.

Stability indicators
In relation to stability the network can be divided in 2 groups in the developing phase:
The 3 subgroups mentioned above are characterised by a rather high transitivity (ties to a high number of neighbours) whereas the other partners show a low transitivity (6, 5, 10, 11). Due to the hierarchical structure the network in this phase is very much dependent on the lead partner leading to a low connectivity and multiplexity.

Conclusion:
From the networking point of view the developing phase was characterised by high efficiency and low stability.

Phase 3 and 4: Pre-Test and Application
Pre-testing started during the Ankara meeting. It overlapped to some extent with the developing phase since some modifications could only be carried out on the basis of practical findings. The network illustration in figure 57 reflects the structure of the testing and application phase. Each project partner (indicated with big circles) had at least 1 satellite project, most partners had 2 and partner 1 had 8 grass-root projects.
With regard to the contribution to the development of the approach, the exchange of experiences and the valorisation of the outcomes, 9 partners formed an active exchange network.
During this phase online meetings were carried out every fortnight, which boosted network communication and common development activities.
From the networking point of view the situation can be described as follows:

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[78] Though these values are rather hypothetical they can to some extent be reasoned and interpreted by the visualisation in figure 45: Partner 3 is surrounded by all partners (maximum D = 1), is in the central position (C max = 1) and shows most of the contacts to all partners (betweeness = 1). Authority weight is quite hypothetical in this small network, nevertheless partner 3 has maximum relations to most influential partners. In contrast, partner 10 is in this phase in a remote position (1/10 with only direct contact out of 10 partners). Partner 10 shows medium values only in relation to the closeness criterion due to the small network.

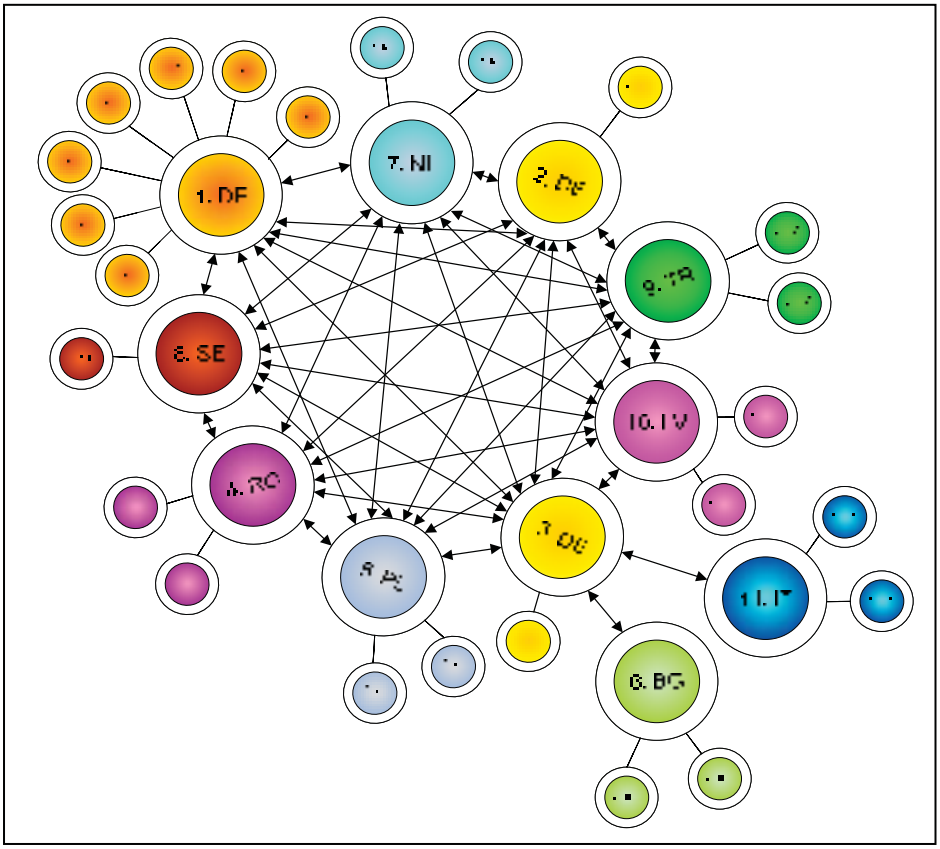

Figure 59: Networking structure in the pre-test and application phase of the project

There is an inner circle of 9 partners taking over central development tasks and 2 partners (6 and 11) who contributed mainly by testing and applying in their local contexts.
In contrast to the others, those 2 partners had a lower degree of centrality (degree, betweenness, closure and authority weight). Their local centrality is of course higher as they coordinated their grass-root projects with regard to the application of the ACT approach.
They were interconnected mainly by partner 3 who was still in the coordinating position, thus showing low transitivity and fragmentarity.
The other partners formed a large circle showing the following properties:

Efficiency parameters:
The inner network is characterised by very short ways (high level proximity) and low fragmentation (all partners can reach each other directly). At the same time, due to the research design (satellite grass-root projects introduced by each partner) the network shows maximum hub-assortativeness.

Stability indicators:
All three stability indicators reached maximum levels. The circle structure with interconnecting ties led to high transitivity. This is remarkable since the previous phase was still characterised by a hierarchical structure dominated by partner 3. Though also in phase 3 this partner remained in the coordinating position all 9 partners from the inner circle introduced major development steps or contributed with decisive practice experiences.

Conclusion:
In comparison to the previous development phase the efficiency could still be increased due to the practice-research design, integrating projects from the field. State of the art synchronous online communication was a key issue for the good results since partners had a very swift information flow and could profit from the experiences of the respective others, thus avoiding fragmentarity.
With exception of the two distant partners the network was extremely stable in the pre-test and application phase.

6 Interpretation of Results: Reflection and Impact

Chapter 5 described the main project deliverables and results from the pre-testing phase and the collaboration processes and structures.
The following chapter will focus on the comparison of achievements with the objectives and targets stated in the project application. It will analyse and interpret cooperation, networking and research and development methodology in the project to derive conclusions for other transnational projects and networks.
It will be concluded with the ACT valorisation approach in which the related practice products and services will be presented (pursuant to action research).

6.1 ACT Evaluation Approach in Informal and Non-Formal Learning

The research design specially focused on disadvantaged groups of citizens in informal learning situations with regard to their citizenship competences.
There were exceptions of micro-projects from formal and non-formal learning backgrounds, one school project dealing with active citizenship in Turkey, one project for educationalists in Latvia and a project for educators for good didactic practice in blended learning and European collaboration in project development.
After more than 20 different projects had been evaluated, the question evolved whether the separation of learning projects or activities in the categories formal, non-formal and informal still is a helpful differentiation.
According to the authors of a study elaborated in the Learning and Skills Research Network (LSRN) in 2002 the three terms differentiate learning situations in an incoherent way, mainly because informal and formal learning are used in regard to methodological or political questions. The author agrees to the statement of Colley (2003) that they are not discrete categories and that to think they are is to misunderstand the nature of learning. It is more accurate to conceive 'formality' and 'informality' as attributes present in all circumstances of learning.
As ACT was especially addressing non-mainstreaming target groups, it is obvious that informality prevails but existing formal components in the setting of the learning events cannot be neglected.
Handicapped and disadvantaged citizens, for instance, may have to develop from (initial) informal learning to a more formalised (e.g. to some extent "vocationalised") learning. Some of the competencies evidenced might also become important in professional life contexts.
Since variability and flexibility are important feasibility criteria for the evaluation and validation approach the ACT-IAS ("Impact Assessment System") should be usable in most learning contexts and systems and should not be restricted to only one of the categories fostering the differentiation into formal and informal types of learning and limit the opportunities of the evidencing system.

6.2 ACT-IAS System Components

The interpretation and discussion of results with regard to the system components is differentiated in 2 parts:
Part 1 describes the outcomes and interpretations in the micro projects in relation to the developed system, namely the fundamental instruments *inventory* and *reference system*.
Part 2 refers to the partners' experiences while evaluating their projects. Each partner described a minimum of 2 projects; all in all, 23 projects were included in the evaluation. The reported projects in chapter 5 referred to examples that were selected according to their transferability and variability. Results and experiences will be highlighted against the major goals and operative objectives stated in the initial research concept.

6.2.1 Selecting Competencies - Inventory

The competencies selected by the partners from the field underpin the basic considerations that the term "Active Citizenship Competence" rather reflects a composition of competencies than a condition of a person or a group.
It also proved well to cluster the topics or competencies in the five categories:

- Civic knowledge part
- Key competencies
- Basic attitudes
- Attitudes towards other groups
- Civic activities.

1. Civic Knowledge:

One can interpret that the relation to the local environment and contexts leads to a high ranking of "institutional knowledge micro level".
As far as the "growing" character of the inventory is concerned the civic knowledge category (1), together with civic activities (5) is especially appropriate for additional topics as new topics were introduced in these categories whereas key competences (2) and attitudes (3 and 4) already showed a sufficient range of options for the evaluators.

2. Key Competences:

"Communication" is evident in all context and group situations and thus being selected most often, followed by collaboration and expression.
"Decision-making" and "conflict solving" were not relevant in the eyes of the evaluators for the contexts and the target groups, though they can clearly be identified as being citizenship-relevant topics or competencies (Cecchini, 2003; ETGACE 2003). However, in most of the ACT-micro-projects these topics are of minor importance only; at least they are overtaken by other, more relevant topics.

3. / 4 Attitudes:

The "attitude"-categories 3 and 4 show a more balanced distribution. Empathy was not selected, probably because it is identical with stage 3 on the affective dimension axis and as such evident in all the topics. The 6th topic "dependencies" was not very clear to the evaluators[79]. They also stated that the "knowledge of life and situation of others" should rather belong in the first category (knowledge) and that the other 2 topics were very close to each other and could be reduced to one.

5. Civic Activities:

"Obtaining and using information" seems to be a rather cross-cutting activity over most of the micro-projects. "Participation in community with others" follows with 5 votes and "engagement" with 4.

Conclusion:

The inventory proved well as an instrument to select relevant topics and to reflect on the main components of the micro project/learning activity. It is easy to use and as such a very good start in the reflection process.

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[79] Result of interviews and discussions during transnational meetings.

Nevertheless it should be considered to re-structure the inventory on the basis of a clear objective of this instrument, be it as an open pick-list for evaluators to identify the major topics of the learning or as a catalogue for already selected topics.
In this connection one could consider to re-group some of the topics ("knowledge about life and situation of others" into category 1 and "willingness to interact with people from other groups" into category 5 (as activity)). This necessary development step is subject to activities in the follow-up project ACT-NET (2009-2010).

6.2.2 Creating Reference Systems

The remit to develop a coherent evaluation system for grass-root projects showed two contradictory components:
Due to the indefinite variability of grass-root projects and beneficiaries *standardised* competence levels are not viable.
On the other hand, it was a working hypothesis and objective of the project that the ACT approach should deliver results that show the development of sub-competencies referring to knowledge, attitudes and activities related to their role as (active) citizens in a *comparable* way. ACT solved this conflict by providing the 3-dimensional competence cube with a general five stage rating system. Within this system 15 general stages evolved that had to be focused in a descriptive way by the project experts. Comparability is given by the 5 grades on each dimension, whereas the specific (context and target group related) competence levels are considered in the individual descriptions.
The viability of the approach in terms of comparability of different grass-root projects may be highlighted by a comparison of a Romanian with a Swedish reference system: the Romanian project dealt with the uplifting of victims[80] of domestic violence whereas the Swedish project addressed long-term unemployed with reading and writing difficulties (dyslexia).

Cognitive Dimension: Learners' Knowledge and Skills Concerning Expression

1	2	Romania	Sweden
Grade/ Level	**Level Titles**	**Individual description/ explanatory statement**	**Individual description/ explanatory statement**
5	Intuitive Acting	Using learned expression skills to adapt to social groups and to new interaction situation.	Is aware of and reflects on the fact that you need to adapt your speech to the situation.
4	Implicit understanding	Ability to understand own and others' ways of expression, when interacting with them.	Knows something about basic grammar and how words are constructed/built and is aware of the meaning and the connection between words.
3	Distant understanding	Reflecting on different ways of expression. Understanding advantages/disadvantages. First attempts to test different ways of expression	Expresses own needs, feelings and opinions both verbally and non-verbally.
2	Know how	Knowing how to express basic needs in verbal and non-verbal ways. (e.g. ask for help, cry, do not hide feelings and thoughts from others)	Understands the importance of being able to express needs, feelings and opinions.
1	Know-that	Victims know that they have certain thoughts, feelings and attitudes but are not aware about the ways in which they express themselves.	Knows that knowledge about the new language is an absolute condition to make himself/herself understood.

Table 13: Comparison of the cognitive domain in two projects from RO and SE

[80] The new associated Portuguese partners call them "survivors" of domestic violence, see also: http://www.background-eu.org/index.php?id=4.

The domestic violence group has a comprehension problem at the beginning. Being abused and traumatised, they first have to understand that their thoughts and feelings can be expressed (without feeling guilty). They are not aware that they may express these feelings. They know how to express these thoughts and feelings on the second level. On the third level, they reflect on how to express these feelings in a good way. On further levels, they have a profound understanding of own and other persons way of expression and transfer their knowledge and skills to new situations.
The Swedish group is at a completely different point, still the topic is communication. The first level is also comprehension but in this case it is awareness that the *language* is needed as a basis for expression.
In case of the Swedish partner project and the target group, the sequence continues with know how, the ability to express in a rudimentary way in this language, introducing grammar up to the ability to modify the speech (expression) according to the situation.

Activity Dimension

1	2	Romania	Sweden
Grade/ Level	**Corresponding Levels Titles**	**Individual description/explanatory statement**	**Individual description/explanatory statement**
5	Developing/ constructing	Developing new expression skills by being coherent, congruent and assertive in new situations.	Constructs arguments supporting his/her view. Tries to influence others.
4	Discovering/acting independently	Discovering new ways of expression and practicing them.	Has a habit of using dictionaries and encyclopaedias as a means to develop and understand nuances in the language. Uses metaphors.
3	Deciding/ selecting	Ability to decide whether to use expression patterns or not and to select favourable behaviour.	Tries to adapt the language to the situation.
2	Application, Imitation	Using expression patterns of own family members when confronting with abusive situations.	Uses the words and expressions to describe what s/he thinks, feels or needs.
1	Perception/ remembering	Reception of aggressive messages and remembering ways of expression towards aggressive behaviour in her own family.	Can make him- or herself understood in everyday situations and express wishes and needs.

Table 14: Comparison of the activity related domain in two projects from RO and SE

On the activity level the expression competences of Romanian beneficiaries are also related to their situation as victims of domestic violence. On level 1, they just stand expressive behaviour, on level 2, they imitate behaviour they know from their family background in relation to abusive situations, whereas, on level 3, they decide on their own how to behave. On level 4, they discover a different kind of behaviour and learn to express themselves in a different way which they also practice in new situations on level 5.
According to the Romanian experts this increase of competence exactly reflects the stages of the "uplifting" of a victim of domestic violence – in other words bringing them back to society and becoming a citizen who can express themselves (again).

The level 1 of the Swedish beneficiaries is describing the state that they can make themselves understood in a foreign language, more refined on level 2. Modifications in expression according to the situation are practised on level 3. On level 4, a person actively learns the language and also uses it in a creative way. On level 5, the beneficiaries use the language as a "normal" expression

tool for arguing and to reach their aims. One should not forget that these citizens were not able to express themselves in daily life situations at the beginning.

Affective Dimension

1	2	Romania	Sweden
Grade/ Level	**Corresponding Level Titles**	**Individual description/explanatory statement**	**Individual description/explanatory statement**
5	Regulating **with** others	By proving equilibrated ways of expression, victims induce/encourage others to express themselves. e.g. Speaking about own abusive experience in public, other victims would have the courage to take initiative in order to change their personal situation of abuse.	Dares to try to express own views in new situations in spite of the poor language and the risk of being misunderstood.
4	Affective self-regulation	Victims adapt own ways of expressing themselves by considering the others.	Incorporates the language, words and body language are in concordance with own feelings and needs. Chooses when and if s/he shows own feelings.
3	Empathetic concern	Victims express feelings and thoughts considering feelings and thoughts of others. They understand and accept ways of others to express themselves.	Adapts his/her language to situation and context. E.g. varies vocal pitch, speed of speech and choice of words.
2	Perspective taking	Victims assume self-positioning in a situation. Being able to express personal feelings and thoughts as they are, without considering being intimidated by potential consequences. They assume risks of personal ways of expression.	Shows interest in finding new words to express feelings and needs.
1	Indifference	Victims feel fear to express themselves because expression of feelings and thoughts could have negative consequences for them. (e.g. partners become more violent). This is why they show no expression and feel paralysed.	Shows no interest in expressing feelings or needs.

Table 7: Comparison of the affective domain in two projects from RO and SE

The affective dimension of the Romanian learners is very much influenced by the emotional status affected by the violence they suffered. Starting with the paralysis on level 1 of being scared to expressing themselves, they feel a bit more secure on the second level. On the third level, they express themselves and show empathy for others while on the following level they are able to adapt their expression to the emotional state of other victims. The highest level, according to the team leaders, would be to encourage other victims to express in an adequate and free way.
In contrast, the Swedish learners are indifferent and disinterested on Level 1, interested in using and finding new words on level 2. The competence increases over stages of language adaptation to the situation (variability in accordance with feelings). The highest level of this group (= the most successful stage for the educators) would be reached if a learner would dare to express himself/herself in a new situation. This clearly indicates that not only language learning is in the centre of the learning activity but it is also aiming to increase self-esteem and self-assurance.

The comparison of the two different examples shows that, if looking at the individual citizen, one cannot compare the absolute levels of their expressiveness. Their situational, emotional and educational and cultural context being too different, behaviouristic patterns can only be recognised in a rather homogeneous group.

What can be evidenced is the process, the change of levels, the gaining of competencies in an informal learning context.
The individual reference system established by experts in the field is the core innovative element of the ACT system.
Each project is seen as an individualised social sub-system. Consequently, the reference systems also had to be constructed in an individual way in order to rate the beneficiaries according to the project-oriented defined stages.
The feasibility of this central mechanism was verified by all ACT micro-projects by setting up their individual competence frames (cubes) for at least five topics.

6.2.3 Evidencing – Impact Assessment System (IAS):

Evidencing Pattern
Evidencing takes place on the basis of the project-related reference systems. After the assessment the project partners and intermediates inserted their ratings in an evidencing grid and substantiate their ratings in a preformatted column:

1	2	3	4	5	6
Grade	**General scaling**	**Individual description**	**Rating 1**	**Rating 2**	**Explanatory statement**
5	Regulating **with** others	Promoting to others that diversity is a way of thinking			
4	Affective self-regulation	Diversity is a way of thinking. All groups are part of the scope. There is no place for discrimination.		4	After the BBQ, she has more contact and personal relation with different persons from other groups. There is more respect and to her mind everybody belongs to the community
3	Empathetic concern	Respecting diversity	3		She is aware of the different groups.
2	Perspective taking	Curiosity towards others from different groups			
1	Indifference	Focussing exclusively on the own group.			

Table 16: Reference system for learners' affective competencies[81]"

The evidencing pattern is a very simple grid and all participants could use it without any problem.
In the example of the Dutch project, one person was observed at two points of time during the learning process. The micro-project observed a woman who held a barbecue for a scattered and loose community in a part of a town.
Starting from level 3 (= "respect diversity" as a project-related description of empathetic concern (column 2)) the learner reached the level of "affective self-regulation". The increase of competence with regard to the affective dimension is documented in column 6 with a description of the observation.
According to the evidencing reports by the partners the evidencing step was the shortest one in terms of required time. This is certainly one of the advantages of the system: having once estab-

[81] Concerning the "willingness to accept diversity" in the (NL) micro-project: "Barbecue (BBQ) for a community".

lished the reference system the evaluators (intermediates) are familiar with the stages and grades and are thus able to describe and insert rating and documentation in a relatively short time[82].

Software System
The approach and the instruments were reproduced in an IT system: a perfected software prototype ("ACT-IAS System") that enables users to evidence their projects.
During the development process, the focus of the evaluation process turned from the assessment aspect in the evidencing part, namely, to the aspect to display the process of competence building.
This development step changed the character of the required supporting software tools from a simple repository to a system with the following general system requirements:
As described in chapter 4.5.2 it was planned to:

- Administer multiple users and projects
- Include inventory and reference systems in a flexible way
- Display procedural elements (competence development, ACT cube).

It was designed to allow partners to

- Administrate every step of the ACT procedure
- Present projects in a comparable way
- Include their assessment results at different times
- Reason their results (documentation)

IAS has met all those requirements.

Most interesting for the participants is the visualisation of the process of consequence development as highlighted in figure 50.

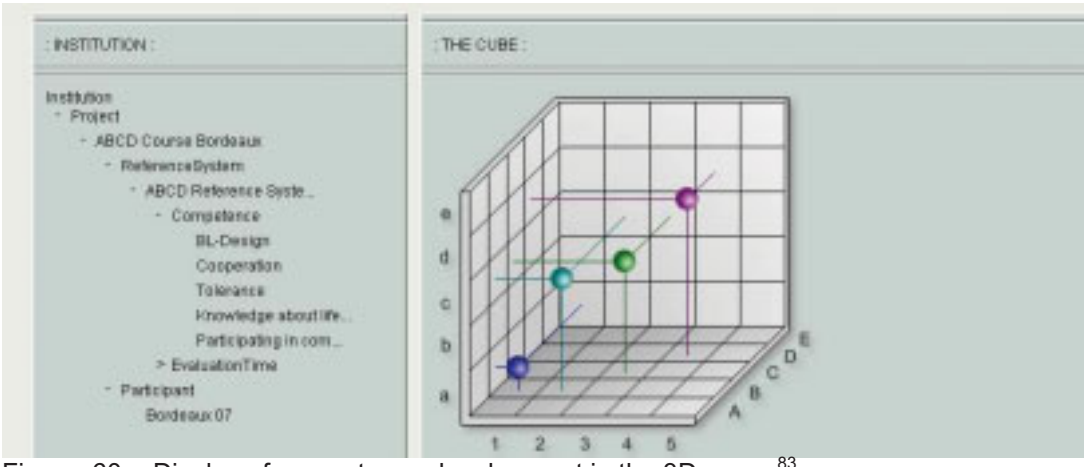

Figure 60: Display of competence development in the 3D-space[83]

The rather abstract results in terms of competence development are displayed in an animated cube model. This is certainly one of the biggest advantages of the system: it makes an abstract (theoretical) process visible, and enables the users (grass-root projects) to present their results and the positive effects of their work in a convincing way.

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82 The documentation in terms of quantity and quality depend on the contextual requirements (e.g. the standards of funding bodies, understanding for other colleagues etc.). Quality criteria should be included in handouts/guidelines.

83 Of cognitive, activity related and affective dimension of the blended learning design topic. Development of the group competence during 4 evaluation times (a-e= cognitive; 1-5 = activity; A-E = affective).

Conclusion:
This subchapter discussed the experiences while building individualised evaluation systems highlighting the general feasibility of the ACT-approach for practice projects on the basis of three central instruments: *Inventory*, *Reference and Evidencing System*.

Inventory:
This instrument enables the project leaders to select from a catalogue of topics that have to be refined to a descriptive level that allows project personnel or interested persons to identify the core meaning and objectives of these topics in relation to life and context of their beneficiaries.
The chosen topics in the category “civic knowledge” clearly showed being relevant for the beneficiaries’ life situation.
The large variability of selected topics showed that an inventory is the right instrument to approach an evaluation of citizenship competencies. Further subtopics were introduced (culture and environment) and more subtopics will be introduced in the future.
The further differentiation and clarification of topics is especially important and the setting up of a reference system describes the relevant competence stages in an adequate way.
The experiences also showed that especially informal grass-root projects were well represented in the framework of the approach and that ACT-IAS matched with the requirements of field projects to a high extent.

Reference System:
The creation of the reference system is the central step in the development process carried out by the intermediates (project leaders) of each micro-project. This process already starts when refining the topics, and ends up in an approach that describes their individual settings in a satisfying way.
The development of the reference system leads to a project centred, contextualised evaluation. By refining the topics, the evaluating personnel defines the central objectives and the competence stages related to these central topics.
In fact, this means that the procedural step of the “creation of the reference system” turns *learning topics* (contents listed in an inventory) into *learning objectives or competencies* that form a stable basis on which the learning processes can be assessed and competence development can be evidenced.

Evidencing System:
Once having established a reference system, the evidencing of the assessed results is rather simple and a quick job.
By including the ACT cube, the character of the “evidencing system” develops from a control instrument to a presentation tool, leading to a high acceptance among the stakeholders in grass-root projects. People feel proud to show the results of their work rather than feeling forced to deliver evidence.

6.3 Interpretation of Usability and Quality of the ACT Approach

The results of the empirical survey on usability and feasibility which were based on questionnaires and experience reports have been presented in chapter five.
In the following they will be interpreted and discussed against the objectives of the project and in terms of consequences, perspectives and necessary steps to be taken in the follow-up of ACT.

6.3.1 Feasibility and Usability

The purpose of the research practice project was to develop a systemic approach to evaluate the impact of informal learning on Active Citizenship in the field. For this purpose an enlargeable system of adaptable instruments for evaluation had to be developed.
This major aim was clearly reached in terms of quantity because all in all 23 learning projects were evaluated.
The approach was generally described as being operable in all different grass-root projects. The positive statements from the partners in the field about the ACT approach and the IAS reveal, in first place, that the system can be applied in very different contexts; hence the variability criterion was satisfactorily tackled.

On the development pathway, a series of system built obstacles had to be tackled and innovative models had to be developed to satisfy the individual needs of projects and personnel from practice without neglecting the task to present comparable and transferable research results.

An inventory of assessment instruments was developed and integrated as a support tool for experts in the field to assess their projects. In general, it did not seem to be difficult to assess the learners. Only the Swedish partner stated that for his context the selection of the right assessment methodology was very difficult. The other partners did not comment in this way. However, it is nearly impossible to present guidelines and a catalogue of fitting assessment instruments for the practical level as a kind of “master plan”. In the interim report the catalogue already comprised 40 instruments. This is why an easy-to-use tool box for evaluation was developed as an instrument for practice projects. Obviously, there is a need for this kind of ready-to-use instruments because a GRUNDTVIG project developed a comprehensive guide to evaluation in 2006 and 2007 (Tilkin, 2007).

One of the most convincing advantages of the approach for stakeholders in the field is that it gives (experts from) social organisations the opportunity to deliver (literally) a clear *picture* of what has been achieved in the framework of their projects. Visualising competence development is seen as a big advantage.

For those partners who used the IAS software system in the last project phase, the evidencing and documentation aspect was another important issue. This aspect again is closely related to quality assurance leading to an additional benefit for NGOs. In times when social organisations have to constantly justify their work, e.g. to legitimate a certain funding, documentation becomes an important issue. The documentation and reasoning of competence levels of groups or beneficiaries is a component of the system. These results are available online and can prove the outputs in terms of substantiated competence descriptions against funding bodies or other authorities.

6.3.2 Efforts/Pre-Knowledge and Skills/Transferability

The partners aimed at developing an easy-to-use system that could swiftly be implemented in practice and that should be understandable by project personnel with different professional backgrounds[84].

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84 Quoting from the ACT project application: “Strategy development: Making instruments and tools easy to understand and as usable and transferable as possible.”

One has to take into account that this claim must be relativised as the original application was not heading for a perfected evaluation *system* but (only) for a comprehensive and transferable evaluation *approach*. A system is much more elaborated and, as described in 6.3.1, it offers more opportunities and added value to the users. Consequently, the input (efforts in terms of time, resources, commitment, creativity and accuracy) to elaborate a complete evaluation must increase.
This mechanism directly leads into the practice-science dilemma if the additional value for the social organisation is not visible.

Consequently an empirical study was carried out including detailed and quantified questions concerning effort and input-output ratio.

The general "feeling" of the project leaders was that the implementation needs extensive effort, even if this statement is subjective and related to different factors such as available time[85]. Nevertheless, the input-output ratio was described to be satisfactory at that stage already.

As found out from the questionnaires of the transnational evaluating teams[86] the required time for the completion of an individual system varied from project to project but it never took longer than one week to construct and implement the whole evaluation system, do the assessment (at two dates) and to evidence the results. In relation to the implementation of a quality management system, this is a quite reasonable time.
Most of the partners and micro-projects were faster and the average time required can be estimated with 3-4 days.

The system can be applied by project staff from the field but it clearly affords an introduction, best an attendance by mentors or a training course. After having experiences with the system the performance of the users increased and they could substantially reduce the required evaluation time.

Concluding the results, it can be stated that, even though the *approach* was extended to a *system,* the efforts to evaluate learners were satisfactory. One has to take into account that the responsible persons in the micro-project first had to be convinced about the benefit of the approach because:

- Some were even not aware that they offer a "learning approach".
- Their central objectives were not related to learning but to help, care or consult.
- Evaluation is not a value in itself – it had to be interconnected with a parallel objective (evidencing).
- Often any required pre-knowledge in terms of competence development and evaluation was missing.
- Quality criteria were often mismatched with a "scientific, abstract" approach.
- Sceptical attitude towards external monitoring was present in many institutions.

Regarding these obstacles, the results concerning this field of questions (efforts and pre-knowledge) have been very encouraging.
With regard to convincing the grass-root organisations to take part in the evaluation the key to success is the demonstration of the additional value. If the aspect of "additional work" can be transferred into "useful work" serving the objectives of the micro-project, there will be a good acceptance for internal evaluation.
Apart from this rather intrinsic motivation of the stakeholders, the validation and accreditation aspect is of major importance for the success of the exploitation of the system (6.4.1).

The ACT approach had to be transferable in different regions and sectors, and it had to include different stakeholders (educational personnel, associated partners) and different groups of beneficiaries.

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85 Apart from that, the term "effort" is rather subjective and the expectations of users in relation to a perfected system are relatively high.
86 To be found in the appendix to the dissertation.

After evaluating more than 20 micro-projects and gathering the quantitative and qualitative statements of partners, it can be stated that this target was reached by 100%.
Due to the flexibility of the approach, partners commented that they could transfer the system to other own subprojects or other groups but also to other contexts. It was highlighted that ACT-IAS has sometimes been the first and only evaluation system being able to adjust to the special requirements of target group and objectives.

6.3.3 Scaling of the Cube

A specific question concerning the scaling evolved already during the early period of the project in June 2006 and occurred continually until the presentation of the complete pre-test results in September 2007, during the meeting in Alden Biesen:
Often partners evidenced the changes of competencies in smaller steps than in the given 5 step scaling.
This problem became obvious at two occasions:
1. Due to the nature of the target group in the Swedish micro-project, the beneficiaries only showed very small movements in terms of competence development.
2. One partner worked with rather quantitative assessment methods (questionnaires) that allowed a numerical grading subdivided in decimals.
Those practice partners felt that the grades were not fine enough to display the changes and they proposed a further subdivision (decimalisation) of the 5 stages.

In the Swedish case the problem was solved by simply enlarging the scale. This is an acceptable approach because the context and the background of the learners simply limited the scope of competence development. The partner described the competence levels in a way that was adequate for the target group and was thus also able to evidence smaller improvements (changes) of cognitive, active and affective competences in the 5 grade scaling. At the end especially in this project very useful results could be achieved and minor changes could have been displayed as well.

The question of how fine the scaling should be to achieve satisfying results can generally be answered on a *political* and *methodological* level:

Political
From the beginning, the research practice project applied a qualitative approach to evaluate social projects in the field because of the limited testimony of a quantitative research in this context. What does it mean if a person or a group moves from level 3.2 to 3.5 in relation to “accepting diversity”? The utilisation of quantitative assessment and the presenting of decimal results are promising more than can be kept. The whish for a more detailed scaling only pretends “exactness and objectivity” but would lead in a wrong direction.

Methodological
Another argument against a decimal scaling is that, as described in chapter 3 (methodology), competence development may take place in stages or plateaus.
A sequential evidencing may simply not be justified.
Solution
A possible way to deal with the problem of decimals simply is to round them.
Even if competence development does not lead to a different step but only to gradual improvements they can be described in the documentation area and thus give evidence for a development.
One could also question whether the whole numerical approach does not lead one on a wrong track as it persuades the informal learning evaluator to think in mathematically terms. As partners mentioned in their experience reports and statements a solution could be to abolish the numbers for the grades (1-5) and invent letters instead (a-d) to avoid any mathematical considerations related to the grades.

Excursus: Prototype Character of the System

During the action research and development process, there have been intensive discussions about the general denotation of the level titles. Some partners are still arguing for the one or the other detail.

According to the principles of action research the demands and experiences of partners from the field should be included in the research design and influence the further experimentation in terms of instruments and procedures.

The Turkish partner, for instance, voted for a turnaround of activity levels 2: "applying" and 3: "deciding" following the idea that first one has to decide to take action before really doing it. The opposite view is taken by partners who argue that the description of level 2 also included the imitation aspect "applying/*imitating*" in contrast to a more self-steered character of "deciding *independently*". Again, the different views may also reflect different learning contexts as the first partner refers mainly to students in formal learning contexts, whereas others refer to grown up persons or group situations in the neighbourhood.

The example makes it clear that the approach and the system are still in a fine-tuning stage. They are prototypes and a larger scale study would be needed to clarify and verify those components under discussion[87].

However, despite the prototypical stage of the reference pattern, every practice partner was able to apply the instruments, and to set up an individual evaluation reference system.

6.3.4 Quality Criteria

Though the comprehensive approach was widely acknowledged in terms of feasibility and transferability, some of the external participants and stakeholders expressed rather unspecific doubts in relation to the "objectivity" of the ACT approach. Some participants felt uneasy because of the lack of clear specifications and had to grow used to the idea of an individual reference system. Consequently, the question arose whether an individualised "subjective" evaluation approach is valuable.

In this connection it is evident to differentiate between "objectivity" in relation to the *described project (system)* and in relation to the *methodology*.

Objective (Standardised) Project Evaluation Setting

Concerning the reflection of the micro-project as a whole, an "objective" observation is difficult. A standardised approach with fixed contents and criteria is simply not feasible and in fact not desired. In general, it has to be asked whether "objectivity" in relation to the measurement of competences can be achieved, and the measurement of standardised performances of human beings is useful against the background of uncountable social sub-systems. From a radical constructivist perspective, one could even argue that objectivity per se does not exist (Glasersfeld 1998). In any case, it is not operable to set up theoretical standards for subjects in informal learning settings independent from their context. There are limits for these standards in everyday life, especially in social projects.

The claim for objectivity in relation to the micro-projects is aiming at transparency, traceability and transferability. Since nobody would expect grass-root projects having exactly the same design, participants and objectives, a satisfying result is achieved when the results can be compared with the original objectives (evidencing), safeguarded and transferred (documentation).

These claims have been fulfilled to a high extent because the properties of micro-projects, learning processes reference and evidencing systems have been described and presented in a transparent and traceable way enabling other projects to learn from the documented projects, compare them and transfer the lessons learnt into their own projects.

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[87] By the time of this dissertation the follow-up project ACT-NET has already started to deal with these questions.

Objectivity as Scientific (Methodological) Quality Criteria

The dissertation on hand is a reconstruction of the practice project ACT thus reporting about the development processes in terms of methodological development, application and pre-test and experiences made on the transnational level.

In this (first) 2 year development phase of the ACT approach the quality criteria “objectivity”, “validity” and “reliability” could not be considered in an adequate scientific way. To include these criteria would have exceeded the research design in terms of time and resources and would have afforded an additional research practice project.

This is why the follow-up project[88] ACT-NET (2009-2010) has been designed to validate the ACT approach against those scientific quality criteria.

However, some introductory remarks and possible approaches to deal with the relevant quality criteria should be already mentioned in this dissertation.

General remarks:

1. When developing a quality criteria pattern for potential ACT partners and evaluators who will use the methodology (to avoid the word “customers”) the quality criteria should be presented in a guideline or central FAQs. A practice oriented deliverable in regard to the application of quality criteria would certainly fit well in the action research approach.
2. For the ACT approach it would be especially interesting to apply the quality criteria on the unique reference system (and not so much on the assessment methodology) since quality criteria for assessment methods have already been described exhaustively.

Detailed remarks on specific quality criteria:

1. Objectivity
   Objectivity describes the degree to which the diagnosis is independent of the investigator. A possible way to ensure certain objectivity could be to conduct the measurement (“Durchführungsobjektivität”) as well as the evaluation and the evidencing of the results in the cube (“Auswertungsobjektivität”) by two or more different persons and compare the similarity of their results. A high level of similarity would be an indicator for a high level ofobjectivity.
2. Reliability
   Reliability describes the degree of reproducibility of a result. A possible way to ensure reliability of the reference system could be to carry out the measurement with two different assessment methods and to assign the results to the same reference system. Similar assignments would indicate a high reliability of the reference system.
3. Validity
   The term “validity” indicates the extent to which a measure accurately reflects the concept that it is intended to measure. Not only the assessment method should consider the criteria “validity”, but also the reference system should be a valid system. A possible way to ensure validity of the reference system could be to compare the defined stages with statements of experts in the respective field. The stages could also be built on existing level models (e.g. for cultural competence).
4. Additionally, as ACT is dealing with qualitative and participatory approaches, concepts used in these areas could also be integrated and demonstrated. This would refer to questions of how the ACT approach deals with "credibility" (parallel to validity), "dependability" and "transparency" (parallel to objectivity) and "confirmability" (parallel to objectivity) (Guba and Lincoln (1989) and Patton (2002).
5. Specific quality criterion:
   Setting up of individual reference systems according to good scientific practice:
   The elaboration of the individual reference systems could be based on the rules of category construction like in a qualitative content analysis or in a structured observation (using a fixed set of categories)[89].

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[88] By the end of 2008 the follow up project ”ACT-NET“ has been started including a work package to include the quality criteria in the approach and to verify them in a series of 20 additional practice projects.

[89] When using the ACT approach possible users could receive information on how to construct high quality categories.

Diekmann (2007) defines the following quality criteria for a scientific category. A category should be:

- Discrete/disjunct,
- Comprehensive and
- Precise.

This means that categories of a variable should not overlap, all possible results should be clearly assigned to a category and the assignment to categories should be precisely regulated.
Mayring (2000) suggests the following elements that go along with using the categories:

- Definition of the category
- Example
- Coding rules.

When constructing the reference system similar rules could be used to ensure a procedure going along with scientific approaches[90].

6.4 Collaboration

European project collaboration is a relatively new issue[91]. In collaborative projects stakeholders from different countries gather under a multinational umbrella to develop new approaches, projects, products and services.
Unquestionable, in contrast to collaborations on the national level these developments require not only higher efforts in terms of resources (time, personnel, money) but also (additional and profound) competence with regard to language skills, multicultural collaboration, tolerance, openness for change etc….).
According to European policy, legislation and funding schemes, multinational collaboration is a top priority with a high European value[92].
Despite these claims, the *internal* learning processes of European project partners are nearly totally ignored though they bear a tremendous European potential, since the stakeholders are multipliers to bring about European understanding and collaboration.
One could also define European collaborative projects as *informal learning environments*.
This is why different aspects of collaboration in ACT, namely partnership, collaborative learning, networking and an interdisciplinary approach in terms of different disciplines and research/practice cooperation should be highlighted.

Collaboration Components
The following paragraphs will focus on practical experiences and lessons learnt in ACT and the special impact of interdisciplinary science-practice projects.
It will start with a description of applied project management principles and instruments, and highlight especially the value of communication and collaboration tools in the framework of the partnership.

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90 In future, a modified “[s]tep model of deductive category application” could be applied (MAYRING 2000), for instance , but the practice relevance must always be borne in mind.

91 Grounded on the process of a growing of Europe and reinforced by the integration of new member states.

92 Official Journal of the European Union, 2006, DECISION No 1720/2006/EC, DECISION No 1720/2006/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 November 2006 establishing an action programme in the field of lifelong learning: …promotion of intercultural understanding through cooperation with third countries in articles, 6, 14, 18, 20, ff.

ACT had a broad partnership and a challenging approach, and showed in the end an ideal type of project sequence (as described in chapter 4.3.2).
This is why ACT is well suitable to discuss important aspects of collaboration in European projects.

6.4.1 Partnership Composition

To reach utmost diversity the ACT partners were selected according to an equal distribution from all orientations in Europe and old and new European member states. With nine partners, it has been a relatively large project in the SOCRATES programme.[93]
This way, different working, developing and learning traditions could also be integrated and observed in the project and its work groups. Additionally, the project consciously integrated partners with different professional and working backgrounds; four university partners (from different faculties: educational sciences, psychology and engineering); adult training institutes and grass-root organisations working in culture and the social care sector.
This large variability was intended to reach a good transferability to different fields and stakeholders.
The impact of heterogeneity in a transnational partnership composition is ambivalent (Somekh, 2002).
On the one hand, diversity may induce synergies and intercultural understanding but on the other hand it may also lead to misunderstandings, frustrations and additional efforts in terms of input by each of the partners and internal moderation.
Like in many other European projects, in ACT, those differences sometimes led to conflicting views, for instance in discussions about the way how certain results have to be presented.

Due to the different backgrounds of partners, the "practice-science dilemma"[94] was a continuous momentum in the project. There were two main reasons: firstly, the stakeholders from NGOs "suffered" from rather academic approaches and instruments (grids, patterns) applied to deliver theoretical reasoning while the scientific partners expected descriptions that satisfy certain quality standards. As the main reason for this conflict is a lack of understanding and insight in the other partner's situation, this systemic conflict could only be tackled by discussions, intensive communication and learning from each other.
Secondly, the applied research and project development method (Grounded Theory) was completely new for most of the partners.
As the overall process evaluation[95] of ACT showed, the only important point of critique in an excellent rated project was an "unclear development path" and long and sometimes superfluous discussions. In contrast, from the project management point of view, these discussions were inevitably necessary – not only to clarify misunderstandings but also to bring forward the development process.
This is why the basic communication and development processes in ACT will be highlighted in the following.

6.4.2. Communication and Collaboration

As indicated in chapter 4.3, collaboration methodologies played an important role in the success of the project.
First and foremost there was a synchronous communication system that enabled the partnership to keep up a relatively high level of connectivity. It made cooperation more effective because it shortened the gaps between project meetings and opened a new virtual cooperation environment.

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93 Though projects in the 6th Research Frame Programme had up to 45 partners. As these networks cannot be handled anymore the Commission reduced the numbers of partners in 7 FP substantially.
94 Described by HALLER et al.: Blended learning in the European 3rd sector, http://www.blinc-eu.org/uploads/media/BL_Report.pdf.
95 See appendix.

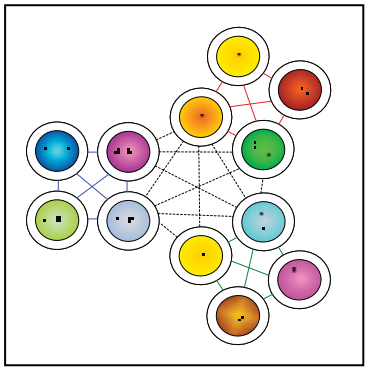
There were crucial (and unforeseen) development steps that were thoroughly communicated and implemented through online communication. The affective scale was introduced, discussed and adopted in several online conferences between January and March 2007.
Being aware that good internal communication does not only depend on (IT-) instruments but mainly on clear and distinctive tasks, moderation and continuity a “culture” of communication was developed[96]. It turned out to be important to have a fixed programme with certain focal discussion points else the online meetings get uninteresting and inefficient.
The internal project communication by means of instruments, methodology and culture determined the success of the projects not only in terms of continuity but even in terms of new outcomes that would not have been possible in asynchronous communication (e.g. eMail, blogs, LMS). The direct contact and exchange directly led to new impulses for development steps.
Some of the partners stated in interviews that the combination of audiophile communication and the visualisation of results on the whiteboard sometimes even exceeded the efficiency of live sessions.

[96] Regular 1-2 hours meetings at fixed dates were held up to twice a month – this was agreed upon by all partners in a common decision process.

6.4.3 Networking in Different Project Phases

The networking structures changed in the project lifetime according to the demands in the project phases as described in chapter 5.3.
The advantages and disadvantages of the different network structures over the project lifetime shall be discussed in the following with the help of a SWOT analysis[97].

Phase 1: Definition and Stock-Taking:
With regard to group dynamic in the first project there was a need to integrate new partners in the network and to create a team building spirit. This aim could be achieved by small sub-teams consisting of 4 partners each.



In this phase the focus is on creating knowledge for the project partnership on:
- Active Citizenship definitions and models
- Evaluation approaches
- European educational practice on AC

Strengths (Attributes of the organisation that are helpful to achieving the objective)	Weaknesses (Attributes of the organisation that are harmful to achieving the objective)
▪ Teams of specialists work on specific modularised tasks ▪ Efficient separation of tasks and work packages ▪ High fragmentation contributes to efficiency	▪ Low connectivity between modules leading to long flows of information ▪ Subnets cannot integrate expertise of all partners (loss of efficiency -> low proximity
Opportunities *(External* conditions that are helpful to achieving the objective)	Threats *(C*onditions which could do damage to the organisation's performance)
▪ Integration of new partners and distant partners ▪ Stability of subnets has to be transferred on the whole network level ▪ Management of interfaces improves efficiency	▪ Eventually subgroups separate due to low connectivity[98] ▪ Unequal distribution of skills and resources in the sub-nets ▪ Danger to produce parallel thus not meeting the requirements of the others

Conclusion:
From the group dynamic point of view the objective was to integrate outer partners and thus to create communality.
This could be well achieved by small subgroups. Against the background of difficult management of large projects and networks the recommendation can be derived that well manageable sub-groups with clearly defined tasks lead to a high identification and integration of outer project partners.
In regard to weaknesses and risks one should bear in mind that the subnet-option is not a way to run a large project or even a network over the whole lifetime since it may foster segregation due to its fragmentarity and low connectivity. In any case it affords a high degree of management and communication.

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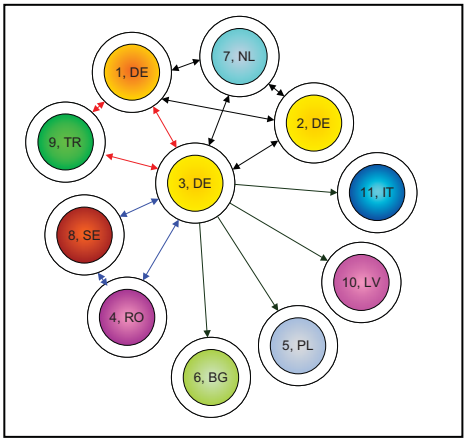
97 SWOT analysis is a strategic planning method used to evaluate the strengths, weaknesses, opportunities, and threats involved in a project.

98 Though this was tackled by redundant systems (2 partners as connectors).

Phase 2: Developing Phase

Phase 2 was the logical successor of the stocktaking phase as it interconnected the major findings and approaches. It was characterised by a totally different structure as it was organised with high centrality and hierarchy.

From the content point of view it aimed at establishing the ACT evaluation approach including the ACT cube model and the consulting procedure. There was a segregation of 4 partners who contributed only small parts to the fundamental developments but regularly participated in information and exchange events.



Strengths	Weaknesses
▪ High coherence of the development circle ▪ High efficiency in development sub-units ▪ High inner diversity can be exploited ▪ High productivity due to simple (central) steering ▪ Clear tasks and roles	▪ Low external input because of 1 main circle ▪ Low stability due to missing alternative pathways ▪ Sublevels can hardly organise themselves independently ▪ Highly divers work loads of partners
Opportunities	**Threats**
▪ Easy Integration of distant partners with the help of clear tasks ▪ Opportunity to standardise of development processes ▪ Identification of strengths and weaknesses of partners in developing process	▪ Threat of exhausting central actors ▪ Threat of a collapse of the whole network if central partner breaks apart ▪ Slow response to external changes (e.g. in case of undetected innovations in the working fields of the consortium) ▪ Distant partners may lose contact to central working unit

Conclusion:

The development phase is characterised by high efficiency and low managerial stability. From the management point of view this phase is critical since a collapse of the main partner would lead to a termination of the project.

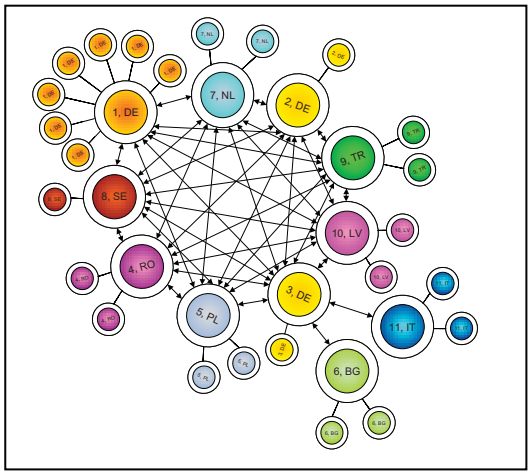
However, the threats of segregations of subgroups have been overcome and also new partners actively contributed in the development circle.

This structure also cannot be a permanent one as the dominance (centrality) of one partner is not recommendable for a network of partners who are aiming at the creation of constant mutual and creative developments. Apart from this fact one should not neglect the threat that the outer partners could be lost in case that they were not integrated in the central development processes. In case of ACT the main reason for the passivity of some partners in this phase is their missing proximity to the development SUBJECT which was very much focused on social science research. Neither partner 11 (cultural NGO), nor partner 9 and 10 (electrical engineering and linguistic faculties of a University) nor the adult education institute were very near to evaluation methodology and measurement of competencies.

On the other hand, as this structure is temporary, this is not a major threat to the project as partners were “activated” in later project phases.

In relation to European collaboration processes it can be concluded that it is evident to integrate partners in development processes according to their expertise and not to force them in roles that they cannot fill.

Phase 3 and 4: Pre-Test and Application
According to the observations of the author and documented through recorded online conferences and reports all partners actively contributed to the project in phase 3 and 4 – at least on a minimum level by including local grass-root projects or activities and carrying out evaluation with ACT procedure and instruments and supplying evaluation reports about experiences and lessons learnt.



Apart from 2 partners all others also took over certain central development tasks and thus formed a circular network structure with perpetual interlinkages leading to strong hub assortativeness and short information paths (proximity).

Strengths	Weaknesses
▪ High stability in the network due to short communication pathways, high connectivity, multiplexity and transitivity. ▪ High efficiency in development sub-units ▪ High (Durchlässigkeit) of practice results due to high hub assortativeness	▪ High structural redundancy ▪ 2 partners with weak connections ▪ associated partners without connection to development circle
Opportunities	**Threats**
▪ Good connection to outer space (to real life/practice) ▪ Feed-back of outer circles may influence research process and lead to o new approaches o modified procedures o extensions of use	▪ Threat of double work in satellite testing and application units ▪ Missing identification due to missing links of local associated partners

Conclusion:
This structure can be interpreted being prototypical for a science practice network showing favouring transnational collaboration within an interdisciplinary partnership.
The results from practice are channelled by the project partners and fed into a common development and research circle. In this circle concrete tasks were distributed and carried out by the central partners:
Each partner had to provide a pre-structured report (chapter 5.1)
Some partners acted as pioneers and reported in several online sessions about experiences and lessons learnt. Problems could be detected (e.g. the scaling problem when evaluating very difficult target groups with a low development potential (partner 8, SE[99])
Bilateral groups worked in very close cooperation on exemplary grade description (PL/GER) and provided a standardised process description for the ACT leaflet (RO/SE/GER).
Finally, a larger sub-group (partners 1, 3, 4, 5, 7, 8 and 10) developed the ACT circuit for the final conference in the course of 8 online conferences. All other partners joined for the organisation and support for the final conference.

99 Working with long-term unemployed migrants who have reading and writing difficulties.

The structure of the network was nearly ideal for practice research (with the exception of partners 6 and 11 who still showed a little lack of proximity).
The only weak point (identified in the SWOT analysis) that should be mentioned is the missing connection of local partners. On the other hand it was not the core aim of the project to set up a large scale network in the project's lifetime.
For this purpose other steps have to be taken and the network structure has to be modified accordingly in the future.

6.4.4 Action Research and Grounded Theory

As discussed above, due to the nature of the project basic *Action Research* components (e.g. the integration of the research subject and intermediates into the research process) determined the research design already at an early stage. The research practice project was planned end executed following the typical "planning, executing, and reconnaissance circle".

Certain principles of *Grounded Theory* served as impulses for research and development steps and proved to be extremely useful:
During the whole development process there was a constant change from *inductive*[100] *and deductive*[101] *reasoning* leading to the new and far-reaching achievements and products:
The cube model emerged in a one year collaborative process from a 2-dimensional coordinate system of Activity and Citizenship to a 3-dimensional gradual system being able to visualise the major components of competence development.
Hence the ACT cube was developed in *transnational collaboration of research and practice partners* – it is a *European product* incorporating the expertise and contribution of partners from nine countries and different backgrounds:
The diversity of the group has been one of the success factors of the project:
Partners from the interdisciplinary definition work group contributed to the explanatory approach that was matched with the approaches developed by the evaluation work group. Engineers added mathematical considerations to the cube model and moderators accompanied and structured discussion processes with the help of state-of-the art moderation techniques (Metaplan) to cluster results and to shape out development potentials. Partners from the field pre-tested the approaches and fed back their experiences into the development process. This way important development could be implemented in the approach. Finally the model was transferred into software by an interdisciplinary team of programmer, designer, project manager and educationalists.

Action Research and Grounded Theory traits and principles contributed to major developments in terms of modelling and theory building. One example was the outcome of an intensive debate between pedagogical and psychological experts during the Ankara meeting in autumn 2006.
Subject of the debate was the general scaling of the third ("emotional/affective") dimension.
By this time there was agreement on the titles and scales on the cognitive and activity related dimension, the third dimension was still in the discussion process.
One partner proposed to name the fifth grade on this dimension "emotional intelligence" - the disagreement of other partners led to a long and open ended discussion, which was the impulse for an additional research work that finally led to the development of the "affective competence" axis and the associated scale.
For a process-orientated evaluation approach (like in ACT) the term "affective competence" seemed more appropriate than the *emotional intelligence* construct or the concept of *attitudes*[102] because it rather displays the change of an emotional state.

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100 I.e. making generalisations based on individual instances.
101 I.e. proceeding from general principles to particular information.
102 The process-oriented model (the act cube) is insofar unique as it differs from static constructs, for instance utilised in the European work programme "Education and Training 2010" in which competencies were described in relation to knowledge, skills and *attitudes.*

The example shows how the stakeholders from the field (evaluators and intermediates) influenced theory building in the research practice project at major and decisive points.

The inherent method of *theoretical sampling* was applied to verify the assumptions through the constant research for additional data that support the developed theory. This was done in ACT, for instance, on the European level by a transnational research for approaches and examples for active citizenship elements in formal, non-formal and informal learning. The results were constantly discussed and condensed in the first project phases.
A key success factor in ACT was the creativity of the partners in combination with the relatively open way of managing the project. There were several occasions when partner contributions led to a new impetus and new explorations and discoveries on the development pathway. The project was open for these kinds of developments (spin-off effects[103]) from the beginning.
In the timeline of the project, a consulting approach was developed with a clear workflow description for social organisations. This outcome was not foreseen in the original application and it clearly increases the value of the approach in terms of valorisation.

This development was induced in the following way:
When pre-testing the approach the project partners reported in a series of online meetings that applying the approach was exhausting but, nevertheless, a very valuable process because it creates awareness of the central processes of the service rendering organisation. Having worked in quality management (QM) in social organisations for a long time, the German partners realised that this effect can be compared with the major objective to introduce process-oriented QM.
If the system is able to display the major results of the central processes of a social organisation (which can be explained in most of the cases as a gain of competence), it can be used as a quality assessment tool. Social organisations will benefit because it enables them to evidence the results of their work independent of formal specifications set by traditional QM systems like ISO, EFQM and most other derivates of QM in the social sector.
This is an example for abductive reasoning[104] because the new theory b (using the ACT system to display the major "business processes" in social organisation -> quality management) was inferred by theory a (ACT-IAS is able to display relevant processes of competence development).
From the methodological point of view one can conclude that the research design not only fit to the multivariable ACT approach (by giving reason to theory) but even created new theory. This way the applied Action Research and Grounded Theory approaches contributed to bridge the research-practice gap because theory and concrete products (especially consultation, software, training modules) were developed parallel and interlinked with scientific theory.

6.4.5 Informal Learning in European Projects

ACT was a transnational development project. Like in ACT in hundreds of other European funded collaborative projects[105] stakeholders from different countries gather under a multinational umbrella to develop new approaches, projects, products and services[106].
Unquestionable, in contrast to collaborations on the national level these developments require not only higher efforts in terms of resources (time, personnel, funds) but also (additional and profound) competencies of project partners in regard to language skills, multicultural collaboration, tolerance, openness for change etc.…).

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103 European Commission, DG EAC Glossary: "Spin off effects are unexpected effects happening along the project life and that are normally considered in the ex-post evaluations" (http://ec.europa.eu/dgs/education_culture/valorisation/glossary_en.html).

104 Abduction allows inferring a as an explanation of b. Because of this, abduction allows the precondition a of "a entails b" to be inferred from the consequence b. Deduction and abduction thus differ in the direction in which a rule like "a entails b" is used for inference.

105 In the new Lifelong Learning Programme this type of projects is called "Multilateral Projects" (MLP).

106 The European collaboration is intended by the European Commission and shall enhance the process of a growing of common Europe and the integration of new member states.

According to European policy, legislation and funding schemes multinational collaboration is a top priority with a high European value as mentioned in the Lisbon Agenda and the derived indicators[107].
Despite these claims *Internal informal* learning processes of partners in European collaborative projects have still been rather neglected though they bear a tremendous European potential since the stakeholders are multipliers to bring about European understanding and collaboration.

In ACT the project partners and team members developed competencies with regard to European collaboration, for instance in relation to tolerance, intercultural understanding, knowledge about everyday (professional) life of team mates, and willingness to interact with others etc.
Though the project had a rather abstract and ambitious approach it turned out to be very successful as all partners showed a strong willingness to learn together in the collaborative project[108].
Due to this spirit, the positive aspects of transnational collaboration could grow:

- Synergies could be created leading to a comprehensive consulting approach that was not envisaged on the proposal level.
- The input of multiple disciplines contributed to a balanced science-practice approach with satisfying results on both levels.
- Additional values were created while the original approach was extended in terms of quality, usability and attractiveness.
- The partners learnt about Active Citizenship in different societal and cultural systems.

The inherent risks of the project could have been overcome because partners were open and able to *learn* during the project.

In fact, the *internal learning in ACT* tackled at least seven relevant key competencies[109] stated in the work programme implementation and Training 2010.

1. Language competence
   Language competence improved automatically in the course of intensive discussion, exchange of information, reporting etc. Language deficiencies became obvious and some partners reported about a new impetus to learn the English language[110].
2. Science and technology
   Internal learning in this respect referred to knowledge about Active Citizenship and educational systems in Europe, evaluation methodology in terms of assessment and evidencing[111]. This way, the project contributed to the willingness to acquire scientific knowledge.
3. Interpersonal, social and civic competences
   ACT was focusing on *Civic Competences*. Nevertheless it is remarkable that also academic partners working in Active Citizenship stated that in the course of the project they developed "new ways of thinking on the concept of citizenship and evaluation"[112].
   The development of *Interpersonal competencies* (such as helping others, the willingness to interact, communication and collaboration, tolerance, empathy and interacting with people from

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107 Lisbon agenda (and consequently a more or less explicit (learning) objective in collaborative projects).

108 Partners from the fields criticised the theoretical project parts as being too "academic" (see process evaluation, chapter 5.3.1).

109 Key competencies represent a transferable, multifunctional package of knowledge, skills and attitudes that all individuals need for personal fulfilment and development, inclusion and employment. These should have been developed by the end of compulsory schooling or training, and should act as a foundation for further learning as part of lifelong learning.

110 Source: Final process evaluation (chapter 5.3.1, appendix): Two partners explicitly mentioned improved English competence and confidence to work in English.

111 Source: Final process evaluation (appendix xx): The evaluation approach and the materials were rated very good – good (1.27 (cube) – 1.73 (material) on a scale from 1-5). Partners stated that evaluation is much easier for them after the project and most partners would like to continue the work with the approach and the products.

112 Source: Final process evaluation.

other backgrounds) could be described as a hidden learning objective in the informal learning context of the European project[113] and evidenced by the process evaluations.
Carried out at four stages during the ACT project the partners openly expressed their critique in the evaluations. Not surprisingly, partners from the field criticised long discussions and the too academic approach(es) whereas academic partners complained about a missing clear *research* approach from the beginning.
Nevertheless in the final process evaluation all partners rated the project and its outcomes good to very good (average 1.55 of 5). This means that all partners were not only able to back down and collaborate despite their individual criticism but to acknowledge the positive effects of a collaboration of different stakeholders.

4. Entrepreneurship
   Economic elements were considered in the project work package of "networking" and organisational building. A special work group for marketing issues worked on the question of how the ACT network could become sustainable and how the initial partners could develop income generating activities in the network. The concrete results were discussed and adopted in partner assemblies. It is also a learning process to understand that different stakeholders have different objectives in terms of valorisation of products. A scientific publication has another audience, context and exploitation objective than a popular one. Learning from each other extended the view to other exploitation levels[114] as well.
5. Cultural expression
   The factor of cultural expression was tackled in every European project at least during the transnational meetings. Partners showed own familiar places and connected historic, geographical, cultural, social and economic aspects to their fellow team members and, vice versa, learned at the partners' locations.
   This is certainly one of the most attractive and successful learning field of transnational cooperative projects and it certainly plays an outstanding role in overcoming cultural stereotypes[115].
   In the framework of ACT the integration of cultural programmes and meetings with local stakeholders became a tradition:
   - It started in Göttingen with a cultural evening with local projects for migrants, juvenile delinquents and street-worker activities.
   - In Sopot there were meetings with local youth projects and traditional music events.
   - In Ankara different excursions (e.g. a visit to a regional museum) were made.
   - The Cagliari meeting was held during a "Monumenti aperti" event.
   - For the final conference in Göttingen again different local initiatives (migrant and other educational projects) were invited.
   - The places for the workshops and conferences were consciously chosen in historically and culturally attractive places (e.g. Seeburger See (near Göttingen), Landskommanderie Alden Biesen (near Maastricht)).

   Apart from this inherent cultural learning aspect there were two ACT projects that exclusively dealt with cultural issues. The impact of these projects on the partners ranged from awareness creation ("cultural projects are very attractive learning environments that I didn't consider before") to concrete transfer ideas ("I will use cultural elements (arts, music) also in our learning context.")
6. Digital competences
   An interactive website seems to be standard in most European projects, not to mention normal office software. Additionally, in ACT different kinds of web-based systems were applied: a learning management system, a blog and synchronous online conferencing software.
   As mentioned above (chapter 4.3.1 and 4.3.2) the applied IT instruments enhanced the progression of the project. However, it has to be stated that especially the utilisation of "online

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113 They ought to be developed in each European collaborative learning project (author's comment).
114 The final conference as commonly developed event to present and market the ACT approach was rated with highest scores (1.09) in the final process evaluation.
115 This point was also asked for in the final process evaluation. It received a score of 1.18 out of 5.

conferences" has to be well prepared and utilised in a more focused way since most of the criticism in relation to communication was related to too long online conferences[116]
IT knowledge and skills are also aspired competencies in collaborative projects, especially if new software developments (IAS system) are components of the system. Most of the partners were eager to apply the new IAS software as shown in the results from the final process evaluation.

7. Learning to learn[117]
Learning to learn describes the willingness to change and further develop competencies as well as self-motivation and confidence in one's capability. As described above, a collaborative learning attitude evolved in the project leading to successful development processes. This spirit was important for the positive group dynamic enabling partners to learn from each other, to open up their minds for other living and working concepts, traditions and cultural backgrounds[118].

One can conclude that internal learning is a major success factor for collaborative projects thus these experiences can be easily generalised and transferred especially to LLP but also to other European facilities like research framework programmes, sectoral development or interregional[119] programmes.

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116 Final process evaluation, questions 1.8 (online conferences) and 4: dislikes.

117 Disposition and ability to organise and regulate one's own learning, both individually and in groups. It includes the ability to manage one's time effectively, to solve problems, to acquire, process, evaluate and assimilate new knowledge, and to apply new knowledge and skills in a variety of contexts — at home, at work, in education and in training. In more general terms, learning-to-learn contributes strongly to managing one's own career path.

118 This point can be backed up by partners' statements on question 3 of the final process evaluation (What did you like in ACT?): "Sharing experiences in different projects even though they all had different scope and context; Realizing the potential and power of partnership in developing and running new projects" or: "I get to know people from other countries who have similar projects and problems. Some of the ideas I would also like to initiate in my country. The experiences which were shared showed also similar problems and the solutions of several partners. After the presentation of my project I got a lot of helpful suggestions from the network" (appendix).

119 EU programmes such as 7 FP, Health, Life+, or INTERREG.

6.4.6 Knowledge Visualisation in European Development Projects

"In the next decade, the most important new sense-making tools will be those that help people visualize and simulate. Visualization techniques reduce vast and obscure pools of data into easily comprehended images" (Saffo, 1998).

As already highlighted in chapter 3, knowledge visualisation is an appropriate method to create and transfer knowledge. In the following it will be discussed – with the help of the example of research and collaborative processes of the ACT project – how knowledge visualisation contributed to outputs, activities and management of the project and which mechanisms can be generalised with regard to future European projects and networks.

6.4.6.1 Visualisation in Knowledge Creation in ACT

In the initial development phase of the ACT project different visualising tools were utilised to create descriptive models to explain a common concept of Active Citizenship.
As there had been no clear definition and sometimes even contradictory explanations on AC verbal explanations were of minor use for the transnational work group addressed with this task. Thus the members used different visualisation techniques to collaboratively develop common knowledge and theory in the workgroup.

Step 1:
In the first Göttingen meeting metaplan methodology was utilised to cluster brainstorming results collected by the 4 partners. A rough map evolved containing all the associated terms and different perspectives that each partner identified as being important for Active Citizenship.
According to its function in the visualisation framework (Burkhard, 2005) this map delivered an overview on the rather complex issue of AC.
Mind maps showing all important aspects of AC for the group members were developed in the next stages. This visual clustering and organising tool is a powerful instrument for the collaborative development (or better organisation) of (common) knowledge. To put it metaphorically, this first mind-map became the fundament of the basic model development.

Step 2:
All partners agreed on the common idea that for the project purpose (evaluation of developing AC-competences) a procedural model had to be developed. More or less intuitively a Cartesian coordinate system was introduced (cf. figure 11 in chapter 4.4.1).
Again visualisation delivered valuable input to the knowledge creation because the model of choice functioned as an "empty knowledge container". The visualised structure (coordinate net), was well known to every partner from learning and practice and delivered patterns and intuitive guidelines since everybody knew that a Cartesian coordinate system describes defined relations of different properties – in the first case between citizenship and activity.
The coordinate net functioned as a visual reference system – it created connectivity of more or less abstract dimensions that the partners filled with examples from practice, thus filling the visual structures with content.

Step 3:
This step indicates the development from a 2-dimensional into a 3-dimensional coordinate system which thus evolved from the image to the model visualisation. The reader should bear in mind that this development step was still rather independent from content creation as the emerging cube model showed different content axes than the final cube.
Again the example shows that visualisation was the key factor to knowledge creation.
It facilitated the following central development factors:

1. Integration of the 3 competence dimensions (cognitive, activity related, affective).
2. Creating a defined space in the cube to visualise all possible movements of an individual in the 3 dimensions.
3. Breaking ground for the ACT-IAS software as the cube is the central element.

4. Facilitating valorisation through haptic properties.

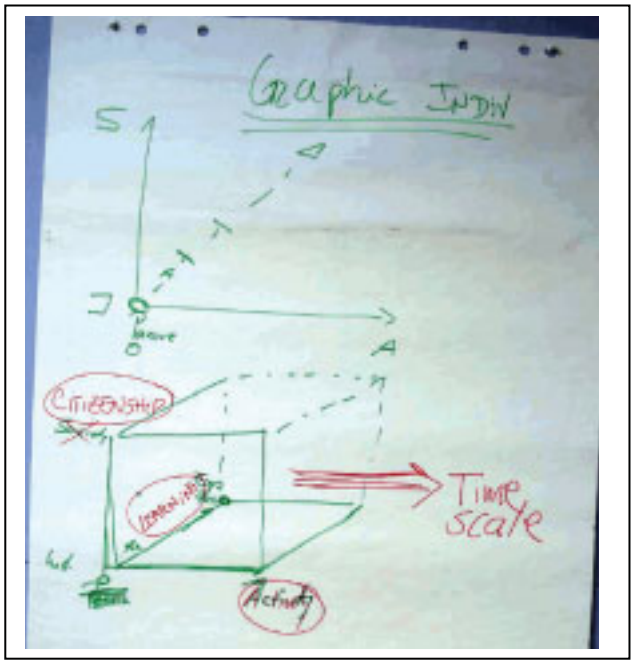

Figure 61: Snapshot from the first visualisation of a development cube (2006)

In a similar process to step 2 in a later stage the cube model was filled with contents in form of titles and standardised descriptions. This was done by partner teams within a 5 months process.

Conclusions:
The main elements that were used were sketches, maps, images and objects. Charts were used at a later stage in order to support procedural descriptions, for instance.

In contrast to the more than 3 centuries applied traditional functionality of illustrations as media to transport knowledge (Böhme, 2005) ACT used visualisation as a method to create knowledge. The employed visualisations are more than just phenomenological media, conveying the results of experiments but they function as recognition tools themselves.

On the other hand it is evident to state that in contrast to pure (IT-related) information visualisation ACT employed knowledge visualisation techniques. In case of ACT the visual knowledge creation processes run vice versa to the information visualisation process described in chapter 3.4.5 (the visualisation pipeline used to visualise large data sets). Knowledge Visualisation seems especially suitable for qualitative research like action research since it contributed to development of explanatory models, supported common understanding of network partners, led to valuable pattern recognition (which was useful for the transfer of research into practical application (e.g. evidencing tools and procedure for 3rd sector organisations).

Arguing from a Gestalt Theory point of view this knowledge creation via visualisation is a logical and necessary method as it reveals the relations of elements/agents rather than their properties.
One can also assume that especially for Action Research and Grounded Theory visualisation is a very appropriate method as it facilitates the change of perspectives, the change of inductive and deductive reasoning. It also supports creative thinking and, thus, abductive development of theory. On the other hand, visualisation may also help to detect logical breaks in descriptive models since contradictions may become obvious in visual presentations (e.g. because of illogical interrelations of certain elements).

6.4.6.2 Visualisation in Knowledge Transfer

Closely connected to knowledge creation is knowledge transfer. The following chapter will refer to knowledge transfer *within the partnership* while knowledge transfer *to external viewers and to the public* will be discussed in the valorisation chapter.
Knowledge, which was created in ACT at several decisive stages, had to be transferred to the whole partnership. It had to be completely internalised as all partners had to apply the approaches at their locations. There was therefore a strong demand for powerful instruments not only for knowledge transfer.
Applying the findings and statements of Cohen and Levinthal (1990), the partners should not only acquire and assimilate knowledge but actively *apply and utilise* it since this is the success factor to knowledge management.

Against the background of a large transnational partnership with long gaps between consortia meetings this key issue seems rather difficult to realise.
This points at a well known problem in transnational European or international projects:
The transfer of (especially procedural) knowledge is hampered systematically by long geographical distances and missing proximity.
ACT could ease these problems by applying visualisation technologies supporting the transfer of knowledge together with modern web-based communication tools in the following way:

- Images were used in online communication to convey latest developments.
    - In the case of one decisive cube development (the integration of the affective scale) the gradation scale was communicated via two online sessions. The developing partner presented the approach by a visual presentation on the whiteboard of an auditive online conference room where it was discussed by all partners.
      The five level scale with general descriptions was filled by all partners during these sessions.
      Without the visualisation this working step would not have been possible as it caught attention, inspired debates, even addressed emotions (what could be realised during engaged online discussions), improved the faculty of recall, and initiated discussions.
- Different kinds of metaphors were used to convey knowledge in online sessions and transnational meetings.
    - Conceptual charts like the Cartesian coordinate system as an interim product described above in the first transnational meeting.
    - Metaphoric diagrams like process description (figure 61).
    - Metaphoric templates as in the case of the cube to visualise the process of competence development.
    - The IAS software, which is a rich visualisation instrument, was demonstrated in online sessions by synchronised browsing. This way all partners could follow each procedural step; exercise the software procedures together with their fellow team members; and, in a next step, present their results in form of own (automatically generated) visualisations. This again fulfils the claim that in knowledge management newly acquired knowledge must be used and applied.

Visualisation in Collaborative European Learning

European project or network teams are active learning organisations - ideally with a very high throughput of different kinds of knowledge (source and procedural) and/or competences (cognitive, activity related and affective) with in the project teams (see also chapter 6.4.5: Informal Learning in European Projects).
According to Landau (2000) “Visuals have been rediscovered as a critical part of thinking and communicating. As a low tech/high touch technology, graphic recording captures both the message and energy of the group. Together with strategic conversation, and supported by communications technology, interactive visual approaches offer a creative, engaging process which leverages how we naturally think and learn.”

The visualisations applied in ACT, ranging from charts and diagrams in the groundwork stage to visual metaphors in the development stage, are good examples for Landau's statement.
Visualisations influence the emotional status of the viewers and their learning capacity as attention is a result of emotion, not its cause (Du Plessis, 2001).
In case of ACT the cube metaphor served as a common identification symbol for the developing group, being constantly modified and further developed in the project lifetime, thus serving to

- a constant identification with the domain,
- a quick understanding of innovation and new findings in the scope of the cube model,
- quick understanding and options to follow the train of thoughts of presenting partners (e.g. when problems occurred during application in practice each partner could immediately follow the experiences of, for instance, the Swedish partner).

The cube reinforced emotions and mutual learning of the ACT group because it strengthened the memory trace effectively doubling recall and recognition. The cube was the best rated project deliverable by the partners[120].

Conclusion

The ACT partners consciously and to a large extent used visualisation techniques to develop and transfer knowledge.
The knowledge transfer via visualisation stimulated the creativity of the partners which was a definite strength of the approach because it contributes to good results in terms of quantity and quality. Especially in collaborative qualitative research projects these creative processes are of utmost value for the development and knowledge transfer and theory building.
Once again the strong impact of metaphors for development processes shall be highlighted:
In ACT they contributed to the organisation of knowledge and to the process of mutual knowledge creation. On the affective level they served as an identification point because they did not only reduce complexity but offered a common object/sign/brand to the developing team. They reduced abstractness ("evaluating the impact of informal learning on citizenship") – instead of long explications they offered a tool, even a tool to play with. The software tool is a 2 dimensional simulation of a 3 dimensional model which invites the viewers to test different settings and scenarios and to immediately transfer this application to their own situation.
This is may be the strongest impact of the cube metaphor – the reduction of abstractness, the identification with a basic man-made artefact, which provides mnemonic and cognitive coordination function as well as an area of mutual and explicit focus.
In general, visualisation with metaphors is a highly recommendable management technique for complex transnational projects. Especially when discovering unknown territory, visualisations are appropriate means to stimulate partners to contribute to the project with their creative potential.

[120] Reflected in both experience reports and process evaluation.

6.5 Valorisation

Valorisation is a relatively new strategy to disseminate the results of projects[121]. It is aiming at transferring, disseminating and exploiting project deliverables and outputs in order to optimise their value and enhance their impact.

Output Levels in ACT
The ACT outputs can be clustered in

- Scientific project deliverables
- Central ACT products that form the "kernel" of the project outputs and
- Envisaged valorisation outputs (exploited and disseminated project outputs).

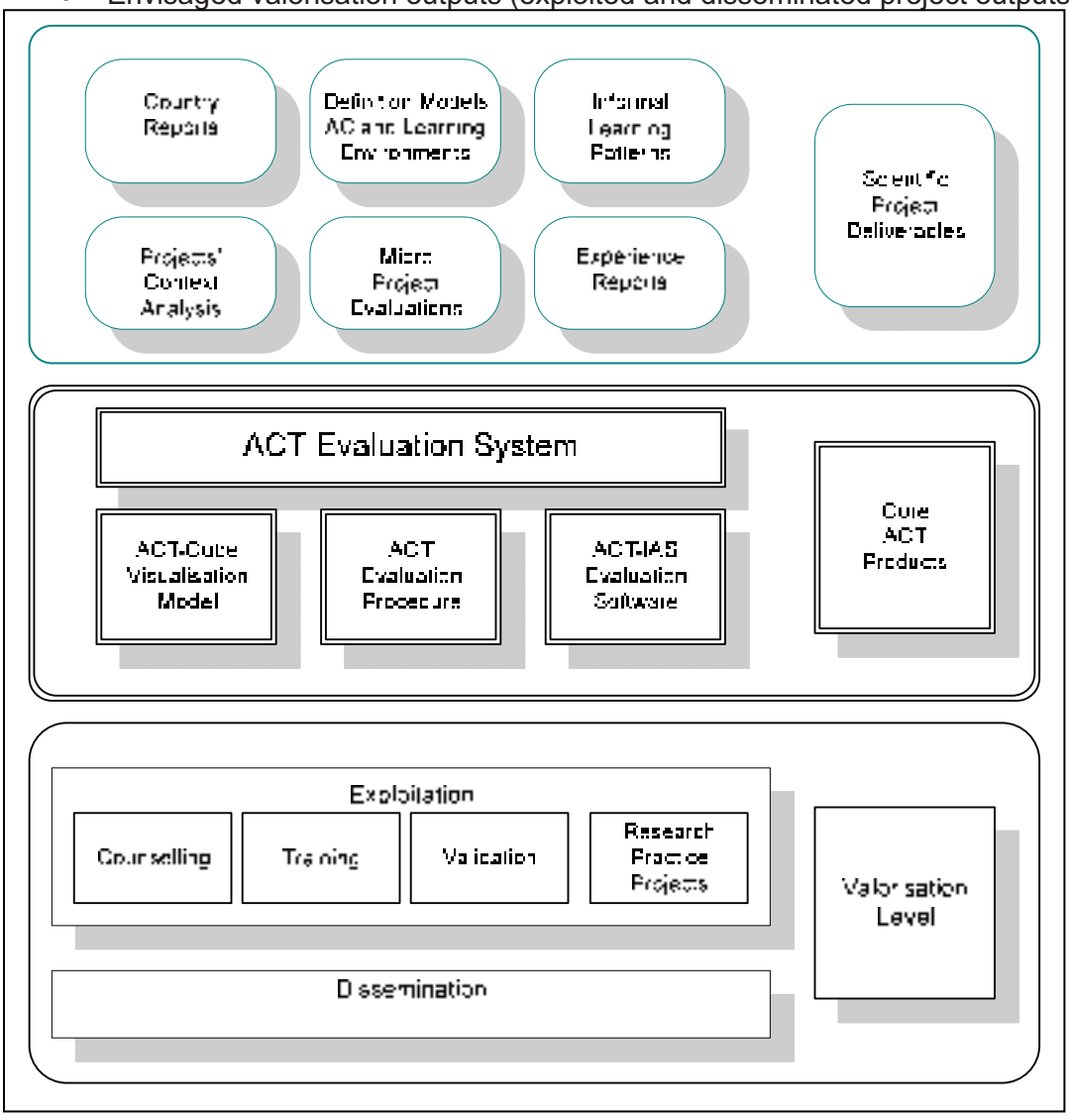

Figure 62: Output levels in ACT

The comprehensive ACT Evaluation System to assess and evidence citizenship competencies in informal learning settings was the *kernel* of the ACT-project (the core product).
It consists of three elements:

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[121] Originally a French term, the concept of valorisation is now widely accepted by the European vocational training community. "Valorisation" can be described as the process of disseminating and exploiting projects outcomes with a view to optimising their value, enhancing their impact and integrating them into training systems and practices at local/national as well as on European level. (http://europa.eu.int/comm/education/programmes/leonardo/new/valorisation/doc/planval_en.pdf).

- A standardised evaluation procedure with description and pre-formatted instruments,
- A visual model (ACT cube),
- A perfected evaluation software to evidence evaluation results and document the micro-project and the procedure.

Procedure and model will be described below; the software concept has already been described in chapter 4.5.2.

There were six *scientific/research-practice project deliverables* that contributed to the development of the ACT system:

- Nine country reports on Active Citizenship.
- Definition models on AC and informal learning delivering the theoretical background to the ACT approach.
- Context analysis of selected projects with extensive descriptions of micro-projects and central learning processes.
- A matrix consisting of 46 informal learning patterns to identify common elements, structures and principles of informal learning.
- 23 perfected micro-project evaluations on paper and in the software.
- 11 experience reports consisting of a quantitative and qualitative survey.

The core project outputs and the scientific deliverables have been described and interpreted in the previous chapters and can be found in the appendix to this dissertation.

Valorisation is a rather strategic concept to achieve a high impact of projects.
In ACT valorisation bundles the activities of:

- Exploitation of the ACT products:
  - Counselling,
  - Training,
  - Validation and
  - Development of and participation in new practice-science projects basing on the ACT approach, as well as
- Dissemination of products and procedures.

Before turning to the valorisation activities carried out in the framework of ACT and the follow-up projects, the main ACT products shall be described from a user-oriented valorisation view.

6.5.1 ACT Products

The central element of ACT is the approach to evidence impact of informal learning activities. Thus, the valorisation (exploitation) is focused on this central outcome. The value proposition for potential customers but also for ACT partners as suppliers is intrinsically tied to this key product.
The valorisation of the ACT procedure has been a challenge as it related to an abstract and rather complex matter. In contrast to concrete products, the illustration of the value of a procedure either needs a lot of descriptions and argumentations or an elaborated visualisation concept to reduce complexity. This is why the ACT team members tried to illustrate the main ACT outputs with the help of symbols, charts and visual metaphors right from the beginning.

ACT Approach - Evaluation Procedure

The attractiveness for clients (and the functionality of the system) is determined by the procedure and the inter-linkage of instruments enabling the users to evidence the impact of their work while, at the same time, keeping up their individuality.
Consequently, the evaluation procedure had to be transferred in a concrete product.
A *marketing work group* consisting of partners from NL and DE started to deal with marketing elements at a relatively early stage at the second meeting in Sopot. It used role plays to simulate the situation of how a responsible person working in a grass-root project can be convinced to use the

approach. Here, the first important arguments in relation to the target group were collected, and the supportive character of the ACT approach emerged. At a later stage these ideas were converted into marketing strands and integrated in the valorisation strategy.
There was a constant involvement of all partners in the developing process. There had been regular feedbacks with other group members to discuss and to improve the interim results.
Finally, three concrete outputs converted the abstract evaluation process into understandable products building the basis for further evaluation:

- Procedural description
- ACT cube
- Concept of visualising learning with hand, head and heart.

Procedural Description
To transform the approach in a product the developed processes in ACT had to be described in a standardised way. Approach and sequencing had to be repeatable and the proposed instruments practicable.
For the product development the process had to be described in a kind of operating manual.
The whole process, the ACT Impact Assessment System (IAS), was displayed in the following flow-chart[122]:

[122] For this purpose ACT used process management charts that are also used to display the processes and workflows in quality management. A flowchart is a schematic representation of an algorithm or a process.

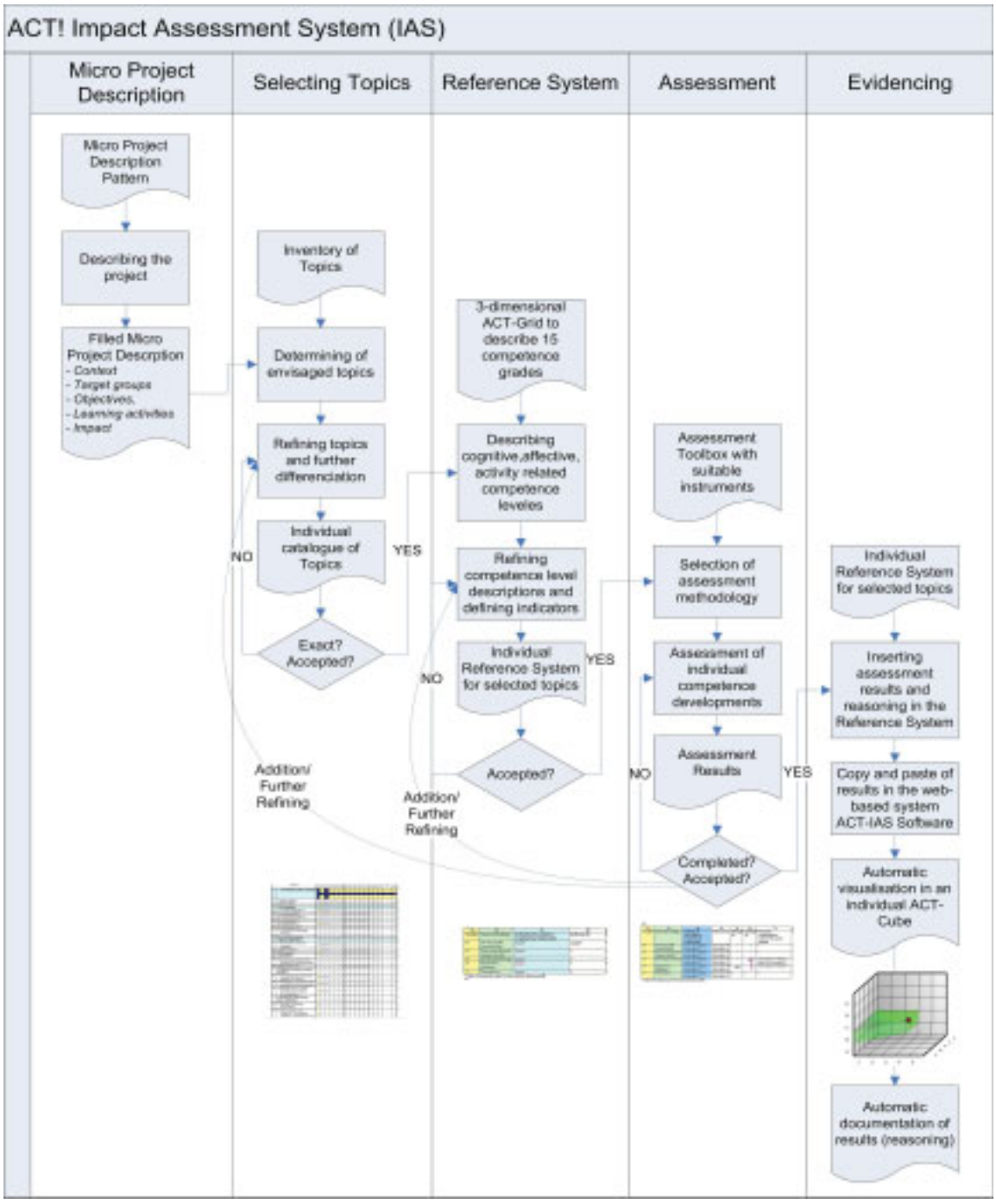
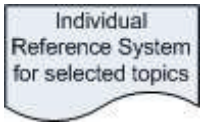


Figure 63: Process flow chart of ACT evaluation procedure

The following elements are depicted by three different symbols:

Procedural steps:

Process documents:



Decision rhomb

The whole process was divided in five segments ranging from “project description” to “evidencing”.[123]

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123 Further down the approach will be displayed again, but in a more cyclic chart.

The ACT Cube

The evolvement of the cube as a model to display the process of competence development has been described extensively in chapter 4.
The cube is the logical visual model for displaying three dimensions. As cited above, cognitive, psychomotor and attitude dimensions formed the basis for various descriptive systems[124].
The innovative element of ACT in terms of visualisation is to combine the three dimensions in relation to one topic, and to allocate the individual in the spatial model.
By visualisation the competence development the effect of learning becomes obvious:

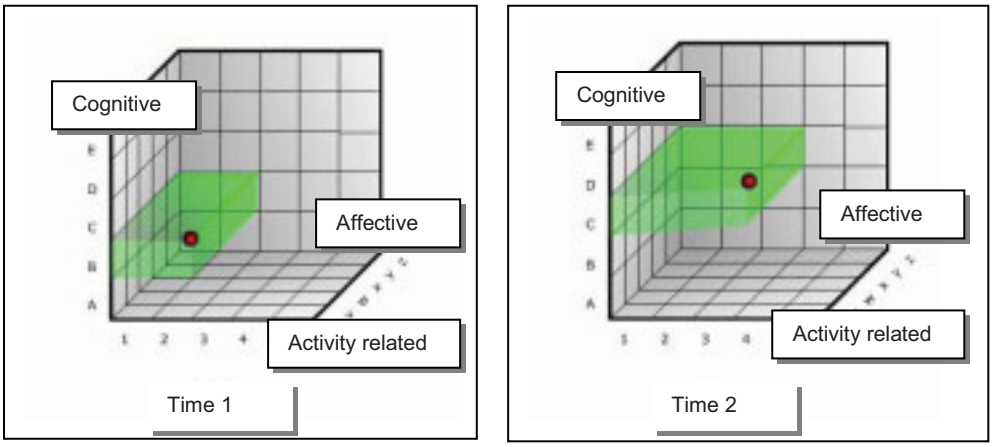

Figure 64: Interim cube model: 2 competence levels[125]

The ACT-Procedure and Cube model were combined in the ACT software, which was described in chapter 4.5.

Concept of Visualising Learning with Hand, Head and Heart
As stated above the major problem of transferring the procedural facts and features into practice is the reduction of their complexity. Therefore, the rather abstract issue of interlinking cognitive, activity related and affective competencies was transferred in symbols and thus "downgraded" to a simpler level. This way the basic principle should be made understandable and the "clients" should become curios and attracted.
Following the principle of didactic reduction the abstract ("competence") and scientific terms ("cognitive", "affective") as well as the models were substituted by three symbols:

To finalise the product development a professional graphic designer was appointed to create the symbols, the cube and the whole web-design in order to achieve a corporate design and a corporate identity. This was done for the purpose of identification of ACT members to give ACT distinctive character, and to support the building of the ACT community.

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124 European Commission, IMPLEMENTATION OF EDUCATION AND TRAINING 2010, http://ec.europa.eu/education/policies/2010/doc/basicframe.pdf.

125 Screenshots from an animated flash model that was produced after completing the 3-dimension approach.

6.5.2 Valorisation Strategy

Valorisation of project results is of major importance for the European Commission – there even is a special valorisation department in the DG Education and Culture[126]. The head of sector had been constantly informed about the proceedings in ACT, first already at the preliminary ACT project meeting in Marseille in 2005[127] and at several other occasions during the project lifetime until the final conference.
From the beginning of the project, the ACT valorisation has been realised under the umbrella of a transnational valorisation structure, the blended learning institutions' cooperative (blinc).

The overall objective of valorisation is to extend the relevance of the project outcomes substantially beyond the project's lifetime. To achieve this goal, a profound knowledge about the requirements, motivations and expectations of potential target groups is required in general. It is widely acknowledged and highly recommended by the European Commission to integrate those target groups that are already involved in the project activities (European Commission, 2007).
This was done in ACT already during the preliminary meeting when involving an additional Portuguese partner and systematically in the further project development by integrating grass-root projects in development, pre-test and feedback[128].

This interlinkage of Action Theory and valorisation principles turned out to be very fruitful because new findings and impulses from target groups could easily be integrated thus leading to better (adapted) outputs. The cube model, which is one of the central outputs and a focal point in regard to the valorisation was constantly further developed together with stakeholders from the field. Consequently the valorisation activities (such as guidelines, trainings and presentations and other dissemination activities) could be adapted and modified to their needs.

A special work group elaborated on a valorisation strategy for ACT to ensure an effective dissemination and exploitation of results as recommended by the European Commission [129].
It consists of four key elements, which will be described in the following:

1. *Designing* tailor-made products and for target groups
2. Elaborating a *value proposition* for these products
3. Transferring projects in practice ("*exploitation*")
4. User centred dissemination.

Design of products has been described in a comprehensive way in the previous chapters. However, it should again be emphasised that due to the consequent application of valorisation principles, namely integration of end users, ACT could create products with a high impact for a large audience and at the same time adjust them to specific needs of grass-root projects (transferability vs. individuality). This has a positive impact on the usability for grass-root organisations and exploitation potential for the suppliers.

Value Proposition[130] should not be mixed with the term "commercialisation". The value of a product is not only expressed in terms of money, generated by selling or service rendering. Commer-

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126 European Commission, DG Education and Culture, Directorate Communication and culture, Unit C3.

127 There was a greeting note from Mrs. Degiampetro for the Marseille Conference.

128 The European Commission calls this "full 'customer' care: Effective dissemination and exploitation requires results to meet the needs of the end users identified at the start of the project and as it progressed. Plans should, therefore, outline how these target groups could become involved in project activities.
That means constantly monitoring dissemination and exploitation activities and reviewing user needs. This includes possibly planning and devising pilot actions to involve them and test out products on them. This is an informative and structured way for any project to receive feedback about its activities." (DG Education and Culture, 2008)

129 http://ec.europa.eu/dgs/education_culture/valorisation/index_en.html.

cialisation is sometimes even not desired – a product can be given for free or to a very low price and nevertheless achieve a very high valorisation impact because of the high transfer potential.
The value of a product should be determined first – commercialisation and exploitation can follow. Products should be transferred in a value related system as it is determined by the context (what is useful for whom?) and by the impact (benefit) for the users (customers/beneficiaries). Thus, an *added value* brings in an additional advantage in the client's system.
In ACT a transnational sub-team worked on the establishment of the value proposition. Specific target groups were identified (3rd sector organisations) and experiences while convincing the stakeholders from the micro projects were gathered. During the meeting in Cagliari (May/June 2007) role plays were carried out to simulate discussions with potential clients and to shape out the main arguments to apply the ACT evaluation in their informal learning activities.

Exploitation: the value of the ACT approach in general and specifically the Impact Assessment System (IAS) has being determined by its systemic accuracy to fit in the context of the users. It has to provide an additional value for the users such as 3rd sector organisations and their beneficiaries.
The basic idea of ACT is to provide an evaluation system that is easy to use and measures and proves the impact of the learning activity (micro-project). By means of the ACT system 3rd sector organisations may justify the outputs and quality of their work via the visualisation and documentation of the competence development of their beneficiaries.
Nowadays in most of the cases the quality of social services providers and 3rd sector organisations (including education providers) is assessed and documented in Quality Management Systems. Central recurring element of these QM-systems is a circular improvement principle based on the so-called "Deming circle" (Deming, 1986).
The four circular stages "Plan-Check-Do-Act" are reminiscent of Lewin's "Look-Plan-Act" circle that he introduced in Action Research.
This circular element was consciously introduced in the ACT procedure – not only because it was necessary in many of the cases to fine-tune and modify some of the settings in earlier steps in the evaluation procedure[131] but especially because the circular element leads to a constant improvement of the process and the outputs, a principle which is also a key element in most procedural QM systems (e.g. in Sallis, 2002).
But in contrast to other quality assessment and management systems the ACT approach consequently follows a bottom up approach by assigning the central evaluation and assessment role to the experts from the field.
However, the approach has to follow basic quality criteria mentioned in chapter 6.3.4 since it shall in future serve as system that enables 3rd sector organisations to justify the quality of their work to a funding organisation.

In this context the *validation of the informal learning activities* plays an important role in the valorisation of ACT.
As described in chapter 5, the users ("clients") in most of cases need (initial) coaching and guidance at least when applying the methodology for the first time. This is why following valorisation sub-chapters deal with the introduction of *counselling* and *training* activities.
Lastly, the further development and the application of the ACT approach has been subject to *new project*s and project proposals that were launched outside of the ACT community.

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[130] A business or marketing statement that summarises why a consumer should buy a product or use a service. This statement should convince a potential consumer that one particular product or service will add more value or better solve a problem than other similar offerings.
http://www.investopedia.com/terms/v/valueproposition.asp

[131] For instance the level descriptions in the reference system have to be fine tuned in the process of assessment or the project description had to be specified as the experts realised during the evaluation that additional information added clarity.

6.5.3 Validation of Informal Learning Projects

The topic "validation of informal learning" has become increasingly important in recent years. The Council of Europe (14 June 2002) adopted a work programme and the European Commission published funded calls for the development of ways to validate the respective learning experiences[132].

However, a comprehensive evaluation and validation approach for informal learning was not available by the end of 2008.

In informal learning a standardisation in regard to contents (*topics*), learning objectives and envisaged outcomes (*competences*) is nearly impossible due to the uncountable life situations and needs of the beneficiaries.

This is why most of the countries rather concentrate on validation of non-formal learning competences that can be put in relation to a kind of standardised learning outcome.

The most comprehensive compilation concerning validation of informal learning in Europe is certainly the ECOTEC inventory. In its 2007 revision 30 European countries were analysed concerning their efforts to implement validation of non-formal and informal learning.

The in-depth analysis of the country studies clearly shows that also in those countries that are advanced in relation to validating *non-formal* learning, validation of *informal* learning is not very common. In France for instance the authors claim a "culture shift" to allow greater value to be attached to vocational skills and to bring the formal education system and informal/non-formal learning closer together. This clearly indicates a rather utilitarian approach of learning in connection with vocational training.

In many cases, the issue is described as "Recognition of Prior Learning" (RPL). It is reported that in Denmark for instance, RPL is no new phenomenon. Especially in initial vocational education and training (VET), adult education programmes and tertiary education it is quite frequent. Nevertheless, here the authors state that more needs to be done to recognise competencies achieved at work and from taking part in liberal adult education as well.

Informal Learning Validation in the 3rd Sector

The ECOTEC country studies from 2007 reveal that there is a great variety in the level of interest and activity in validation across the third sector. In some countries (e.g. Estonia, Hungary, Latvia) only very few (if any) examples of *third sector initiatives* were identified, whereas in others (e.g. Germany, Finland, the Netherlands) the third sector was found to be very active, either in delivering their own validation initiatives, or working in partnership with public and/or private actors.

A quotation from the Norway report (which is far ahead in terms of validation of *informal* learning competencies) brings us back to some of the basic questions concerning the evidencing Active Citizenship: Who and what shall be evaluated and which competences?

"In the third sector (in Norway) too, organisations have worked together to develop validation tools, to enable individuals to recognise the skills and competences they have attained through voluntary work or other third sector activities." (ECOTEC 2007) This is of course a very positive development but only the social workers are being validated whereas the (final) beneficiaries who were taking part in the social programmes were not subject to the evaluation and thus did not profit from the validation.

The 3rd sector study concludes that "there is a strong need for procedural and methodological approaches and frameworks in the field of validation."

The ACT Impact Assessment System was designed to contribute to this necessary development process. It delivered a perfected procedure (which still has to be fine-tuned with regard to quality criteria) and a complete web-based documentation and evidencing system.

It has been innovative as, in contrast to the approaches mentioned above, the ACT evaluation approach specifically targeted the "learner oriented validation".

The authors of the ECOTEC 3rd sector compendium state that "…declarative and competence portfolio methods are prevalent in the 3rd Sector and it remains to be seen if more complex methods are devised and the extent to which these are linked to formal standards and frameworks."

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[132] E.g. in the 2009 Lifelong Learning Programme Call.

With regard to “citizenship competencies” the ACT approach was heading in the opposite direction. The dissertation on hand showed that formal standards and frameworks are not appropriate means to measure and evidence the effects of informal learning on civic competence development.
In this respect, the ACT project was treading new trails because it was explicitly aimed at validating skills and competencies of the beneficiaries of third sector informal learning offers.

Validation means that a product or a service satisfies the needs of the stakeholders. It “confirms that something …(e.g. … a service (the author)) consistently fulfils the requirements for a specific use”[133].

A basic consideration behind the ACT approach is that the experts in the field know best the situation and the demands of their beneficiaries. Here, based on action research principles and in contrast to other, rather externally driven evaluation approaches[134], experts from the field define the goals, context, priorities and the reference systems of the evaluation.

Consequently, a validation in the framework of ACT should show (and document) that the learning activity or the learning success fulfils the requirements of *both learner and informal learning provider* (e.g. an NGO or another 3rd sector organisation)[135].
Thus the ACT evaluation approach is not aimed at proving standardised *contents* but is an open standardised *procedure.*
The last step of this procedure (step 6) should be the *validation* of the informal learning activity or the learning project as well as of the competence development of the beneficiaries[136].

In view of its valorisation the ACT evaluation system shall be comprehensively presented with its *objectives*, *processes*, *requirements* and *deliverables* in the following short description:

Objectives:
Evaluation in ACT is aimed at delivering a feasible instrument for grass-root projects to:

- Analyse, safeguard and improve their internal working processes
- Evidence the impact of the their work
- Compare their approaches with other organisations.

In connection with quality one can refer back to the discussion in chapter 6.3.4, which deals with objectivity and quality criteria. If applied in accordance with the developed instruments and guidelines, one can assume that the ACT evaluation approach leads to a good quality in the sense of good practice[137].

Processes:
The central procedures in ACT have already been described above in detail in a sequential way by using flow charts stemming from QM procedural descriptions.

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133 http://www.answers.com/topic/validation

134 In which standards are posed on 3rd sector organisations in a top-down way.

135 Ideally their objectives also correspond to the objectives of funding organisations (such as public bodies or donors) but these fundamental issues already have to be tackled in the project description.

136 Independent of their context, background and abilities.

137 European Commission DG EAC glossary: A good practice is an exemplary project (including results or processes) which has positively influenced systems and practices throughout its activities and results. Consequently, good practices are worth transferring and exploiting in different contexts and environments by new users or entities.

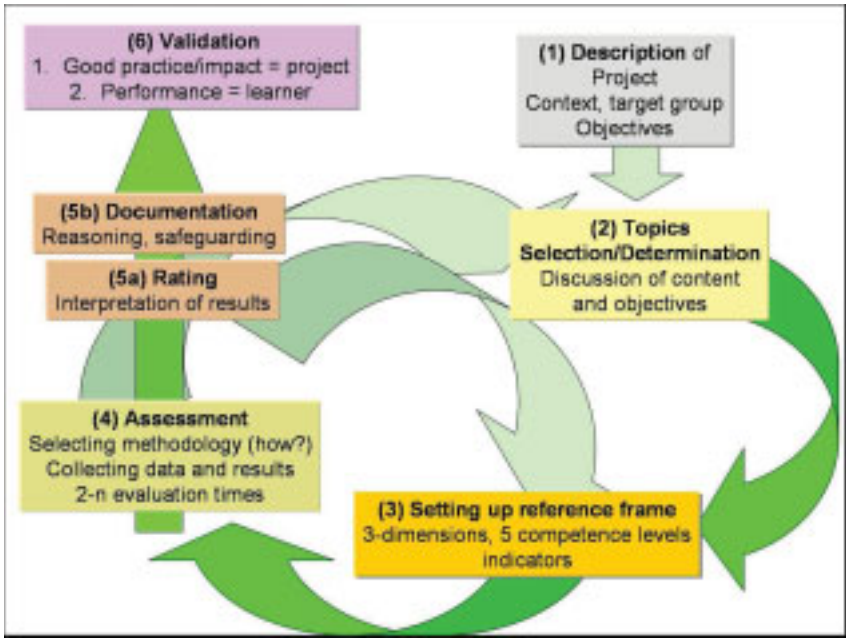

Figure 65: Cyclic ACT evaluation procedure

The procedure is clustered in the 5 central components:

- Project description
- Selecting topics from the inventory
- Building a reference system (competence level descriptions)
- Assessment (measuring)
- Evidencing (rating and documenting).

Each of the components is subject to a validation of good quality as all the steps and the prepared instruments are compulsory elements of the evaluation process.
Therefore in a final validation step (6)

- informal learning projects can be validated against the objectives stated in the project description and
- learners' competence development can be validated against the competence levels established by the experts.

Requirements:
To validate a project the evaluation procedure must comply with the requirements of the ACT approach (traceability criterion). Most of the requirements have to be met by each micro-project because of fixed procedures and applied instruments (inventory, reference and evidencing system, descriptive patterns). The elaboration of this approach already leads to an increase of awareness of central processes and can be regarded as an important step to ensure system quality. As the system is based on the idea to measure a process of competence development, also the "improvement" criterion[138] is de facto fulfilled because it contributes to an adaptation (improvement) of the learning process.
Deliverables/Outputs:
At the end of the project, 23 projects were evaluated with the ACT method. As this procedure is an auto-evaluation, the validation also has to reflect its self-centred, subjective character. The procedure can thus be compared with the self-evaluation approach by the quality management approach of EFQM[139].

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138 QM principle of constant improvement also displayed in the plan-do-check-act circle (PDCA, Deming circle). Most important requirement for QM in social organisations using ACT IAS is the ability of the staff to learn and to improve. To create this internal learning process the evaluation should not be entirely carried out by external personnel (e.g. consultants).

139 European Foundation for Quality Management (EFQM).

In this approach the procedural quality of the micro-project[140] can already be documented. A label for good quality has been given to those projects that used or will be using the ACT system for evaluation and planning purposes[141].
At a later stage, the ACT network is also heading for an external validation approach that is carried out by accredited ACT consultants. This validation has to be seen in connection with the consulting and training approaches of ACT[142].
In the follow up project ACT-NET (2009-2010) the second validation strand, the documentation of learners' competence development will be further elaborated.

6.5.4 ACT Counselling

Bringing together all the components of the approach, the instruments and the software the partner realised during the development process (first recorded in the minutes of the Ankara meeting and further discussed in developed during the Cagliari-meeting) that the developed evaluation system has an additional impact on the practical level.
Evaluation is not a specific value per se, and many experts in the field are even reluctant towards any kind of evaluation because it is often associated with control and creates an uncertainty, since it could limit the freedom of the grass-root projects[143]. This also reflects a statement by Smith (2006): "Many informal educators such as youth workers and social pedagogues are suspicious of evaluation because they see it as something that is imposed from outside."
To avoid these negative effects and attitudes, the additional value for informal educators as potential customers had to be shaped out.

Most of the 3rd sector grass-root organisations are dependent on public funding[144]. As resources are limited and the demand of funding exceeds the supply by dimensions the funding authorities from all levels[145] ask for quality evidencing to justify the co-financing with public funds.
Most of the quality assessment systems mainly measure the management quality (even if process-orientated) but not the performance quality related to the services offered by the organisations[146].
The effects of these services can be, in the majority of the cases, documented by the competence development of the final beneficiaries, the citizens. In so far the measurement of the impact of informal learning on Active Citizenship is gaining a very valuable impact for the organisations in the field as well.

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140 In contrast to QM systems ACT is only heading to evidence the quality of the micro-project and not the properties of the educational institution.

141 The ACT certificate is added in the appendix.

142 Chapters 6.5.3.2 and 6.5.3.3

143 Reflected by experiences e.g. of Dutch and German partners when convincing local grass-root projects. According to long-term professional experiences in professional training projects the author concludes that especially the social sector (nurses, health care professionals) severely suffer from quality assessments that do not reflect their professional practice.

144 This refers to most of the voluntary (philanthropic or self-help) organisations but also to professional and confessional organisations. The may receive public funding or be supported by private donors. The micro-projects evaluated in ACT were examples of those 3rd sector organisations.

145 E.g.: funding adult training institutes, welfare organisations like social care organisations, neighbourhood organisations, kindergartens, rehabilitation centres, homes for the aged etc.
Public administrations, churches, foundations, national, regional or European programmes as well as other donors support the activities of those organisations.

146 In contrary, it should rather be asked what is the effect of the offer on the final beneficiaries - be it the survivor of domestic violence, an elderly person in a community home service, the youngster in a self organised camp, the participant of an excursion to a modern arts exhibition or the self organised music group in a local community.

Since these stakeholders had to be convinced to take part in the project a special ACT workgroup with Romanian, Swedish and German partners developed a brochure for grass-root projects that was printed and delivered to attract participants for the final conference.

In the brochure the issue was described from the perspective of the responsible persons from NGOs, and the self-evaluation or consulting processes were presented in a less scientific way.
The brochure was developed in month 22, discussed and adopted by all partners in month 23 during the Alden Biesen meeting, and sent together with the invitation to the final conference.

On the basis of the experience reports, a consulting strategy was developed that took the demands of support by the responsible project stakeholders into account.
The consulting offer was developed in role plays among the partners and pre-tested in connection with the grass-root projects on the local level.
The demand of support was already highlighted in chapter 5 (experience reports). Consulting offers should be focused on each of the main procedural steps:

1. Selection of competences and refining
2. Building reference system
3. Assessment
4. Evidencing.

It is expected that the organisations from the field will need initial coaching when first carrying out an evaluation. Depending on the pre-knowledge and experiences, project personnel might need a coach at every single step of the procedure. This demand will surely decrease when evaluating the second project.
Consulting should be offered in a modular way, since support is needed in relation to the project setting and the context.
As the objectives and learning steps of consulting are similar to those of the training they will be described in the following chapter.

6.5.5 ACT Training

In the framework of ACT, specific course modules were developed by a workgroup consisting of partners from RO, LV, SE, NL, DE and PL.
The modules were aimed at enabling European stakeholders (educationalists and personnel from grass-root organisations) to apply the ACT evaluation methodology on the basis of a profound introduction in practical evaluation.
Each module passed through the whole evaluation procedure but put its focus on a different evaluation step:

	Project SE Uplifting long term unemployed (reading and writing difficulties)	Project LV Regional development promoted by women in rural areas	Project RO Empowering victims of domestic violence	Project GER Environment and youngsters	Project NL Active Citizens in a neighbourhood project (“Can Do”)
Focus:	***Inventory*** Presentation, Films, Developing topics in a debate	***Inventory/ reference system*** Discussion pair-work, presentation for development of topics and reference system	***Ref. system evidencing*** Presentation, Films, Developing reference system and ratings in collaborative learning	***Assessment*** Role Play with different assessment methodologies	***Evidencing*** Telling a story with key observations; participants rate the learner according to the presented evidence system

Table 17: Focus of micro learning projects

This way the micro-projects became demonstration projects in the framework of the training thus valorising their experience in a large European practice.
Each learning unit (or procedural step) was introduced by a theoretical input about the evaluation step and the applied methodology. The micro-projects served to deepen the knowledge and transfer it in a practical example.

The following table describes one of the fine tuning of one of the modules with a simplified planning grid focusing on assessment methodology.

Project DE: Environmental Management in a Youth Group:

	Topic/Contents	Objectives	Methodology/Activities	Material
0	**Introduction:**	Understanding: • Target group • Learning process • Learning objectives etc.	*Presentation and discussion*	PPT/photos
1	**Inventory**			
	Selection of topics/competencies	Understanding the idea of the inventory and what were the core topics of the project	*Presentation* and short *discussion*	ppt
	Refined topics/competencies			
2	**Creating an individual reference system**			
	3 dimensions per topic/competence	Deeper understanding of what kind of impact the environmental issue has for the learners. -> This topic has 3 dimensions	*Discussion with opening questions:* -> what do they have to know, what can they do and how could they feel concerning environment?	
	The scales and the grades per dimension	Understanding the 5 scales (stages) on each of the axis (dimensions) Understanding how the scales can be contextualised (What does each stage mean in the very context?)	*Discussion:* How can different grades be displayed? (Minimum-Maximum) *Presentation* of a filled pattern	Description on paper (pattern)
	The cube model		*Presentation* of the flash model	Flash model
3	***Assessment methodology***			
	Selection of assessment methodology (Why)	***Practical insight in assessment***	***Introduction role play with different assessment methodologies***	
	Assessment in the project			
4	**Evidencing the success of informal learning**			
	Evidencing on paper (table)	Understanding how growing competencies can be documented in the pattern	Interview with projects executives, presentation of an exemplary environmental pattern (1 person)	Evidencing pattern
	Changes in stages (“growing competencies”)			
	Visualising changing competencies (“cube”) and the related descriptions in the software	Having an impression how the topic “environment” and the related competences can be displayed and evidenced	Presentation in the software	
	Synopsis/reprise		Discussion	

Table 18: Micro learning-project with focus on assessment

Complete ACT Training Course in Blended Learning Methodology
At a later date the learning units shall be combined to a perfected course and delivered to a European Audience[148].
The course is planned to be developed in blended learning methodology with a 16 hours preliminary phase (approximately two months) in eLearning modality before the 4-5 days face to face (f2f) phase and a 16 hours follow-up phase.
The theoretical background will be delivered in the preliminary phase in asynchronous and synchronous web-based learning (LMS, blogs and ePortfolios and online conference rooms).
The activity related competencies (=> applying the evaluation methodology) will be conveyed in the f2f-section. The follow-up phase will offer opportunities to accompany the projects of the participants and exchange experiences via online conferencing.

	Preliminary	F2f	Follow-up
Functions	Opening Getting to know each other	ACT-Evaluation steps	Transferring of knowledge in skills in own context
Contents	Participant profiles Project descriptions Evaluation theory	Micro-projects 4 Evaluation modules	Application in own projects
Method	eLearning	Frontal, role plays, simulations, observations, group work, etc.	eLearning learning by teaching
Materials/media	ePortfolio online rooms blogs LMS	PPT, films, evaluation materials and instruments (grids/patterns), IAS system	instruments (grids/patterns), IAS system
Duration (hrs)	16	40	16

Table 19: Envisaged training plan for an ACT blended learning course

The five practical evaluation modules were already successfully tested in a conference circuit with an audience of more than 80 participants from 15 European countries.
The training course is an important valorisation element.
Parallel to competence development for European stakeholders it is aiming at a series of side effects:

- Validation of various micro-projects and creation of comprehensive case studies[149]
- Enlarging the ACT network
- Income generating opportunities for ACT partners
- Learning from new experiences to be fed in data pool and web-portal
- Fine tuning and further development of the ACT-IAS approach.

The ACT course will be planned in detail and delivered on the European level in the framework of follow-up projects already proposed to the European Commission.

6.5.6 Follow-Up Projects

By the beginning of 2009 the ACT approach has been exploited in a series of new practice-research projects.

ACT-NET
The follow-up project application ACT-NET was developed in spring 2008 and approved in October. The project started in 2009.

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[148] To be thoroughly developed in the framework of a Grundtvig project (ACT-NET, VIP) for a perfected European Grundtvig 3 training course.
[149] According to the ECOTEC study there is a substantial lack of case studies of validation of informal learning projects (ECOTEC, 2008).

It will further develop the approach by introducing a comprehensive approach to integrate quality criteria. It will further elaborate planning components (informal learning patterns) and customise the ACT-IAS software. ACT-NET is also targeting to enlarge the community and to establish a European ACT network.
Another 20 micro-projects (from European social, cultural, environmental and sports sectors) will be evaluated and serve to further refine methods and instruments.

VIP - Validation of Informal Learning in Grundtvig Projects and Partnerships
The project responded to the 2009 call for Grundtvig multilateral projects, fitting in priority 4 of the call: "validation and certification".
The project will be aimed at evaluating and validating informal learning of transnational project partners participating in Grundtvig multilateral projects.
In the framework of the project well-proven evaluation approaches (ACT! and SEALLL) will be applied to assess and evidence informal learning in the collaborative learning context of European adult education projects.
Like in ACT-NET, the validation activities in VIP will be further developed.

Cross-Sectoral Projects
The ACT evaluation methods are especially appropriate to assess, display and document the competence development of learning contexts and target groups that are not subject to any formalised concept.
This is why it shall be tested and further developed in the framework of non-educational projects.
In this connection it will be applied in the environmental demonstration project "PROGRASS - Securing the conservation of NATURA grassland habitats with a distributed bioenergy production" in the field of nature protection in the framework of the LIFE+ project[150]. The project deals with the invention of a technology to retain bio-energy from mature grassland from so-called "Natura 2000" sites. An important element of the project is the assessment of the acceptance and the competence development of local farmers to apply the PROGRASS procedure that will be carried out by using the ACT approach.
Sintropher is a further environmentally driven project that aims at improving the European public transport facilities between rural areas and the national traffic hubs. Also in this project that started in 2009 the ACT approach will be applied to assess the competence development of major stakeholder groups.

6.5.7 Dissemination

Dissemination activities were carried out in ACT from the beginning.
They can be differentiated in the following elements:
- Public information
- Information of scientific audience, educational institutes and NGOs
- Workshops
- Website
- Projects
- Conferences

Figure 66: Screenshot from the Bulgarian University website with ACT

[150] LIFE+ is the European Environmental funding programme, PROGRASS website: www.prograss.eu

Public Information
In Göttingen press articles in newspapers reporting about the project on the local level to attract and inform local stakeholders were already released. Partners wrote and published articles and descriptions of the project in their daily or weekly newspapers and other media. In other cases, ACT project information was connected with cultural events (Monumenti Aperti). Two radio interviews and one transnational podcast were developed and broadcasted.

Information of Scientific Audience, Educational Institutes and NGOs:
There has been a constant flow of information to the stakeholders working in the field of AC, education and social services. Various articles have been released in the web-portals of transnational information and consulting networks blinc, Eurocircle and eLearningeuropa.
The project was disseminated at various occasions by the partner universities in university pamphlets and websites, round tables and educational workshops and conferences (Gdansk, Göttingen, Kassel, Gabrovo, Burgas, Istanbul).

Partners also disseminated ACT through their professional networks (PL, SE, RO, PT, DE); e.g. a 2 pages article was developed, translated and released in a journal for Swedish and European state-funded adult education centres. Three newsletters were developed and sent to more than 300 selected stakeholders in local, regional and European projects and in public (European) administrations by the Dutch and German partners.

ACT was presented at workshops for teachers and other educational personnel in PO, NL, BG, DE and IT during the project lifetime. Here, partners gathered important information about the acceptance of ACT in practice.

In the course of work shops the procedure was demonstrated in more than five seminars and workshops at universities in Göttingen, Kassel, Riga, Ankara and Gabrovo.

6.5.7.1 Visualisation in the Valorisation Process

In chapter 6.4.5 the function and value of visualisation for the knowledge creation and transfer processes was described and discussed. In the valorisation process the target group is no longer the development team but both stakeholders from the field and the interested public.

Both groups have to be convinced to:
1. Apply the products of ACT
2. Understand and support the approach
3. Identify with the network tasks and community (partnership).

In general the problem of research-practice projects is that:
- the outputs are much too abstract for non-experts,
- the usability is hidden behind complex procedures,
- the language may be too scientific and
- content and meaning can only be transported by long texts.

Visualisation is an appropriate means to tackle these problems as it reduces complexity and condenses meaning by using simple and powerful pictures and illustrations:
In the case of ACT products the visualisations were created for the following elements:

1 Products
Cube
As described above the cube is a very strong metaphor-based conceptual diagram - a human made artefact transporting the idea of a square space with regular dimensions.

A regular scaling is attached to the cube, combining the three (cognitive, activity and affective) competence dimensions and delivering the option to visualise 125 different combinations (expressed by 125 different spatial objects).
From the visual frame-working point view, the ACT cube is combined with another two level metaphoric reduction:

1. Since one point in the 3-dimensional space is related in a regular way with the respective grades, the evolving matching point is referencing to three properties or states of competences at a time.
2. The second reduction will take place in the head of the viewer as this point not only describes an abstract composition of competencies but symbolises a whole person or even a group.

In fact this means that the ACT cube interlinks two metaphors. The cube as creator of a regular space and the point/bowl is symbolising the human being in its reference space.

IAS software
Visualisation was a major process in the development of the IAS software as it determines usability and ergonomic aspects of the software tool.
Generally put, IAS is an interactive, computer-based visualisation allowing different members of the target groups to access their documentation system, combining and manipulating different types of information or media.
The interactive visualisations help to catch the attention of the users, enable interactive collaboration across time and space, and make it possible to represent and explore complex data and to create new insights (e.g. while giving proof of successful competence development in a grass-root project to funding authorities).
To facilitate ergonomic user-navigation well-known symbols or “icons” have been modified according to the corporate identity (CI) of ACT and to enable the intuitive moving of the users when using the IAS-software. Icons are symbols that users are familiar with (e.g. forward/backward – up/down buttons) and that have “taken on a whole new meaning as people point and click their way along the information highway” (LANDAU, 2000).
ACT made use of IT-programming to transfer the static metaphoric diagram into a dynamic animated metaphoric template. It offers pre-defined categories to structure the competence development domain: The person can move in the space which means that the main idea – the development of competencies (in which direction ever) is now perceivable in this model. The evaluated human is reduced to a point in this space – in fact it is a further abstraction as the composition of competencies of comparable subjects is reduced to this point.

2 Approach

Process description:
For the visualisation of the ACT consulting approach a graphical template was consciously utilised in order to create visual connotations to known process descriptions used in quality management. The idea behind this was to offer an alternative to quality management systems.
Decision makers opt for quality management systems and apply them in their organisations expect professional graphs and process visualisations. The formal visualisation in this case transports professionalism because it uses the same structuring techniques as the industry management systems – but, of course, with different contents.

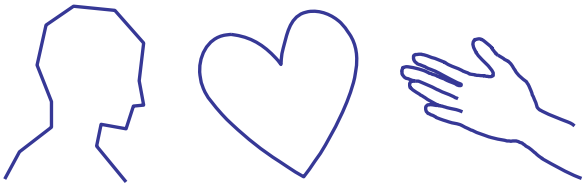
3 Community and Network

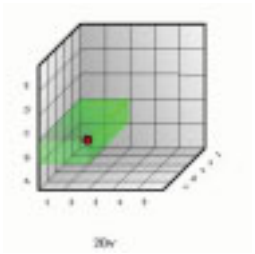
Visualisation in relation to the creation of identity:
The effect of visualisation to support identity building in networks and communities cannot be underestimated. A major effect of visualisation is the creation of a design umbrella creating recall and mnemonic effects for the viewer, which will be highlighted in the following chapter.

6.5.7.2 Corporate Design

The ACT-Partners used the common logos and symbols on each of their publications and presentation materials developed by a professional graphic designer styling the design of ACT-products (cubes, leaflets, web-portal, Impact Assessment System, roll-ups).
Five different logos were developed that symbolised:

Cooperation (HANDS), the 3 dimensions (HAND, HEART and HEAD) and the approach (CUBE).





Network (BANNER website)

While knowledge visualisation supports content and knowledge transfer corporate design transports hidden messages that the viewer will percept rather unconsciously. Visualisation can create emotional stimuli because emotional reactions are closely connected with the human visual system.

6.5.7.3 Dissemination Material and Media

Network and product identity has been created and transported via a unique Gestalt – the corporate identity of ACT, which was used for the creation of ACT products and dissemination material and media.

The ACT leaflet was developed in a trilateral workgroup as well as templates for Power Point presentations.
For European conferences each partner developed two scientific posters about its micro-projects.
Two large ACT roll-ups were designed in EN, layouted and printed and will be shipped for dissemination purposes to ACT partners attending educational conferences.

Ten central website pages were translated into nine languages to deliver in-depth information on the project to local stakeholders as well. As ACT is a “living” network/project the web-sites, that are based on a CMS, are constantly further developed. This hints at an important issue of European projects’ website. As long as they are not updated, interactive, and do not deliver usability for potential “clients” they will not create sustainable attention. This is why a content management system was used in ACT to enable the partners to provide multilingual information themselves in real-time; they were combined with interactive web 2.0 tools like a blog or a learning management system (LMS).
Additionally, the IAS software provided a helpful instrument in ACT to support basic business processes for 3rd sector organisations that will be further developed in the follow-up projects as major instrument to support the ACT network community.

6.5.7.4 Conferences and Events

Due to the experiences of former projects, the complexity of the issue and, last but not least, the goals of the dissemination the partners rather concentrated on personal convincing than on broad mass campaigning. Following a bottom-up approach, ACT has given a European stage for projects and activities conducted by small local initiatives and NGOs working with disadvantaged beneficiary groups. This valorisation model proved to be successful during recent conferences in Marseille, Göttingen and Cagliari, combining both transnational and local NGO-projects.
Due to the transnational audience, it is much easier to activate the local press for events and to disseminate the local projects in the region. Similar experiences were made during conferences in Hanover (2006) where ACT was actively presented together with local ESF projects. Vice versa, there is an added value in valorising local initiatives on a transnational level.

A specific way of dissemination was the utilisation of the ACT approach in European projects. By the end of 2007 the evaluation approach was used in two European Grundtvig 1.1 projects as official evaluation method thus being disseminated in depth to more than ten European organisations from the educational sector.

The most spectacular and successful (sustainable) way of dissemination was certainly transnational conferencing. In the course of the project, ACT was disseminated in three large conferences carried out twice in Göttingen and in Alden Biesen. In the framework of the project, an innovative concept was developed that could be named “Active Conferencing”.
While traditional conferences show a lack of active participation of the audience ACT developed a concept blending conferencing with active learning techniques.
The first conference in Göttingen showed a rather “traditional” concept though there was a clear focus on the inclusion of local initiatives. The conference in Alden Biesen (60 European participants) already contained more active elements as the ACT partners hosted one practical conference workshop.
During the last conference in Göttingen a conference circuit was developed. Five partner groups delivered a perfected learning unit for sub-groups of 15-20 participants each. Participants were able to join three work groups and experienced an intensive, active learning event in small transnational groups.
This way the conference reached:

- A high level of in-depth understanding of the rather complex concept,
- A broad survey of the evaluated micro-projects and an profound insight in the problems,
- Vivid discussions about the approach and an active participation and contribution of the participants and
- A situation in which foreign persons worked together in groups of 15-20 persons and got together.

The concept of “Active Conferencing” proved outstandingly successful[151] and it will be reproduced in the follow-up projects in other European locations[152].

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[151] Documented by the very positive feed-back of the participants (s. Minutes of meeting 6 in the appendix) and in the results of process evaluation No. 5.

[152] In the approved project ACT-NET regional conferences will be held in Gothenburg (SE), Maastricht (NL/BE) and Sopot (PL) in 2009 and 2010.

7 Conclusion

The dissertation on hand described, analysed and evaluated a transnational project ACT.
The author was in a double position: on the one hand, as rapporteur, he reported about the project and analysed major processes and outcomes; and on the other hand (in the framework of his research & development task) he actively developed the project's concepts and deliverables together with the European partners.
In the lifetime of the research-practice project a comprehensive approach, a procedure and the related instruments were developed to assess and evidence the impact of informal learning on citizenship competencies; particularly focusing on disadvantaged citizens.

The development and theory building processes followed an Action Research concept building on Lewin's "Think – Act – Look" circle.
With the help of a constant change of inductive and deductive (and sometimes abductive) reasoning the major project deliverables could be developed – some of them had not even been subject of the original application that was delivered to the European Commission in the year 2004 on the occasion of the "European year of Active Citizenship" 2005.

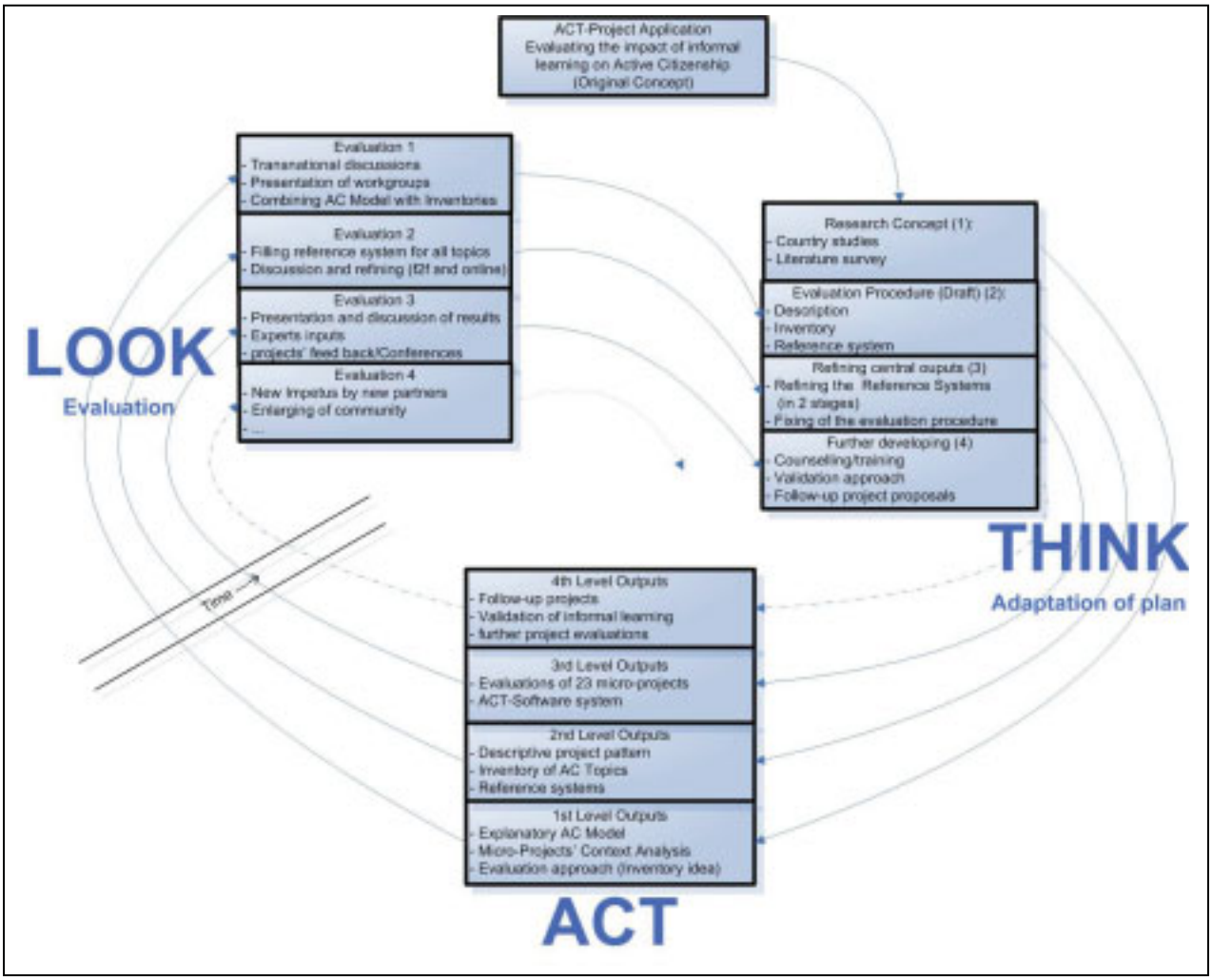

Figure 67: Action research circle in ACT

In a first stock-taking phase a comprehensive literature survey was done accompanied by national studies being developed in the participating partner countries. These studies gave a first view on how citizenship education had been delivered in European member states.
Especially the investigation on non-formal and informal Active Citizenship learning revealed that a common theory was missing.

Further research and development had to be carried out to achieve a satisfying explanatory approach about Active Citizenship on which appropriate tools and instruments could be established.
Thus a procedural Active Citizenship model was developed and displayed in a two- and later a three-dimensional coordinate system to describe “Active Citizenship” in a consistent way.

In contrast to evaluation of citizenship education in formal education the ACT approach was designed to evidence Active Citizenship in informal learning situations. Due to the unlimited scope of contexts and target groups it is impossible to design a standardised and formalised evaluation system.
Consequently, the basic idea that Active Citizenship is a composition of individual topics and competencies was transferred into an Active Citizenship inventory that later became one of the basic components of the ACT evaluation procedure.
It offers to the informal evaluators the possibility to select relevant items and even add new topics to enlarge the inventory. It proved well as an evaluation instrument in situations where standardised categories are not applicable.
Internal evaluations and discussions about the outcomes were carried out on several occasions: mainly during the transnational meetings and from 2006 on increasingly in the internet during more than 20 online conferences.
Those evaluations and exchanges of experiences led in the following phase to a modification and fine tuning of the ACT evaluation concept combining the Active Citizenship explanatory model with the inventory.
Standardised descriptive project patterns and inventories were designed and pre-tested.
In the following phase the central evaluation instrument was developed – the “ACT cube” which was based on a 3-dimensional ACT reference systems, consisting of a cognitive, activity related and affective axes. Each of the axes was divided in 5 stages that were described with general titles.
Each stage on the three axes has to be individually described by the informal evaluators who are experts from the field having deep insight knowledge on their target groups and the informal learning situations. The detailed description of the (15) stages leads to the creation of an individual reference system to display the competence stage for each selected AC topic.
On the basis of several successive assessments the competence development of an individual can be displayed by his/her changing position in the three-dimensional AC cube.
The ACT cube model displays and evidences the competence development in a gradual system, generally preformatted by the 5 categories on each axis. Thus the ACT approach evidences different cognitive, affective and activity related competence plateaus.
To develop and back up the basic principles of the procedure intensive literature research was carried out. It contributed and safeguarded the idea of the 3-dimensional system and clarified the principle of the gradual competence development.
The dissertation on hand discussed the question of competence plateaus versus continuous competence development which also played a role in the course of controversies, planning and deliberations of the ACT project. It can still be considered to be a relatively open issue which also corresponds to actual discussions about competence development (e.g. in relation to the PISA-study or in Minnamaier (2002)). Many observations with regard to competence development hint to a rather discontinuous process as the increase of knowledge (and competence) manifests itself on different “competence levels”.
However, from the feasibility and usability point of view in relation to the evaluation of informal learning projects, it was shown that the gradual system and the ACT cube as a central reference and visual evidencing instrument proved well, especially against the background that standardised evaluation approaches were not appropriate in the informal learning situations.
In the course of the dissertation different selected topics from diverse micro projects were compared on the basis of their descriptors. It could be proven that the combination of the inventory and the individual competence cubes led to an individual, traceable and comparable evidencing system for active citizenship competencies.

The evaluation approach was tested and applied and in 23 projects in 9 countries.

Constant improvement activities had been carried out over the project lifetime, catalysed by regular exchange of experiences during online conferences, simulations and workgroups during the transnational meetings.
An empirical study was carried out to analyse the utilisation of the ACT procedure and the developed instruments. For this purpose evaluators' questionnaires were designed, filled and analysed as well as evaluators' reports that substantiated the questionnaires' results in terms of feasibility, usability and required time and resources necessary to carry out the evaluation according to the ACT method.
Although the approach was described as being relatively time consuming the feed-back from the experts from the field was generally very positive. It was reported that it led to awareness about the central processes, objectives and impact of the offers of the learning providers.
On the basis of these results a comprehensive valorisation strategy was developed consisting of

- Counselling and training offers,
- The concept for an innovative validation system for informal learning considering especially the final beneficiaries[153] of these active citizenship learning offers and
- The development of follow-up project proposals to further develop and finalise the ACT concept and specific components like quality criteria.

ACT was a European project. Since these multilateral cooperation projects have been rather new in educational science, the dissertation on hand – in addition to the analysis and interpretation of the ACT evaluation approach and deliverables - concentrated on the examination of the collaborative processes in the European project.
As described in chapters 4.5 and 5.3.2, good and conscious networking is a major success factor for transnational projects. The network analysis showed that in the course of the project the partnership relations' structure ranged in the right relation between stable to efficient states in decisive development and collaboration phases– a fact that catalysed the good project results[154].
These results were also backed up by an accompanying process evaluation that was carried out five times over the project's lifetime to monitor and evaluate partners' satisfaction in relation to:

- the project's progression,
- central communication and collaboration processes and
- the central project's outputs.

Another strand of this dissertation described and analysed the impact of visualisation for the European practice-research project.
It was shown that especially in difficult and complex transnational development situations, visualisation is vital for a successful collaboration.
Visualisation had also been playing a major role in the valorisation (the exploitation and dissemination) of the central project processes and products since it brought about the complex and abstract evaluation procedure in a focused and easily understandable way. The cube, as visual metaphor takes centre stage in this visualisation concept. This unique Gestalt element has been supporting the exploitation and dissemination of the project's deliverables.
Already at the delivery time of this dissertation the ACT approach has been further developed in follow-up projects aiming at refining certain procedural elements, extending the approach to a validation system and applying the approach in other European informal learning contexts.

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[153] Especially targeting disadvantaged population groups, respecting their contexts and needs.

[154] After its completion the project was very well rated from the external evaluators from the European Commission (oral confirmation by Mr. Jean-Yves Stefani (desk-officer DG EAC in November 2008) and statements during the panel discussion from Mrs. Erika Mann, Member of the European Parliament and Mrs. Esther Gelabert (expert evaluator for the European Commission during the final conference in December 2007)).

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